ALIBABA CLOUD

Alibaba Cloud

Elastic Compute Service

API Reference

Document Version: 20220712

Alibaba Cloud

Legal disclaimer

Alibaba Cloud reminds you to carefully read and fully understand the terms and conditions of this legal disclaimer before you read or use this document. If you have read or used this document, it shall be deemed as your total acceptance of this legal disclaimer.

1. You shall download and obtain this document from the Alibaba Cloud website or other Alibaba Cloud-authorized channels, and use this document for your own legal business activities only. The content of this document is considered confidential information of Alibaba Cloud. You shall strictly abide by the confidentiality obligations. No part of this document shall be disclosed or provided to any third party for use without the prior written consent of Alibaba Cloud.

2. No part of this document shall be excerpted, translated, reproduced, transmitted, or disseminated by any organization, company or individual in any form or by any means without the prior written consent of Alibaba Cloud.

3. The content of this document may be changed because of product version upgrade, adjustment, or other reasons. Alibaba Cloud reserves the right to modify the content of this document without notice and an updated version of this document will be released through Alibaba Cloud-authorized channels from time to time. You should pay attention to the version changes of this document as they occur and download and obtain the most up-to-date version of this document from Alibaba Cloud-authorized channels.

4. This document serves only as a reference guide for your use of Alibaba Cloud products and services. Alibaba Cloud provides this document based on the "status quo", "being defective", and "existing functions" of its products and services. Alibaba Cloud makes every effort to provide relevant operational guidance based on existing technologies. However, Alibaba Cloud hereby makes a clear statement that it in no way guarantees the accuracy, integrity, applicability, and reliability of the content of this document, either explicitly or implicitly. Alibaba Cloud shall not take legal responsibility for any errors or lost profits incurred by any organization, company, or individual arising from download, use, or trust in this document. Alibaba Cloud shall not, under any circumstances, take responsibility for any indirect, consequential, punitive, contingent, special, or punitive damages, including lost profits arising from the use or trust in this document (even if Alibaba Cloud has been notified of the possibility of such a loss).

5. By law, all the contents in Alibaba Cloud documents, including but not limited to pictures, architecture design, page layout, and text description, are intellectual property of Alibaba Cloud and/or its affiliates. This intellectual property includes, but is not limited to, trademark rights, patent rights, copyrights, and trade secrets. No part of this document shall be used, modified, reproduced, publicly transmitted, changed, disseminated, distributed, or published without the prior written consent of Alibaba Cloud and/or its affiliates. The names owned by Alibaba Cloud shall not be used, published, or reproduced for marketing, advertising, promotion, or other purposes without the prior written consent of Alibaba Cloud. The names owned by Alibaba Cloud include, but are not limited to, "Alibaba Cloud", "Aliyun", "HiChina", and other brands of Alibaba Cloud and/or its affiliates, which appear separately or in combination, as well as the auxiliary signs and patterns of the preceding brands, or anything similar to the company names, trade names, trademarks, product or service names, domain names, patterns, logos, marks, signs, or special descriptions that third parties identify as Alibaba Cloud and/or its affiliates.

6. Please directly contact Alibaba Cloud for any errors of this document.

Document conventions

Style	Description	Example
Danger	A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	**Danger:** Resetting will result in the loss of user configuration data.
Warning	A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	**Warning:** Restarting will cause business interruption. About 10 minutes are required to restart an instance.
Notice	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	**Notice:** If the weight is set to 0, the server no longer receives new requests.
Note	A note indicates supplemental instructions, best practices, tips, and other content.	**Note:** You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click **Settings**> **Network**> **Set network type**.
Bold	Bold formatting is used for buttons , menus, page names, and other UI elements.	Click **OK**.
`Courier font`	Courier font is used for commands	Run the `cd /d C:/window` command to enter the Windows system folder.
Italic	Italic formatting is used for parameters and variables.	`bae log list --instanceid` *Instance_ID*
[] or [a|b]	This format is used for an optional value, where only one item can be selected.	`ipconfig [-all|-t]`
{} or {a|b}	This format is used for a required value, where only one item can be selected.	`switch {active|stand}`

Table of Contents

1.Introduction 15
2.List of operations by function 17
3.Quick start 27
4.HTTP Requests 29
4.1. Overview 29
4.2. Request syntax 29
4.3. Common parameters 30
4.4. Request signatures 31
4.5. Responses 34
5.Authentication rules 38
6.Instances 45
6.1. CreateInstance 45
6.2. DescribeInstances 71
6.3. DeleteInstances 86
6.4. StartInstance 88
6.5. RebootInstance 91
6.6. StopInstance 93
6.7. StartInstances 95
6.8. RebootInstances 99
6.9. StopInstances 102
6.10. DeleteInstance 106
6.11. AttachInstanceRamRole 108
6.12. DetachInstanceRamRole 110
6.13. DescribeInstanceStatus 113
6.14. RenewInstance 115
6.15. ReActivateInstances 118

6.16. DescribeInstanceVncUrl 120
6.17. DescribeUserData 121
6.18. DescribeInstanceAutoRenewAttribute 123
6.19. DescribeInstanceRamRole 125
6.20. DescribeSpotPriceHistory 127
6.21. DescribeSpotAdvice 131
6.22. DescribeInstanceTypeFamilies 135
6.23. DescribeInstanceTypes 138
6.24. ModifyInstanceAttribute 143
6.25. ModifyInstanceVncPasswd 148
6.26. ModifyInstanceAutoReleaseTime 150
6.27. ModifyInstanceAutoRenewAttribute 151
6.28. ModifyInstanceChargeType 153
6.29. ModifyInstanceSpec 159
6.30. ModifyPrepayInstanceSpec 165
6.31. ModifyInstanceMetadataOptions 172
7.Dedicated hosts 174
7.1. AllocateDedicatedHosts 174
7.2. CreateDedicatedHostCluster 180
7.3. DescribeDedicatedHostClusters 182
7.4. ModifyDedicatedHostClusterAttribute 186
7.5. DeleteDedicatedHostCluster 187
7.6. DescribeDedicatedHostTypes 188
7.7. DescribeDedicatedHosts 191
7.8. DescribeDedicatedHostAutoRenew 198
7.9. ModifyDedicatedHostAttribute 201
7.10. ModifyDedicatedHostAutoRenewAttribute 203
7.11. ModifyDedicatedHostAutoReleaseTime 206

7.12. ModifyDedicatedHostsChargeType 208
7.13. ModifyInstanceDeployment 212
7.14. RenewDedicatedHosts 216
7.15. ReleaseDedicatedHost 218
7.16. RedeployDedicatedHost 219
8.Launch templates 221
8.1. CreateLaunchTemplate 221
8.2. CreateLaunchTemplateVersion 232
8.3. DescribeLaunchTemplates 241
8.4. DescribeLaunchTemplateVersions 244
8.5. ModifyLaunchTemplateDefaultVersion 252
8.6. DeleteLaunchTemplate 254
8.7. DeleteLaunchTemplateVersion 255
9.Resource assurance 257
9.1. CreateElasticityAssurance 257
9.2. CreateCapacityReservation 261
9.3. DescribeElasticityAssurances 266
9.4. DescribeElasticityAssuranceInstances 271
9.5. DescribeCapacityReservations 273
9.6. DescribeCapacityReservationInstances 279
9.7. DescribeInstanceAttachmentAttributes 281
9.8. ModifyElasticityAssurance 283
9.9. ModifyCapacityReservation 284
9.10. ModifyInstanceAttachmentAttributes 286
9.11. ReleaseCapacityReservation 288
10.Auto provisioning group 290
10.1. DescribeAutoProvisioningGroups 290
10.2. DescribeAutoProvisioningGroupInstances 296

10.3. DescribeAutoProvisioningGroupHistory 299
10.4. ModifyAutoProvisioningGroup 301
10.5. DeleteAutoProvisioningGroup 304
11.Disks 306
11.1. CreateDisk 306
11.2. AttachDisk 314
11.3. DescribeDisks 318
11.4. ModifyDiskChargeType 329
11.5. ModifyDiskAttribute 333
11.6. ModifyDiskSpec 335
11.7. ResetDisk 338
11.8. ReplaceSystemDisk 341
11.9. ReInitDisk 347
11.10. ResizeDisk 350
11.11. DetachDisk 354
11.12. DeleteDisk 356
11.13. CreateDedicatedBlockStorageCluster 357
11.14. DescribeDedicatedBlockStorageClusters 360
12.Reserved Instances 364
12.1. PurchaseReservedInstancesOffering 364
12.2. DescribeReservedInstances 368
12.3. ModifyReservedInstances 372
13.Storage Capacity Units 376
13.1. PurchaseStorageCapacityUnit 376
13.2. DescribeStorageCapacityUnits 378
13.3. ModifyStorageCapacityUnitAttribute 382
14.Images 384
14.1. CreateImage 384

14.2. ImportImage 390
14.3. CopyImage 397
14.4. CancelCopyImage 401
14.5. ExportImage 402
14.6. DescribeImages 406
14.7. DescribeImageSharePermission 415
14.8. DescribeImageSupportInstanceTypes 417
14.9. DescribeImageFromFamily 419
14.10. ModifyImageAttribute 423
14.11. ModifyImageSharePermission 425
14.12. DeleteImage 428
15.Image builder 430
15.1. CreateImageComponent 430
15.2. CreateImagePipeline 432
15.3. DescribeImageComponents 435
15.4. DescribeImagePipelines 438
15.5. DeleteImageComponent 442
15.6. DeleteImagePipeline 443
15.7. StartImagePipelineExecution 444
15.8. DescribeImagePipelineExecutions 445
15.9. CancelImagePipelineExecution 448
16.Snapshots 450
16.1. CreateSnapshot 450
16.2. CopySnapshot 455
16.3. DescribeSnapshots 457
16.4. DescribeSnapshotsUsage 464
16.5. DescribeSnapshotLinks 465
16.6. ModifySnapshotAttribute 468

16.7. DeleteSnapshot 470
16.8. CreateAutoSnapshotPolicy 471
16.9. ApplyAutoSnapshotPolicy 474
16.10. CancelAutoSnapshotPolicy 476
16.11. DescribeAutoSnapshotPolicyEX 477
16.12. ModifyAutoSnapshotPolicyEx 481
16.13. DeleteAutoSnapshotPolicy 483
16.14. CreateSnapshotGroup 484
16.15. DescribeSnapshotGroups 489
16.16. DeleteSnapshotGroup 493
16.17. ModifySnapshotGroup 496
17.Prefix lists 498
17.1. CreatePrefixList 498
17.2. DescribePrefixLists 500
17.3. DescribePrefixListAssociations 502
17.4. DescribePrefixListAttributes 504
17.5. ModifyPrefixList 506
17.6. DeletePrefixList 508
18.Security groups 510
18.1. CreateSecurityGroup 510
18.2. AuthorizeSecurityGroup 513
18.3. AuthorizeSecurityGroupEgress 520
18.4. RevokeSecurityGroup 526
18.5. RevokeSecurityGroupEgress 532
18.6. JoinSecurityGroup 538
18.7. LeaveSecurityGroup 541
18.8. DescribeSecurityGroupAttribute 542
18.9. DescribeSecurityGroups 546

18.10. DescribeSecurityGroupReferences 551
18.11. ModifySecurityGroupAttribute 553
18.12. ModifySecurityGroupRule 555
18.13. ModifySecurityGroupEgressRule 561
18.14. ModifySecurityGroupPolicy 566
18.15. DeleteSecurityGroup 568
19.Deployment sets 570
19.1. CreateDeploymentSet 570
19.2. DescribeDeploymentSets 572
19.3. DescribeDeploymentSetSupportedInstanceTypeFamily 575
19.4. ModifyDeploymentSetAttribute 576
19.5. DeleteDeploymentSet 578
20.SSH key pairs 580
20.1. CreateKeyPair 580
20.2. ImportKeyPair 582
20.3. DescribeKeyPairs 584
20.4. AttachKeyPair 586
20.5. DetachKeyPair 588
20.6. DeleteKeyPairs 591
21.Networks 593
21.1. ModifyInstanceVpcAttribute 593
21.2. AllocatePublicIpAddress 596
21.3. ConvertNatPublicIpToEip 598
21.4. AttachClassicLinkVpc 600
21.5. DetachClassicLinkVpc 602
21.6. DescribeBandwidthLimitation 603
21.7. DescribeClassicLinkInstances 606
21.8. ModifyInstanceNetworkSpec 608

22.Elastic network interfaces 614
22.1. CreateNetworkInterface 614
22.2. AttachNetworkInterface 621
22.3. AssignPrivateIpAddresses 625
22.4. UnassignPrivateIpAddresses 629
22.5. DetachNetworkInterface 631
22.6. DescribeNetworkInterfaces 633
22.7. ModifyNetworkInterfaceAttribute 642
22.8. AssignIpv6Addresses 645
22.9. UnassignIpv6Addresses 648
22.10. DeleteNetworkInterface 650
23.System event 653
23.1. CreateSimulatedSystemEvents 653
23.2. DescribeInstancesFullStatus 655
23.3. DescribeInstanceHistoryEvents 660
23.4. DescribeDisksFullStatus 668
23.5. AcceptInquiredSystemEvent 674
23.6. CancelSimulatedSystemEvents 675
24.Monitoring 677
24.1. DescribeSnapshotMonitorData 677
24.2. DescribeEniMonitorData 679
24.3. DescribeDiskMonitorData 683
24.4. DescribeInstanceMonitorData 687
24.5. GetInstanceScreenshot 690
24.6. GetInstanceConsoleOutput 692
24.7. DescribeInstanceMaintenanceAttributes 694
24.8. ModifyInstanceMaintenanceAttributes 696
24.9. RedeployInstance 698

24.10. ReportInstancesStatus 700
25.Cloud assistants 704
25.1. CreateActivation 704
25.2. InvokeCommand 706
25.3. DisableActivation 712
25.4. DeregisterManagedInstance 714
25.5. StopInvocation 716
25.6. StartTerminalSession 718
25.7. InstallCloudAssistant 720
25.8. ModifyCommand 721
25.9. ModifyManagedInstance 723
25.10. SendFile 725
25.11. DescribeSendFileResults 728
25.12. DescribeCloudAssistantStatus 733
25.13. DescribeCommands 736
25.14. DescribeInvocationResults 740
25.15. DescribeActivations 746
25.16. DescribeManagedInstances 748
25.17. DeleteCommand 751
25.18. DeleteActivation 752
26.HPC clusters 755
26.1. CreateHpcCluster 755
26.2. DescribeHpcClusters 756
26.3. ModifyHpcClusterAttribute 758
26.4. DeleteHpcCluster 760
27.Tags 762
27.1. TagResources 762
27.2. ListTagResources 764

27.3. UntagResources 769
28.Regions 773
28.1. DescribeRegions 773
28.2. DescribeZones 775
28.3. DescribeResourcesModification 780
28.4. DescribeAvailableResource 784
29.Pricing 791
29.1. DescribePrice 791
29.2. DescribeRenewalPrice 803
29.3. DescribeInstanceModificationPrice 806
30.Others 811
30.1. CancelTask 811
30.2. DescribeTasks 812
30.3. DescribeTaskAttribute 815
30.4. DescribeDemands 817
30.5. DescribeAccountAttributes 822
30.6. JoinResourceGroup 828
31.Appendix 831
31.1. Error code table 831
31.2. Instance states 831
31.3. Instance status chart 831
31.4. Disk states 832
31.5. Disk status chart 832
31.6. ISO 8601 Time Format 833
31.7. Disk categories 833
31.8. API behavior for accounts that have overdue payments 833
31.9. API behavior when an instance is locked for security reas... 836
31.10. How to ensure idempotence 837

31.11. Call API operations over the internal network 838
31.12. Why are only 10 entries returned after an API operation... 840
31.13. API usage Specification 841
32.API FAQ 842

1.Introduction

If you are familiar with network service protocols and one or more programming languages, we recommend that you use Elastic Compute Service (ECS) API to manage your cloud resources and develop your applications.

Limits

Limits apply to your ECS resources such as instances, Elastic Block Storage (EBS) devices, security groups, snapshots, and public bandwidth. These limits vary based on your ECS usage. For more information, see 使用限制.

Instructions

ECS API supports HTTP or HTTPS requests. You can use the GET or POST method to send and receive requests. You can use one of the following tools to call ECS API operations:

- Alibaba Cloud OpenAPI Explorer. You can use OpenAPI Explorer to call ECS API operations. For more information, see OpenAPI Developer Portal.
- ECS SDKs. You can use ECS SDKs to call ECS API operations. For more information, see SDK overview.
- Alibaba Cloud CLI. You can run the **aliyun** command in the shell command line to interact with Alibaba Cloud services and manage your Alibaba Cloud resources. For more information, see What is Alibaba Cloud CLI? .

> **Note** When you call an API operation by using Alibaba Cloud CLI or SDKs, remove the periods (.) from request parameters. For example, use `SystemDiskCategory` instead of `SystemDisk.Category` as a request parameter.

For information about how to call API operations by using different tools, see Quick start.

Terms

Term	Parameter	Description
region	RegionId	An Alibaba Cloud data center. After you create a resource, its region cannot be changed.
zone	ZoneId	A physical location with independent power grids and networks within a region. Each region includes multiple zones. Resources in zones of the same region can communicate with each other over the internal network with faults isolated. The network latency for ECS instances within the same zone is low.
instance	InstanceId	A virtual machine virtualized from a physical server. It is the basic computing unit of ECS. For more information, see Instance family.
reserved instance	ReservedInstanceId	A discount coupon that can be applied to pay-as-you-go instances (excluding preemptible instances) and provides a resource reservation for pay-as-you-go instances.
launch template	LaunchTemplateId	A template that contains configurations that you can use to create instances. A launch template can include configurations except for passwords. It can include a key pair, a RAM role, an instance type, and network configurations.
auto provisioning group	AutoProvisioningGroupId	A group used by Auto Provisioning to schedule and maintain compute resources. Auto Provisioning is a service used to deploy an instance cluster that consists of preemptible and pay-as-you-go instances. Auto Provisioning facilitates the deployment of instance clusters across different billing methods, zones, and instance families.
image	ImageId	A template that is pre-installed with an operating system and software configurations. System disks of new instances are the copies of images that are used to create the instances. You can use an image to create an instance or replace the system disk of an instance.
EBS device	DiskId	A storage device for Alibaba Cloud ECS. EBS devices are classified into cloud disks and local disks based on their performance and use scenarios.
security group	SecurityGroupId	A virtual firewall to control inbound and outbound traffic for ECS instances. An instance must belong to one or more security groups.
SSH key pair	KeyPairName	A combination of a public key and a private key. SSH key pairs are used to connect to ECS instances over the SSH protocol and are applicable only to Linux instances.
elastic network interface	NetworkInterfaceId	A logical networking component that represents a virtual network card in a virtual private cloud (VPC). Elastic network interfaces (ENIs) are applicable only to ECS instances within VPCs and can be bound to or unbound from the instances.
snapshot	SnapshotId	A point-in-time copy of a disk. Snapshots are taken for disks to restore disk data to a specific point in time. Snapshots can be used to restore disk data and create images.
tag	Tag.N.Key	A key-value pair. You can add tags to ECS resources for easy search and classification.

Term	Parameter	Description
IP address	NatIPAddress	The public or private IP address of an ECS instance.
Cloud Assistant	CommandId	A built-in tool for ECS that provides O&M and deployment services. Cloud Assistant can automatically run batch, PowerShell, or shell commands to perform tasks on multiple instances at a time without establishing individual connections to these instances.

2.List of operations by function

The following tables list the API operations available for use in Elastic Compute Service (ECS).

Instances

Operation	Description
RunInstances	Creates one or more pay-as-you-go or subscription instances.
CreateInstance	Creates a subscription or pay-as-you-go instance.
StartInstance	Starts an instance.
StopInstance	Stops an instance.
RebootInstance	Restarts an instance that is in the Running state.
DeleteInstance	Releases a pay-as-you-go instance or an expired subscription instance.
StartInstances	Starts one or more instances that are in the Stopped state.
RebootInstances	Restarts one or more instances that are in the Running state.
StopInstances	Stops one or more instances that are in the Running state.
AttachInstanceRamRole	Attaches an instance RAM role to one or more instances. An instance can have only a single instance RAM role. If an instance already has an instance RAM role, an error is returned when you attach another instance RAM role to the instance.
DetachInstanceRamRole	Detaches an instance RAM role from one or more instances.
DescribeInstanceStatus	Queries the status information of one or more instances.
DescribeInstances	Queries the details of one or more instances.
DescribeInstanceVncUrl	Queries the Virtual Network Console (VNC) URL of an instance.
DescribeUserData	Queries the user data of an instance.
DescribeInstanceAutoRenewAttribute	Queries the auto-renewal status of one or more subscription instances.
DescribeInstanceRamRole	Queries instance RAM roles attached to one or more instances.
DescribeSpotPriceHistory	Queries the price history of a preemptible instance over the last 30 days.
DescribeSpotAdvice	Queries information such as the average release rate and discount rate of a preemptible instance in a specified region over the last 30 days.
DescribeInstanceTypeFamilies	Queries instance families provided by ECS.
DescribeInstanceTypes	Queries instance types provided by ECS.
ModifyInstanceAttribute	Modifies information of an instance, such as the password, name, description, hostname, and user data. For a burstable instance, you can also change its performance mode.
ModifyInstanceVncPasswd	Modifies the VNC password of an instance.
ModifyInstanceAutoReleaseTime	Sets or cancels the automatic release time for a pay-as-you-go instance. If you set the automatic release time for an instance, the instance is automatically released at the specified time. Proceed with caution when you call this operation.
ModifyInstanceAutoRenewAttribute	Configures auto-renewal for one or more subscription instances. To reduce the maintenance workloads when instances expire, you can configure auto-renewal for subscription instances.
ModifyInstanceChargeType	Changes the billing method of one or more ECS instances. You can change the billing methods of instances between pay-as-you-go and subscription, or change the billing method of all data disks attached to an instance from pay-as-you-go to subscription.
ModifyInstanceSpec	Changes the instance type and public bandwidth of a pay-as-you-go instance.
ModifyPrepayInstanceSpec	Upgrades or downgrades the instance type of a subscription instance. The new instance type takes effect for the entire lifecycle of the instance.
ModifyInstanceMetadataOptions	Modifies the metadata of an instance.

Operation	Description
RenewInstance	Renews a subscription instance.
ReactivateInstances	Reactivates a pay-as-you-go instance that is in the Expired state or Overdue and Being Recycled state.
DeleteInstances	Releases one or more pay-as-you-go instances or expired subscription instances.

Dedicated hosts

Operation	Description
AllocateDedicatedHosts	Creates one or more pay-as-you-go or subscription dedicated hosts. A dedicated host is a physical server dedicated to a single tenant. You can create ECS instances on a dedicated host and view the attributes of the dedicated host.
CreateDedicatedHostCluster	Creates a dedicated host cluster.
DescribeDedicatedHostClusters	Queries the details of one or more dedicated host clusters.
ModifyDedicatedHostClusterAttribute	Modifies some attributes of a dedicated host cluster, such as its name and description.
DeleteDedicatedHostCluster	Deletes a dedicated host cluster.
RenewDedicatedHosts	Renews one or more subscription dedicated hosts.
ReleaseDedicatedHost	Releases a pay-as-you-go dedicated host.
RedeployDedicatedHost	Migrates instances from a failed dedicated host.
DescribeDedicatedHosts	Queries the details of one or more dedicated hosts, including the physical performance specifications, machine codes, and service status of the dedicated hosts, and ECS instances that are created on the dedicated hosts.
DescribeDedicatedHostTypes	Queries the details of dedicated host types supported in a region, or the ECS instance families supported by a specific dedicated host type.
DescribeDedicatedHostAutoRenew	Queries the auto-renewal status of one or more subscription dedicated hosts.
ModifyInstanceDeployment	Changes the deployment set of an instance or migrates an instance to a dedicated host. The instance and the destination dedicated host must be in the same region.
ModifyDedicatedHostAttribute	Modifies the information of a dedicated host, including the name, description, and instance migration policy applied when the dedicated host fails.
ModifyDedicatedHostAutoReleaseTime	Sets or cancels the automatic release time for a pay-as-you-go dedicated host.
ModifyDedicatedHostAutoRenewAttribute	Enables or disables auto-renewal for one or more subscription dedicated hosts.
ModifyDedicatedHostsChargeType	Changes the billing method of dedicated hosts.

Launch templates

Operation	Description
CreateLaunchTemplate	Creates a launch template. A launch template eliminates the need to configure a large number of parameters each time you create an instance.
CreateLaunchTemplateVersion	Creates a version for a specific launch template.
DeleteLaunchTemplate	Deletes a launch template.
DeleteLaunchTemplateVersion	Deletes a version of a specific launch template. You cannot call this operation to delete the default version. To delete the default version, you must call the DeleteLaunchTemplate operation.
DescribeLaunchTemplates	Queries one or more available launch templates.
DescribeLaunchTemplateVersions	Queries the versions of launch templates.
ModifyLaunchTemplateDefaultVersion	Modifies the default version of a launch template. If you do not specify a template version number when you create instances by calling the RunInstances operation, the default version is used.

Resource assurances

Operation	Description
CreateElasticityAssurance	Creates an elasticity assurance.
CreateCapacityReservation	Creates a capacity reservation.
DescribeElasticityAssurances	Queries the details of elasticity assurances.
DescribeElasticityAssuranceInstances	Queries the running ECS instances that were created by using an elasticity assurance.
DescribeCapacityReservations	Queries the details of one or more capacity reservations.
DescribeCapacityReservationInstances	Queries the instances that match a capacity reservation.
DescribeInstanceAttachmentAttributes	Queries information of the private pools that instances match.
ModifyElasticityAssurance	Modifies the name and description of an elasticity assurance.
ModifyCapacityReservation	Modifies information of a capacity reservation, including the name, description, expiration method, and the total number of ECS instances that can be reserved.
ModifyInstanceAttachmentAttributes	Modifies the attributes of the private pool for an instance.
ReleaseCapacityReservation	Releases a capacity reservation.

Auto provisioning groups

Operation	Description
CreateAutoProvisioningGroup	Creates an auto provisioning group.
ModifyAutoProvisioningGroup	Modifies the configurations of an auto provisioning group.
DeleteAutoProvisioningGroup	Deletes an auto provisioning group.
DescribeAutoProvisioningGroupInstances	Queries the instances in an auto provisioning group.
DescribeAutoProvisioningGroups	Queries information of auto provisioning groups.
DescribeAutoProvisioningGroupHistory	Queries the scheduling tasks of an auto provisioning group.

Elastic Block Storage (EBS) devices

Operation	Description
CreateDisk	Creates a pay-as-you-go or subscription data disk. The data disk can be a basic disk, an ultra disk, a standard SSD, or an enhanced SSD (ESSD).
DeleteDisk	Releases a pay-as-you-go data disk. The data disk can be a basic disk, an ultra disk, a standard SSD, or an ESSD.
DescribeDisks	Queries one or more EBS devices that you have created, including cloud disks and local disks.
AttachDisk	Attaches a pay-as-you-go data disk to an instance.
DetachDisk	Detaches a pay-as-you-go disk from an instance. The disk can be a basic disk, an ultra disk, or a standard SSD.
ModifyDiskAttribute	Modifies the attributes of one or more disks.
ReplaceSystemDisk	Replaces the system disk or operating system of an instance.
ReInitDisk	Re-initializes a disk to the state that it was in when it was created.
ResetDisk	Rolls back a disk to a specific point in time based on a snapshot of the disk.
ResetDisks	Rolls back one or more disks by using a snapshot-consistent group.
ResizeDisk	Resizes a system disk or data disk.
ModifyDiskChargeType	Changes the billing methods of up to 16 disks attached to an instance.
ModifyDiskSpec	Upgrades the performance level of an ESSD.

Operation	Description
CreateDedicatedBlockStorageCluster	Creates a dedicated block storage cluster.
DescribeDedicatedBlockStorageClusters	Queries the created dedicated block storage clusters.

EBS devices (advanced features)

Operation	Description
CreateDiskReplicaPair	Creates a replication pair to asynchronously replicate data between disks.
StartDiskReplicaPair	Activates a replication pair to replicate data from the primary disk to the secondary disk across regions on a regular basis.
FailoverDiskReplicaPair	Enables the failover feature for a replication pair. When the primary disk in a replication pair fails, you can call this operation to enable read and write permissions on the secondary disk and fail over to the secondary disk.
ReprotectDiskReplicaPair	Enables the reverse replication feature for a replication pair. After reverse replication is enabled for the replication pair, data is replicated from the original secondary disk to the original primary disk.
DescribeDiskReplicaPairs	Queries the details of one or more replication pairs in a specific region.
DescribeRegions	Queries the details of regions in which EBS features are supported.
ModifyDiskReplicaPair	Modifies the name or description of a replication pair.
StopDiskReplicaPair	Stops a replication pair.
DeleteDiskReplicaPair	Deletes a replication pair.

Reserved instances

Operation	Description
PurchaseReservedInstancesOffering	Purchases a reserved instance. Reserved instances can be applied to automatically offset the bills of pay-as-you-go instances.
DescribeReservedInstances	Queries purchased reserved instances.
ModifyReservedInstances	Modifies reserved instances.

Storage capacity units (SCUs)

Operation	Description
PurchaseStorageCapacityUnit	Purchases one or more SCUs.
ModifyStorageCapacityUnitAttribute	Modifies the name or description of an SCU.
DescribeStorageCapacityUnits	Queries the details of one or more SCUs.

Images

Operation	Description
CreateImage	Creates a custom image. You can use the created image to create ECS instances (RunInstances) or replace system disks of ECS instances (ReplaceSystemDisk).
ImportImage	Imports an existing image to ECS. The imported image appears as a custom image in the destination region.
ExportImage	Exports a custom image to an Object Storage Service (OSS) bucket in the same region.
CopyImage	Copies a custom image from one region to another. You can deploy or copy instances across regions by copying images.
CancelCopyImage	Cancels an ongoing image copy (CopyImage) task.
DescribeImages	Queries available images.

Operation	Description
DeleteImage	Deletes a custom image.
DescribeImageSharePermission	Queries the accounts to which a custom image is shared. The response can be displayed by page. By default, ten entries are displayed on each page.
ModifyImageAttribute	Modifies the name or description of a custom image.
ModifyImageSharePermission	Manages the share permissions on a custom image. After you share a custom image to another Alibaba Cloud account, the account can use the shared image to create ECS instances (RunInstances) or replace system disks of ECS instances (ReplaceSystemDisk).
DescribeImageSupportInstanceTypes	Queries the instance types supported by an image.
DescribeImageFromFamily	Queries available custom images that are most recently created in a specific image family.

Image Builder

Operation	Description
CreateImageComponent	Creates an image component. Image components are used to store the image template commands that are commonly used to create images.
CreateImagePipeline	Creates an image template. Image templates can be used to create images.
DescribeImageComponents	Queries the details of one or more image components.
DescribeImagePipelines	Queries the details of one or more image templates.
DeleteImageComponent	Deletes an image component.
DeleteImagePipeline	Deletes an image template.
StartImagePipelineExecution	Executes an image creation task by using an image template.
DescribeImagePipelineExecutions	Queries the details of an image creation task.
CancelImagePipelineExecution	Cancels an image creation task.

Snapshots

Operation	Description
CreateSnapshot	Creates a snapshot for a disk.
CreateAutoSnapshotPolicy	Creates an automatic snapshot policy.
CreateSnapshotGroup	Creates a snapshot-consistent group for the disks on an ECS instance. A snapshot-consistent group can contain snapshots of one or more disks.
ApplyAutoSnapshotPolicy	Applies an automatic snapshot policy to one or more disks. If you apply an automatic snapshot policy to a disk that already has an automatic snapshot policy, the new policy replaces the original policy to take effect on the disk.
CopySnapshot	Copies a normal snapshot from one region to another.
DeleteSnapshot	Deletes a snapshot. If you call this operation to delete a snapshot that is being created, the snapshot creation task is canceled.
CancelAutoSnapshotPolicy	Disables the automatic snapshot policy for one or more disks.
DeleteAutoSnapshotPolicy	Deletes an automatic snapshot policy. After you delete an automatic snapshot policy, the policy is no longer applied to the disks on which it previously took effect.
DeleteSnapshotGroup	Deletes a snapshot-consistent group.
DescribeAutoSnapshotPolicyEX	Queries the automatic snapshot policies that you have created.
DescribeSnapshots	Queries all snapshots of an instance or disk. You can specify multiple request parameters such as InstanceId, DiskId, and SnapshotIds to be queried. Specified parameters have logical AND relations. Only the specified parameters are included in the filter conditions.

Operation	Description
DescribeSnapshotLinks	Queries the snapshot chains of one or more disks. A snapshot chain is a chain of all the snapshots created for a disk. A disk corresponds to a snapshot chain.
DescribeSnapshotGroups	Queries the information of one or more snapshot-consistent groups.
DescribeSnapshotsUsage	Queries the number of snapshots that are stored in a region and the total size of the snapshots.
ModifyAutoSnapshotPolicyEx	Modifies an automatic snapshot policy. After an automatic snapshot policy is modified, the modifications immediately take effect on the disks to which the policy is applied.
ModifySnapshotAttribute	Modifies the name or description of a snapshot.
ModifySnapshotGroup	Modifies the name or description of a snapshot-consistent group.

Prefix lists

Operation	Description
CreatePrefixList	Creates a prefix list.
DescribePrefixLists	Queries the information of one or more prefix lists.
DescribePrefixListAssociations	Queries the information of resources that are associated with a specific prefix list.
DescribePrefixListAttributes	Queries the details of a prefix list, including the name, address family, maximum number of entries, and details of the entries.
ModifyPrefixList	Modifies the name, description, or entries of a specific prefix list.
DeletePrefixList	Deletes a prefix list and all entries in the prefix list.

Security groups

Operation	Description
CreateSecurityGroup	Creates a security group. By default, a new security group allows mutual access between instances in the security group. Access requests to the security group from outside are denied. If you want to allow requests from the Internet or requests from instances in other security groups, you can call the AuthorizeSecurityGroup operation.
AuthorizeSecurityGroup	Creates an inbound rule in a security group. You can use the created rule to allow or deny inbound traffic from other devices to instances in the security group.
AuthorizeSecurityGroupEgress	Creates an outbound rule in a security group. You can use the created rule to allow or deny outbound traffic from instances in the security group to other devices.
RevokeSecurityGroup	Deletes an inbound security group rule. After the rule is deleted, the access control implemented by it is removed.
RevokeSecurityGroupEgress	Deletes an outbound security group rule. After the rule is deleted, the access control implemented by it is removed.
JoinSecurityGroup	Adds an instance to a security group.
LeaveSecurityGroup	Removes an instance from a security group.
DeleteSecurityGroup	Deletes a security group.
DescribeSecurityGroupAttribute	Queries the rules of a security group.
DescribeSecurityGroups	Queries the basic information of security groups, including their IDs and descriptions. Security groups are displayed in descending order of their IDs.
DescribeSecurityGroupReferences	Queries whether a security group is referenced by other security groups.
ModifySecurityGroupAttribute	Modifies the name or description of a security group.
ModifySecurityGroupPolicy	Modifies the internal access control policy of a basic security group.
ModifySecurityGroupRule	Modifies the descriptions of inbound rules in a security group. You can call the AuthorizeSecurityGroup operation to create an inbound security group rule.

Operation	Description
ModifySecurityGroupEgressRule	Modifies the descriptions of outbound rules in a security group. You can call the AuthorizeSecurityGroupEgress operation to create an outbound security group rule.

Deployment sets

Operation	Description
CreateDeploymentSet	Creates a deployment set in a specific region.
DeleteDeploymentSet	Deletes a deployment set.
ModifyDeploymentSetAttribute	Modifies the name or description of a deployment set.
DescribeDeploymentSets	Queries the attributes of one or more deployment sets.
DescribeDeploymentSetSupportedInstanceTypeFamily	Queries the instance families that support deployment sets.

SSH key pairs

Operation	Description
CreateKeyPair	Creates an SSH key pair. An SSH key pair consists of a public key and a private key. Alibaba Cloud stores the public key and returns the unencrypted private key that is PEM-encoded in the PKCS#8 format. You must securely lock away the private key.
ImportKeyPair	Imports the public key of an RSA-encrypted key pair that is generated by a third-party tool. After the key pair is imported, Alibaba Cloud stores the public key. You must securely lock away the private key.
AttachKeyPair	Binds an SSH key pair to one or more Linux instances.
DetachKeyPair	Unbinds an SSH key pair from one or more Linux instances.
DeleteKeyPairs	Deletes one or more SSH key pairs. After an SSH key pair is deleted, the public key is no longer stored in Alibaba Cloud. However, the instances to which the SSH key pair is bound can still use the key pair, and the key pair name is still displayed on the instance details page.
DescribeKeyPairs	Queries one or more key pairs.

High performance computing (HPC) clusters

Operation	Description
DeleteHpcCluster	Deletes an HPC cluster.
CreateHpcCluster	Creates an HPC cluster.
DescribeHpcClusters	Queries available HPC clusters. You can specify multiple request parameters to be queried. Specified parameters have logical AND relations. Only the specified parameters are included in the filter conditions.
ModifyHpcClusterAttribute	Modifies the description of an HPC cluster.

Networks

Operation	Description
ModifyInstanceVpcAttribute	Modifies the Virtual Private Cloud (VPC) attributes of an instance.
AllocatePublicIpAddress	Assigns a public IP address to an instance.
ConvertNatPublicIpToEip	Converts the public IP address of an instance located in a VPC to an elastic IP address (EIP).
AttachClassicLinkVpc	Links an instance located in the classic network to a VPC by establishing a ClassicLink connection between them. This way, the instance can communicate with cloud resources in the VPC over the internal network.

Operation	Description
DetachClassicLinkVpc	Unlinks an instance located in the classic network from a VPC by removing the ClassicLink connection between them. After the instance is unlinked from the VPC, it can no longer communicate with the resources in the VPC.
DescribeBandwidthLimitation	Queries available bandwidth resources.
DescribeClassicLinkInstances	Queries one or more instances located in the classic network that have established ClassicLink connections with VPCs.
ModifyInstanceNetworkSpec	Modifies the bandwidth configurations of an instance. You can modify the bandwidth configurations of an instance to improve network performance.

Elastic network interfaces (ENIs)

Operation	Description
CreateNetworkInterface	Creates an ENI.
AttachNetworkInterface	Binds an ENI to an instance located in a VPC.
DetachNetworkInterface	Unbinds an ENI from an instance.
DeleteNetworkInterface	Deletes an ENI.
DescribeNetworkInterfaces	Queries one or more ENIs.
ModifyNetworkInterfaceAttribute	Modifies the attributes such as the name, description, and security group of an ENI.
AssignPrivateIpAddresses	Assigns one or more secondary private IP addresses to an ENI. You can specify available private IP addresses within the CIDR block of the vSwitch that is associated with the ENI. Alternatively, you can specify a number to have the specified number of private IP addresses automatically assigned to the ENI.
UnassignPrivateIpAddresses	Unassigns one or more secondary private IP addresses from an ENI.

System events

Operation	Description
DescribeDisksFullStatus	Queries the full status information of one or more EBS devices.
DescribeInstancesFullStatus	Queries the full status information of one or more instances. The full status information includes instance states and states of instance system events. The instance states is the lifecycle states of instances. The states of instance system events are the health states of maintenance events.
DescribeInstanceHistoryEvents	Queries the system events of an instance. By default, system events that are in the Executed, Avoided, Canceled, or Failed state are queried.
CancelSimulatedSystemEvents	Cancels one or more simulated system events that are in the Scheduled or Executing state. After you cancel a simulated system event, the simulated event enters the Canceled state.
CreateSimulatedSystemEvents	Schedules simulated system events for one or more instances. The simulated system events do not actually occur on or affect ECS instances.
AcceptInquiredSystemEvent	Accepts the default operation for a system event in the Inquiring state and authorizes the system to perform the default operation.

O&M and monitoring

Operation	Description
GetInstanceScreenshot	Obtains the screenshots of an instance.
GetInstanceConsoleOutput	Obtains the command output of an instance. The returned command output is encoded in Base64.
DescribeDiskMonitorData	Queries the monitoring data of a disk over a specific period of time.
DescribeInstanceMonitorData	Queries the monitoring data of an instance. The returned monitoring data about an ECS instance includes the vCPU utilization, CPU credits of the burstable instance, received data traffic, sent data traffic, and average bandwidth.

Operation	Description
DescribeEniMonitorData	Queries the monitoring data of a secondary ENI over a specific period of time.
DescribeSnapshotMonitorData	Queries the monitoring data of changes in snapshot sizes in a region over the last 30 days.
DescribeInstanceMaintenanceAttributes	Queries the maintenance attributes of an instance.
ModifyInstanceMaintenanceAttributes	Modifies the maintenance attributes of an instance.
RedeployInstance	Redeploys an instance when the instance receives an event notification.
ReportInstancesStatus	Reports an exception on one or more ECS instances. You can report the same exception on multiple ECS instances or on multiple disks of an ECS instance.

Cloud Assistant

Operation	Description
CreateCommand	Creates a Cloud Assistant command.
CreateActivation	Creates an activation code. This activation code is used to register servers that are not provided by Alibaba Cloud as Alibaba Cloud managed instances.
InvokeCommand	Triggers a Cloud Assistant command for one or more instances.
StopInvocation	Stops the process of a running Cloud Assistant command on one or more instances.
DisableActivation	Manually disables an activation code.
ModifyCommand	Modifies the parameters and content of a Cloud Assistant command.
ModifyManagedInstance	Modifies the information of a managed instance.
DeleteCommand	Deletes a Cloud Assistant command.
DeregisterManagedInstance	Deregisters a managed instance. After you deregister the managed instance, you can no longer use Cloud Assistant to send commands or files to the instance.
DescribeCommands	Queries Cloud Assistant commands that you have created. If you specify only the Action and RegionId parameters, all available commands are queried.
DescribeInvocations	Queries the execution list and states of Cloud Assistant commands over the last two weeks.
DescribeInvocationResults	Queries the execution results of Cloud Assistant commands on instances.
DescribeCloudAssistantStatus	Queries whether the Cloud Assistant client is installed on one or more instances.
DescribeActivations	Queries existing activation codes and their usage information.
DescribeManagedInstances	Queries managed instances.
InstallCloudAssistant	Installs the Cloud Assistant client on one or more instances.
RunCommand	Creates a Cloud Assistant command of the shell, PowerShell, or batch type and then runs the command on one or more instances.
SendFile	Sends a remote file to one or more ECS instances.
DescribeSendFileResults	Queries the files sent by Cloud Assistant and their states.
DeleteActivation	Deletes an unused activation code.
StartTerminalSession	Creates a session by using the session management feature. When you call this operation, you can include the ID of an ECS instance in the request to create a WebSocket session to the instance. The URL of the WebSocket session returned by the operation can be used to connect to the instance.

Tags

Operation	Description
TagResources	Adds tags to specified ECS resources.
ListTagResources	Queries tags that are added to one or more ECS resources.

Operation	Description
UntagResources	Removes tags from specified ECS resources.

Regions

Operation	Description
DescribeRegions	Queries available Alibaba Cloud regions.
DescribeZones	Queries the zones in a specific region.
DescribeAvailableResource	Queries resources in a specific zone. For example, you can query the most recent resource list before you create instances (RunInstances) or modify instance specifications (ModifyInstanceSpec) in a specific zone.
DescribeResourcesModification	Queries available resources within a specific zone when you upgrade or downgrade instance types or replace system disks.

Inquiry

Operation	Description
DescribePrice	Queries the most recent prices of ECS resources.
DescribeRenewalPrice	Queries the renewal prices of subscription ECS resources. Renewal prices of only subscription resources can be queried.
DescribeInstanceModificationPrice	Queries the pricing information about newly attached subscription data disks or about the new ECS instance types when you upgrade the configurations of unexpired subscription instances.

Other operations

Operation	Description
CancelTask	Cancels a running task. You can cancel the running tasks generated by the ImportImage or ExportImage operation.
DescribeTasks	Queries the progress of one or more asynchronous requests.
DescribeTaskAttribute	Queries the details of an asynchronous task. You can query the asynchronous tasks generated by the ImportImage or ExportImage operation.
DescribeAccountAttributes	Queries the quotas of ECS resources that you can create in an Alibaba Cloud region. You can query the maximum numbers of security groups, ENIs, vCPUs for pay-as-you-go instances, vCPUs for preemptible instances, and dedicated hosts that you can create in a region. You can also query the information such as the network type in that region or whether real-name verification has been completed for an account.
JoinResourceGroup	Adds an ECS resource or service to a resource group.
DescribeDemands	Queries the delivery and usage states of filed resources.

3.Quick start

This topic describes how to use a developer tool such as Alibaba Cloud CLI, OpenAPI Explorer, or Alibaba Cloud SDK to call Elastic Compute Service (ECS) API operations. In the examples, CreateSnapshot is used.

Context

Before you call an API operation, you must understand related instructions in the API documentation and obtain the values of the required request parameters. If an error code is returned after you send a request, you can obtain the description of the error code in the API documentation.

Methods used to make API requests

- Example of calling an ECS API operation by using Alibaba Cloud CLI: Alibaba Cloud CLI is applicable to scenarios where command line tools are frequently used. Make sure that Alibaba Cloud CLI is installed on the ECS instance. For more information about how to install Alibaba Cloud CLI in different operating systems, see the following topics:
  - Windows
  - Linux
  - macOS
- Example of calling an ECS API operation by using OpenAPI Explorer: OpenAPI Explorer is applicable to users who frequently use interactive operation interfaces or developers who are unfamiliar with Alibaba Cloud services. You can debug API operations and obtain sample SDK requests in OpenAPI Explorer. For more information about OpenAPI Explorer, see What is OpenAPI Explorer?
- Example of calling an ECS API operation by using ECS SDK for Java: ECS SDK for Java is applicable to scenarios such as SDK encoding or DevOps. To use ECS SDK for Java, make sure that the SDK is installed. For more information, see Install ECS SDK for Java.

Example of calling an ECS API operation by using Alibaba Cloud CLI

1. Use one of the following methods to obtain the ID of an instance :
   - If you are connected to the ECS instance, you can obtain the ID of the instance from the instance metadata.

     ```
     curl http://100.100.100.200/2016-01-01/meta-data/instance-id
     ```

   - On your computer, you can call the DescribeInstances operation to obtain the ID of the instance.

     ```
     aliyun ecs DescribeInstances --output cols=InstanceId,InstanceName rows=Instances.Instance[]
     ```

2. Call the DescribeDisks operation to obtain the ID of a disk.

   ```
   aliyun ecs DescribeDisks --RegionId cn-hangzhou --InstanceId i-bp1afnc98r8k69****** --output cols=DiskId rows=Disks.Disk[]
   ```

3. Call the CreateSnapshot operation to create a snapshot based on the obtained disk ID.

   ```
   aliyun ecs CreateSnapshot --DiskId d-bp19pjyf12hebp******
   ```

   If the following information is returned, the task to create a snapshot is initiated:

   ```
   {"RequestId":"16B856F6-EFFB-4397-8A8A-CB73FA******","SnapshotId":"s-bp1afnc98r8kjh******"}
   ```

4. Call the DescribeSnapshots operation to query the progress of snapshot creation.

   ```
   aliyun ecs DescribeSnapshots --RegionId cn-hangzhou --InstanceId i-bp1afnc98r8k69******
   ```

   If both `"SnapshotId"="s-bp1afnc98r8kjh******"` and `"Status":"accomplished"` are returned, the snapshot is created.

Example of calling an ECS API operation by using OpenAPI Explorer

1. Call the DescribeInstances operation to obtain the ID of an instance and the ID of a disk.
2. Call the CreateSnapshot operation to create a snapshot based on the obtained disk ID.
3. Call the DescribeSnapshots operation to query the progress of snapshot creation.
   If both `"SnapshotId"="s-bp1afnc98r8kjh******"` and `"Status":"accomplished"` are returned, the snapshot is created.

Example of calling an ECS API operation by using ECS SDK for Java

You must specify the values of the following parameters in the sample code:

- <AccessKey>: Enter your AccessKey ID. For information about how to obtain your AccessKey pair, see Obtain an AccessKey pair.
- <AccessSecret>: Enter your AccessKey secret.
- <RegionId>: Enter the region ID of the instance. For information about the valid values, see Regions and zones or DescribeRegions.
- <DiskId>: Enter the ID of the disk. For information about the valid values, see DescribeDisks.

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.ecs.model.v20140526.CreateSnapshotRequest;
import com.aliyuncs.ecs.model.v20140526.CreateSnapshotResponse;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;
/* pom.xml
<dependency>
    <groupId>com.aliyun</groupId>
    <artifactId>aliyun-java-sdk-core</artifactId>
    <version>3.0.9</version>
</dependency>
<dependency>
    <groupId>com.aliyun</groupId>
    <artifactId>aliyun-java-sdk-ecs</artifactId>
    <version>4.10.1</version>
</dependency>
*/
public class CreateSnapshotExample {
    private String accessKeyId = "<AccessKey>";
    private String accessSecret = "<AccessSecret>";
    /**
     * The region ID of the disk
     */
    private String regionId = "<RegionId>";
    /**
     * The ID of the disk for which you want to create a snapshot
     */
    private String diskId = "<DiskId>";
    public void createSnapshot() {
        DefaultProfile profile = DefaultProfile.getProfile(regionId, accessKeyId, accessSecret);
        IAcsClient client = new DefaultAcsClient(profile);
        CreateSnapshotRequest request = new CreateSnapshotRequest();
        request.setRegionId(regionId);
        request.setDiskId(diskId);
        try {
            CreateSnapshotResponse response = client.getAcsResponse(request);
            logInfo(response.getSnapshotId());
        } catch (ServerException e) {
            logInfo(String.format("Fail. Something with your connection with Aliyun go incorrect. ErrorCode: %s",
                e.getErrCode()));
        } catch (ClientException e) {
            logInfo(String.format("Fail. Business error. ErrorCode: %s, RequestId: %s",
                e.getErrCode(), e.getRequestId()));
        }
    }
    private static void logInfo(String message) {
        System.out.println(message);
    }
    public static void main(String[] args) {
        new CreateSnapshotExample().createSnapshot();
    }
}
```

4.HTTP Requests

4.1. Overview

This topic describes how to make API requests over HTTP. This topic is intended for users who initiate HTTP or HTTPS GET requests based on URLs to call API operations.

If you are using SDKs, OpenAPI Explorer, or Alibaba Cloud CLI, skip this topic.

The request URL consists of different parameters and has a fixed syntax. The URL contains common request parameters, your signature, and operation-specific parameters. Sample request URLs are provided for each API operation. These URLs are not encoded, which makes them easy to read. Before you make a request, you must encode the request URL. After the request is verified based on your signature, the results are returned to you. Response parameters are displayed if the call succeeds, and an error message is displayed if the call fails. You can troubleshoot issues based on the common error codes and API operation-specific error codes.

> **Note** We recommend that you use an SDK to call operations and manage resources, which eliminates the need for manual authentication.

Related information

- What is Alibaba Cloud CLI?
- Request syntax
- Common parameters
- Request signatures
- Responses

4.2. Request syntax

You can call ECS API operations by sending HTTP or HTTPS GET requests based on URLs. Each URL must contain request parameters. This topic describes the syntax of HTTP or HTTPS GET requests and provides the endpoints of Elastic Compute Service (ECS) API.

Sample request

The following example shows an unencoded URL request to call the CreateSnapshot operation:

```
https://ecs.aliyuncs.com/?Action=CreateSnapshot
&DiskId=d-28m5zbu****
&<Common request parameters>
```

- `https` specifies the protocol that is used to transmit the request.
- `ecs.aliyuncs.com` specifies the endpoint of ECS.
- `Action=CreateSnapshot` specifies the API operation to call. `DiskId=d-28m5zbu****` is a request parameter for CreateSnapshot.
- `<Common request parameters>` are common parameters defined in the system.

Protocols

You can send requests over HTTP or HTTPS. For security purposes, we recommend that you send requests over HTTPS.

If requests contain sensitive data such as passwords and SSH key pairs, we recommend that you use HTTPS. For example, if you want to specify the `Password` parameter when you call the CreateInstance operation, you can send a request over HTTPS to ensure data security.

Endpoints

The following table describes the endpoints of ECS API. To minimize the network latency, we recommend that you specify the endpoint based on the region where you make API requests.

- IPv4 endpoints

Region	Endpoint
China (Hangzhou) (Central region)	ecs.aliyuncs.com **Note** Global acceleration is enabled for `ecs.aliyuncs.com`. This can reduce the network latency caused by traffic forwarding across countries or regions. You can use this endpoint when you want to make API requests from countries or regions outside the Chinese mainland.
China (Zhangjiakou)	ecs.cn-zhangjiakou.aliyuncs.com
China (Hohhot)	ecs.cn-huhehaote.aliyuncs.com

Region	Endpoint
China (Ulanqab)	ecs.cn-wulanchabu.aliyuncs.com
China (Heyuan)	ecs.cn-heyuan.aliyuncs.com
China (Guangzhou)	ecs.cn-guangzhou.aliyuncs.com
Japan (Tokyo)	ecs.ap-northeast-1.aliyuncs.com
Australia (Sydney)	ecs.ap-southeast-2.aliyuncs.com
Malaysia (Kuala Lumpur)	ecs.ap-southeast-3.aliyuncs.com
Indonesia (Jakarta)	ecs.ap-southeast-5.aliyuncs.com
India (Mumbai)	ecs.ap-south-1.aliyuncs.com
UAE (Dubai)	ecs.me-east-1.aliyuncs.com
Germany (Frankfurt)	ecs.eu-central-1.aliyuncs.com
UK (London)	ecs.eu-west-1.aliyuncs.com

- IPv4/IPv6 dual-stack endpoints

Region	Endpoint
China (Hangzhou) (Central region)	ecs-dualstack.aliyuncs.com
China (Shanghai)	ecs-dualstack.cn-shanghai.aliyuncs.com
China (Qingdao)	ecs-dualstack.cn-qingdao.aliyuncs.com
China (Beijing)	ecs-dualstack.cn-beijing.aliyuncs.com
China (Zhangjiakou)	ecs-dualstack.cn-zhangjiakou.aliyuncs.com
China (Hohhot)	ecs-dualstack.cn-huhehaote.aliyuncs.com
China (Ulanqab)	ecs-dualstack.cn-wulanchabu.aliyuncs.com
China (Shenzhen)	ecs-dualstack.cn-shenzhen.aliyuncs.com
China (Heyuan)	ecs-dualstack.cn-heyuan.aliyuncs.com
China (Guangzhou)	ecs-dualstack.cn-guangzhou.aliyuncs.com
China (Chengdu)	ecs-dualstack.cn-chengdu.aliyuncs.com
China (Hong Kong)	ecs-dualstack.cn-hongkong.aliyuncs.com

Note ECS provides public endpoints. If your ECS instance does not have a public bandwidth or a public IP address, you cannot use tools such as Alibaba Cloud CLI or SDKs to make API requests for the instance. If you want to call API operations on ECS instances in virtual private clouds (VPCs) that cannot access the Internet, you can call the API operations over the internal network. For more information, see Call API operations over the internal network.

Request parameters

You must use the `Action` parameter to specify the API operation that you want to call. For example, set Action to StartInstance to call the StartInstance operation. You must also specify other operation-specific request parameters and common request parameters. For more information, see Common parameters.

Encoding

All requests and responses are encoded in `UTF-8`.

4.3. Common parameters

Common parameters consist of common request parameters and common response parameters.

Common request parameters

The following table describes common request parameters that can be used when you call Elastic Compute Service (ECS) API operations by sending GET requests over URLs.

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. For more information about the parameter values, see List of operations by function.
AccessKeyId	String	Yes	The AccessKey ID provided to you by Alibaba Cloud. AccessKey pairs are used to call API operations. Usernames and passwords are used to log on to the ECS console. For more information, see Obtain an AccessKey pair.
Signature	String	Yes	The signature string of the request. For information about how signatures are calculated, see Request signatures.
SignatureMethod	String	Yes	The encryption method of the signature string. Set the value to HMAC-SHA1.
SignatureVersion	String	Yes	The version of the signature encryption algorithm. Set the value to 1.0.
SignatureNonce	String	Yes	A unique, random number used to prevent replay attacks. You must use different numbers for different requests.
Timestamp	String	Yes	The timestamp of the request. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. Example: `2018-01-01T12:00:00Z`, which indicates 20:00:00 on January 1, 2018 (UTC+8).
Version	String	Yes	The version number of the API. The value must be in the YYYY-MM-DD format. Set the value to 2014-05-26.
Format	String	No	The format of the response parameters. Valid values: • json • xml Default value: xml.

Sample requests

Note The following content provides only sample values. Perform URL encoding in your actual operations. For more information, see the "Step 1: Create a canonicalized query string" section in Request signatures.

```
https://ecs.aliyuncs.com/?Action=<API Name>
&Format=xml
&Version=2014-05-26
&Signature=Pc5WB8gokVn0xfeu%2FZV%2BiNM1dgI%3D
&SignatureMethod=HMAC-SHA1
&SignatureNonce=15215528852396
&SignatureVersion=1.0
&AccessKeyId=key-test
&Timestamp=2018-01-01T12:00:00Z
...
```

Common response parameters

Parameter	Type	Description
RequestId	String	The ID of the request. This parameter is returned regardless of whether the operation is successful.

4.4. Request signatures

You must sign all HTTP and HTTPS API requests to ensure security. Alibaba Cloud uses the request signature to verify the identity of a request sender. Alibaba Cloud implements symmetric encryption with an AccessKey pair to verify the identity of the request sender.

> **Note**
> - An AccessKey pair serves as logon credentials that are used to call API operations, and the username and password are used to log on to the Elastic Compute Service (ECS) console. The AccessKey ID is used to verify the identity of the user, while the AccessKey secret is used to encrypt and verify the signature string. You must keep your AccessKey secret strictly confidential. For more information, see Obtain an AccessKey pair.
> - ECS provides SDKs for multiple programming languages and third-party SDKs to facilitate complex signature calculation. For more information, download SDKs.

Step 1: Create a canonicalized query string

1. Arrange the request parameters (including operation-specific parameters and common parameters except `Signature`) in alphabetical order.

   > **Note** If you use the GET method to send a request, the request parameters are included as a part of the request URL. The first parameter follows the question mark (`?`) in the URL, and the other parameters follow an ampersand (`&`).

2. Encode the request parameters and parameter values in UTF-8 based on RFC 3986. The following rules apply in the encoding process:
   - Uppercase letters, lowercase letters, and digits do not need to be encoded. Hyphens (`-`), underscores (`_`), periods (`.`), and tildes (`~`) do not need to be encoded.
   - Other characters must be percent encoded in the `%XY` format. In this format, `XY` represents the ASCII code of the characters in hexadecimal notation. For example, double quotation marks (`"`) are encoded as `%22`.
   - Extended UTF-8 characters are encoded in the `%XY%ZA…` format.
   - Spaces are encoded as `%20` instead of plus signs (`+`).

     The preceding encoding method is similar to but slightly different from the `application/x-www-form-urlencoded` MIME-type encoding algorithm.

     If you use `java.net.URLEncoder` in the Java standard library, use `percentEncode` to encode request parameters and their values. In the encoded query string, replace plus signs (`+`) with `%20`, asterisks (`*`) with `%2A`, and `%7E` with tildes (`~`). In this way, you can obtain an encoded string that matches the preceding encoding rules.

     ```
     private static final String ENCODING = "UTF-8";
     private static String percentEncode(String value) throws UnsupportedEncodingException {
     return value != null ? URLEncoder.encode(value, ENCODING).replace("+", "%20").replace("*", "%2A").replace("%7E", "~") : nu
     ll;
     }
     ```

3. Connect the encoded parameter names and values with equal signs (`=`).
4. Use an ampersand (`&`) to connect the encoded request parameters. These parameters must be arranged in the same order as those in Step 1.

In this way, you have a canonicalized query string (CanonicalizedQueryString) that follows the request syntax. For more information, see Request syntax.

Step 2: Create a string-to-sign

1. Create a string-to-sign (`StringToSign`). You can also use `percentEncode` to encode the canonicalized query string created in the previous step. The following rules apply:

   ```
   StringToSign=
     HTTPMethod + "&" + // HTTPMethod: The HTTP method used to make the request, such as GET.
     percentEncode("/") + "&" + // percentEncode("/"): Encode the forward slash (/) in UTF-8 as %2F.
     percentEncode(CanonicalizedQueryString) //Encode the canonicalized query string created in Step 1.
   ```

2. Calculate the hash-based message authentication code (HMAC) value of the string-to-sign (`StringToSign`), as defined in RFC 2104. Use the Secure Hash Algorithm 1 (SHA-1) algorithm to calculate the HMAC value. In this example, the Java Base64 encoding method is used.

   ```
   Signature = Base64( HMAC-SHA1( AccessSecret, UTF-8-Encoding-Of(StringToSign) ) )
   ```

   > **Note** When you calculate the signature, the key value specified by RFC 2104 is your `AccessKeySecret` with an ampersand (`&`), which has an ASCII value of 38. For more information, see Obtain an AccessKey pair.

3. Encode the `Signature` parameter based on RFC 3986 and add the parameter to the canonicalized query string.

Example 1: Concatenate parameters

In this example, the DescribeRegions operation is called. The following example shows the signature process when `AccessKeyID` is set to testid and `AccessKeySecret` set to testsecret:

1. Create a canonicalized query string.

```
http://ecs.aliyuncs.com/?Timestamp=2016-02-23T12%3A46%3A24Z&Format=XML&AccessKeyId=testid&Action=DescribeRegions&SignatureMethod=HMAC-SHA1&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf&Version=2014-05-26&SignatureVersion=1.0
```

2. Create a string-to-sign (`StringToSign`).

```
GET&%2F&AccessKeyId%3Dtestid%26Action%3DDescribeRegions%26Format%3DXML%26SignatureMethod%3DHMAC-SHA1%26SignatureNonce%3D3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf%26SignatureVersion%3D1.0%26Timestamp%3D2016-02-23T12%253A46%253A24Z%26Version%3D2014-05-26
```

3. Calculate the signature value. If `AccessKeySecret` is set to testsecret, the key value used for calculation is `testsecret&` . The calculated signature is `OLeaidS1JvxuMvnyHOwuJ+uX5qY=` . In this example, the Java Base64 encoding method is used.

```
Signature = Base64( HMAC-SHA1( AccessSecret, UTF-8-Encoding-Of(StringToSign) ) )
```

4. Add the `Signature=OLeaidS1JvxuMvnyHOwuJ%2BuX5qY%3D` string that is encoded based on RFC 3986 to the URL in Step 1.

```
http://ecs.aliyuncs.com/?SignatureVersion=1.0&Action=DescribeRegions&Format=XML&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf&Version=2014-05-26&AccessKeyId=testid&Signature=OLeaidS1JvxuMvnyHOwuJ%2BuX5qY%3D&SignatureMethod=HMAC-SHA1&Timestamp=2016-02-23T12%253A46%253A24Z
```

You can use browsers or tools such as cURL and Wget to initiate an HTTP request by using the new URL. The HTTP request calls the `DescribeRegions` operation to query the Alibaba Cloud region list.

Example 2: Use the standard library of the programming language

In this example, the DescribeRegions operation is called. The following example shows the signature process when `AccessKeyID` is set to testid and `AccessKeySecret` is set to testsecret, and all request parameters are placed in a Java `Map<String, String>` object:

1. Predefine the encoding method.

```
private static final String ENCODING = "UTF-8";
private static String percentEncode(String value) throws UnsupportedEncodingException {
  return value != null ? URLEncoder.encode(value, ENCODING).replace("+", "%20").replace("*", "%2A").replace("%7E", "~") : nu
ll;
}
```

2. Predefine the time format for the `Timestamp` parameter. The value of the `Timestamp` parameter must be specified in the ISO 8601 standard. The time must be in UTC.

```
private static final String ISO8601_DATE_FORMAT = "yyyy-MM-dd'T'HH:mm:ss'Z'";
private static String formatIso8601Date(Date date) {
  SimpleDateFormat df = new SimpleDateFormat(ISO8601_DATE_FORMAT);
  df.setTimeZone(new SimpleTimeZone(0, "GMT"));
  return df.format(date);
}
```

3. Create a query string.

```
final String HTTP_METHOD = "GET";
Map parameters = new HashMap();
// Specify request parameters.
parameters.put("Action", "DescribeRegions");
parameters.put("Version", "2014-05-26");
parameters.put("AccessKeyId", "testid");
parameters.put("Timestamp", formatIso8601Date(new Date()));
parameters.put("SignatureMethod", "HMAC-SHA1");
parameters.put("SignatureVersion", "1.0");
parameters.put("SignatureNonce", UUID.randomUUID().toString());
parameters.put("Format", "XML");
// Arrange request parameters.
String[] sortedKeys = parameters.keySet().toArray(new String[]{});
Arrays.sort(sortedKeys);
final String SEPARATOR = "&";
// Create a string-to-sign.
StringBuilder stringToSign = new StringBuilder();
stringToSign.append(HTTP_METHOD).append(SEPARATOR);
stringToSign.append(percentEncode("/")).append(SEPARATOR);
StringBuilder canonicalizedQueryString = new StringBuilder();
for(String key : sortedKeys) {
// Encode the key and the value.
  canonicalizedQueryString.append("&")
  .append(percentEncode(key)).append("=")
  .append(percentEncode(parameters.get(key)));
}
// Encode the canonicalized query string.
stringToSign.append(percentEncode(
  canonicalizedQueryString.toString().substring(1)));
```

4. Calculate the signature. If `AccessKeySecret` is set to testsecret, the key used for calculation is `testsecret&`. The calculated signature is `OLeaidS1JvxuMvnyHOwuJ%2BuX5qY%3D`.

```
// The following code describes how to calculate the signature:
final String ALGORITHM = "HmacSHA1";
final String ENCODING = "UTF-8";
key = "testsecret&";
Mac mac = Mac.getInstance(ALGORITHM);
mac.init(new SecretKeySpec(key.getBytes(ENCODING), ALGORITHM));
byte[] signData = mac.doFinal(stringToSign.getBytes(ENCODING));
String signature = new String(Base64.encodeBase64(signData));
```

Encode the Signature parameter based on RFC 3986 and add the parameter to the URL. The following section shows the new URL:

```
http://ecs.aliyuncs.com/?SignatureVersion=1.0&Action=DescribeRegions&Format=XML&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad
82fd6cf&Version=2014-05-26&AccessKeyId=testid&Signature=OLeaidS1JvxuMvnyHOwuJ%2BuX5qY%3D&SignatureMethod=HMAC-SHA1&Timestamp
=2016-02-23T12%253A46%253A24Z
```

5. Send HTTP requests by using a browser or a tool such as cURL and Wget.

```
<DescribeRegionsResponse>
 <Regions>
     <Region>
         <LocalName>China (Qingdao)</LocalName>
         <RegionId>cn-qingdao</RegionId>
     </Region>
     <Region>
         <LocalName>China (Hangzhou)</LocalName>
         <RegionId>cn-hangzhou</RegionId>
     </Region>
 </Regions>
 <RequestId>833C6B2C-E309-45D4-A5C3-03A7A7A48ACF</RequestId>
</DescribeRegionsResponse>
```

The response lists the regions and region IDs. If you set `Format` to JSON when you submit a request, the response is returned in the JSON format instead of the XML format. For more information, see Responses.

4.5. Responses

Responses can be returned in either the JSON or XML format. The default response format is XML. You can specify the `Format` common parameter in the request to change the format of responses. For more information, see Common parameters. Sample responses provided in API reference are formatted with line breaks and indentations for better readability and clarity. However, the actual responses are not formatted with line breaks or indentations.

Sample success responses

Each response returns response parameters such as the request ID when the call is successful. API responses use the HTTP response format where a 2xx status code indicates a successful call.

- XML format

```
<?xml version="1.0" encoding="UTF-8"?> <!--Result root node-->
<ActionResponse> <!--Returned request ID-->
    <RequestId>4C467B38-3910-447D-87BC-AC049166F216</RequestId> <!--Response data-->
</ActionResponse>
```

- JSON format

```
{
    "RequestId": "4C467B38-3910-447D-87BC-AC049166F216" /* Response data */
}
```

Sample error responses

If an error occurs when you call an operation, an error response that consists of the error code, error message, and request ID is returned. API responses use the HTTP response format where a 4xx or 5xx status code indicates a failed call.

You can troubleshoot issues based on the common error codes and operation-specific error codes. For more information, see the Common error codes section and visit the API Error Center. If the error persists, you can submit a ticket and provide the `HostId` and `RequestId` values to obtain technical support from Alibaba Cloud.

- XML format

```
<?xml version="1.0" encoding="UTF-8"?><!--Result root node-->
<Error>
    <RequestId>540CFF28-407A-40B5-B6A5-74Bxxxxxxxxx</RequestId> <!--Request ID-->
    <HostId>ecs.aliyuncs.com</HostId> <!--Endpoint-->
    <Code>MissingParameter.CommandId</Code> <!--Error code-->
    <Message>The input parameter "CommandId" that is mandatory for processing this request is not supplied. </Message> <!--Err
or message-->
</Error>
```

- JSON format

```
{
    "RequestId": "540CFF28-407A-40B5-B6A5-74Bxxxxxxxxx", /* Request ID */
    "HostId": "ecs.aliyuncs.com",/* Endpoint */
    "Code": "MissingParameter.CommandId",/* Error code */
    "Message": "The input parameter "CommandId" that is mandatory for processing this request is not supplied." /* Error messa
ge */
}
```

Common error codes

Error code	HTTP status code	Error message
IdempotentParameterMismatch	400	The request is retried with updated parameters.
IllegalTimestamp	400	The input parameter "Timestamp" that is mandatory for processing this request is not supplied.
IncompleteSignature	400	The request signature does not conform to Aliyun standards.
InsufficientBalance	400	Your account does not have enough balance.
InvalidAccessKeyId.NotFound	400	The specified Access Key ID does not exist.
InvalidOwner	400	OwnerId and OwnerAccount can't be used at one API access.
InvalidOwnerAccount	400	The specified OwnerAccount is not valid.
InvalidOwnerId	400	The specified OwnerId is not valid.
InvalidParamater	400	The specified parameter "SignatureMethod" is not valid.
InvalidParamater	400	The specified parameter "SignatureVersion" is not valid.
InvalidParameter	400	The specified parameter is not valid.

Error code	HTTP status code	Error message
InvalidParameter	400	The specified parameter "Action or Version" is not valid.
InvalidParameter.IsNull	400	The required parameter must be not null.
MissingParameter	400	The input parameter "Action" that is mandatory for processing this request is not supplied.
MissingParameter	400	The input parameter "AccessKeyId" that is mandatory for processing this request is not supplied.
MissingParameter	400	The input parameter "Signature" that is mandatory for processing the request is not supplied.
MissingParameter	400	The input parameter "TimeStamp" that is mandatory for processing this request is not supplied.
MissingParameter	400	The input parameter "Version" that is mandatory for processing this request is not supplied.
SignatureNonceUsed	400	The request signature nonce has been used.
Throttling	400	You have made too many requests within a short time; your request is denied due to request throttling.
UnsupportedParameter	400	The parameters is unsupported.
UnknownError	400	The request processing has failed due to some unknown error.
ChargeTypeViolation	403	The operation is not permitted due to charge type of the instance.
Forbidden.AccessKeyDisabled	403	The Access Key is disabled.
Forbidden.NotSupportRAM	403	This action does not support accessed by RAM mode.
Forbidden.RAM	403	User not authorized to operate on the specified resource, or this API doesn't support RAM.
Forbidden.RiskControl	403	This operation is forbidden by Aliyun RiskControl system.
Forbidden.SubUser	403	The specified action is not available for you.
Forbidden.Unauthorized	403	User not authorized to operate on the specified resource.
InvalidAccount.NotFound	403	The specified Account does not exist.
InvalidAction	403	Specified action is not valid.
InvalidIdempotenceParameter.Mismatch	403	The specified parameters are different from before.
InvalidParameter.OwnerAccount	403	OwnerAccount is Invalid.
InvalidParameter.ResourceOwnerAccount	403	ResourceOwnerAccount is Invalid.
LastTokenProcessing	403	The last token request is processing.
MissingParameter	403	The input parameter OwnerId,OwnerAccount that is mandatory for processing this request is not supplied.
RealNameAuthenticationError	403	Your account has not passed the real-name authentication yet.
UnsupportedHTTPMethod	403	This http method is not supported.
InvalidDiskId.NotFound	404	The specified DiskId does not exist.
InvalidImageId.NotFound	404	The specified ImageId does not exist.
InvalidInstanceId.NotFound	404	The specified InstanceId does not exist.
InvalidRegionId.NotFound	404	The specified RegionId does not exist.

Error code	HTTP status code	Error message
InvalidSecurityGroupId.NotFound	404	The specified SecurityGroupId does not exist.
InvalidSnapshotId.NotFound	404	The specified SnapshotId does not exist.
OperationConflict	409	Request was denied due to conflict with a previous request.
InternalError	500	The request processing has failed due to some unknown error, exception or failure.
ServiceUnavailable	503	The request has failed due to a temporary failure of the server.
ServiceUnavailable.RegionMaintaining	503	System maintenance is in progress on the selected region, please wait a few minutes before trying again.

5.Authentication rules

This topic lists the values of Action and Resource parameters that are used to implement Resource Access Management (RAM) authentication. You can use the Elastic Compute Service (ECS) console or call ECS API operations to authenticate team or department members, grant permissions to RAM users and roles, implement tag-based authentication, and grant permissions across cloud services. These parameters are suitable for scenarios where custom policies are created to implement fine-grained access control.

Background

> **Note** If you already have permissions to access resources, skip this topic.

By default, both Alibaba Cloud accounts and RAM users can manage ECS resources by using the ECS console or by calling API operations. Specific permissions are required in the following scenarios:

- A new RAM user does not have permissions required to manage resources in your Alibaba Cloud account.
- You want to access ECS resources from other Alibaba Cloud services or access other Alibaba Cloud services from ECS.
- Before you can manage a resource that is under access control, you must be granted the required permissions on the resource and on the relevant API operations by the resource owner.
- Before you can manage a resource that uses tag-based authentication, you must be granted the required permissions on the resource and on the relevant API operations by the resource owner.

When an Alibaba Cloud account requests access to ECS resources in your Alibaba Cloud account by calling ECS API operations, Alibaba Cloud ECS instructs RAM to perform a permission check to ensure that the requester account is granted the required permissions. Required permissions vary based on the requested ECS resources and API operations. For more information, see What is RAM? and List of operations by function.

Custom policies

RAM allows you to manage user identities and resource access and operation permissions based on policies. A policy is a set of access permissions. Each policy includes a version number and one or more individual statements. Each statement includes the following elements: Effect, Action, Resource, and Condition. The Condition element is optional.

Tags can be used to identify, group, or classify resources for easy management.

You can use tags as conditions in RAM policies for fine-grained resource permission management. The following table describes the tag-based conditions in RAM policies.

Tag-based condition	Description
`acs:RequestTag`	Specifies that a specific tag must be included in each API request. If an API request does not include tag-related parameters, you cannot use the `acs:RequestTag` condition. Otherwise, authentication fails.
`acs:ResourceTag`	Specifies that a specific tag must be added to the specified resource. If an API request does not include a resource ID, you cannot use the `acs:ResourceTag` condition. Otherwise, authentication fails.

You can create a custom policy by using the RAM console or by calling the CreatePolicy operation provided by RAM The following code provides a sample custom policy. When you create a custom policy, you must edit the policy based on the JSON template. In the policy statements, set Action and Resource to API operations and Alibaba Cloud Resource Name (ARN) values from the ARNs for API operations section and set parameters in the Condition element as described in the Tag-based authentication of requests to different API operations section. For more information, see Control access to resources by using RAM users and Policy elements.

```
{
    "Version": "1",
    "Statement": [
        {
        "Effect": "Allow"
            "Action": [
                "ecs:[ECS RAM Action]",
                "ecs:DescribeInstances"
            ],
            "Resource": [
                "[ECS RAM Action Resource]",
                "acs:ecs:$regionid:15619224785*****:instance/i-bp1bzvz55uz27hf*****"
            ],
        "Condition": {
                "StringEquals": {
                    "acs:RequestTag/${key}":"${value}"
                }
        },
        {
        "Effect": "Allow"
            "Action": [
                "ecs:[ECS RAM Action]",
                "ecs:DescribeInstances"
            ],
            "Resource": [
                "[ECS RAM Action Resource]",
                "acs:ecs:$regionid:15619224785*****:instance/i-bp1bzvz55uz27hf*****"
            ],
        "Condition": {
                "StringEquals": {
                    "acs:ResourceTag/${key}":"${value}"
                }
        }
    ]
}
```

ARNs for API operations

Note The following table describes ECS API operations (Action) and the ARNs that correspond to them. For more information about the format of ARN, see Terms.

API operation (Action)	ARN (Resource)	Description
AllocatePublicIpAddress	acs:ecs:$regionid:$accountid:instance/$instanceId	Assigns a public IP address to an ECS instance.
ApplyAutoSnapshotPolicy	acs:ecs:*:$accountid:snapshot/*	Applies an automatic snapshot policy to one or more cloud disks or replaces the existing automatic snapshot policy of the cloud disks.
AttachClassicLinkVpc	acs:ecs:$regionid:$accountid:instance/$instanceId	Establishes a ClassicLink connection between an ECS instance of the classic network type and a virtual private cloud (VPC) to allow the instance to communicate with resources in the VPC over the internal network.
AttachDisk	• acs:ecs:$regionid:$accountid:instance/$instanceId • acs:ecs:$regionid:$accountid:instance/$diskId	Attaches a pay-as-you-go data disk to an ECS instance.
AttachKeyPair	• acs:ecs:$regionid:$accountid:instance/$instanceId • acs:ecs:$regionid:$accountid:keypair/$keypairName	Binds an SSH key pair to one or more Linux ECS instances.
AuthorizeSecurityGroup	acs:ecs:$regionid:$accountid:securitygroup/$groupNo	Add an inbound rule to a security group.
AuthorizeSecurityGroupEgress	acs:ecs:$regionid:$accountid:securitygroup/$groupNo	Add an outbound rule to a security group.
CancelAutoSnapshotPolicy	acs:ecs:*:$accountid:snapshot/*	Disables an automatic snapshot policy for one or more cloud disks.

API operation (Action)	ARN (Resource)	Description
CancelCopyImage	acs:ecs:$regionid:$accountid:image/$imageNo	Cancels an ongoing image copy task.
CopyImage	• acs:ecs:$fromRegionid:$accountid:image/$imageNo • acs:ecs:$toRegionid:$accountid:image/*	Copies a custom image from one region to another.
ConvertNatPublicIpToEip	acs:ecs:$regionid:$accountid:instance/$instanceId	Converts the public IP address of an ECS instance that resides in a VPC into an elastic IP address (EIP).
CreateAutoSnapshotPolicy	acs:ecs:*:$accountid:snapshot/*	Creates an automatic snapshot policy.
CreateDisk	• acs:ecs:$regionid:$accountid:disk/* • acs:ecs:$regionid:$accountid:snapshot/$snapshotId	Creates a pay-as-you-go or subscription data disk.
CreateImage	• acs:ecs:$regionid:$accountid:image/* • acs:ecs:$regionid:$accountid:snapshot/$snapshotId • acs:ecs:$regionid:$accountid:instance/$instanceId	Creates a custom image.
CreateInstance	• acs:ecs:$regionid:$accountid:instance/* • acs:ecs:$regionid:$accountid:image/$imageNo • acs:ecs:$regionid:$accountid:securitygroup/$groupNo • acs:ecs:$regionid:$accountid:snapshot/$snapshotId • Optional. acs:ecs:$regionid:$accountid:keypair/$keyPairName • acs:vpc:$regionid:$accountid:vswitch/$vswitchId • acs:vpc:$regionid:$accountid:vpc/$vpcId	Creates a subscription or pay-as-you-go ECS instance.
CreateKeyPair	acs:ecs:$regionid:$accountid:keypair/*	Creates an SSH key pair.
CreateSecurityGroup	acs:ecs:$regionid:$accountid:securitygroup/*	Creates a security group. By default, a new security group allows mutual access between instances within the security group. Access requests to the security group from outside are denied. If you want to allow requests from the Internet or requests from instances within other security groups, you can call the AuthorizeSecurityGroup operation.
CreateSnapshot	• acs:ecs:$regionid:$accountid:snapshot/* • acs:ecs:$regionid:$accountid:disk/$diskId • acs:ecs:$regionid:$accountid:volume/$volumeId	Creates a snapshot for a cloud disk.
DeleteAutoSnapshotPolicy	acs:ecs:*:$accountid:snapshot/*	Deletes an automatic snapshot policy.
DeleteDisk	acs:ecs:$regionid:$accountid:disk/$diskId	Releases a pay-as-you-go data disk.
DeleteImage	acs:ecs:$regionid:$accountid:image/$imageNo	Deletes a custom image.
DeleteInstance	acs:ecs:$regionid:$accountid:instance/$instanceId	Releases a pay-as-you-go instance or an expired subscription instance.
DeleteKeyPairs	acs:ecs:$regionid:$accountid:keypair/$keyPairName	Deletes one or more SSH key pairs.
DeleteSecurityGroup	acs:ecs:$regionid:$accountid:securitygroup/$groupNo	Deletes a security group.
DeleteSnapshot	acs:ecs:$regionid:$accountid:snapshot/$snapshotId	Deletes a specific snapshot.
DescribeClassicLinkInstances	acs:ecs:$regionid:$accountid:instance/*	Queries one or more instances of the classic network type that have established ClassicLink connections to VPCs.
DescribeDiskMonitorData	acs:ecs:$regionid:$accountid:disk/$diskId	Queries the monitoring data of a disk over a specific period of time.
DescribeDisks	• acs:ecs:$regionid:$accountid:disk/$diskId • acs:ecs:$regionid:$accountid:disk/*	Queries one or more cloud disks and local disks that you have created.

API operation (Action)	ARN (Resource)	Description
DescribeImages	• acs:ecs:$regionid:$accountid:image/$imageNo • acs:ecs:$regionid:$accountid:image/*	Queries available images.
DescribeInstanceMonitorData	acs:ecs:$regionid:$accountid:instance/$instanceId	Queries the monitoring data of an ECS instance.
DescribeInstances	• acs:ecs:$regionid:$accountid:instance/$instanceId • acs:ecs:$regionid:$accountid:instance/*	Queries the details of one or more ECS instances.
DescribeInstanceStatus	acs:ecs:$regionid:$accountid:instance/*	Queries the status information of one or more ECS instances.
DescribeInstanceVncUrl	acs:ecs:$regionid:$accountid:instance/$instanceId	Queries the Virtual Network Console (VNC) URL of an ECS instance.
DescribeKeyPairs	• acs:ecs:$regionid:$accountid:keypair/$keyPairName • acs:ecs:$regionid:$accountid:keypair/*	Queries one or more SSH key pairs.
DescribePrice	acs:ecs:*:$accountid:*	Queries the most recent prices of ECS resources.
DescribeRenewalPrice	acs:ecs:$regionid:$accountid:instance/$instanceId	Queries the renewal prices of ECS resources. Renewal prices of only subscription resources can be queried.
DescribeSecurityGroupAttribute	acs:ecs:$regionid:$accountid:securitygroup/$groupNo	Query the rules of a security group.
DescribeSecurityGroups	• acs:ecs:$regionid:$accountid:securitygroup/$groupNo • acs:ecs:$regionid:$accountid:securitygroup/*	Queries the basic information of security groups.
DescribeSnapshotLinks	• acs:ecs:$regionid:$accountid:disk/$diskId • acs:ecs:$regionid:$accountid:disk/*	Queries the snapshot chains of one or more cloud disks.
DescribeSnapshotMonitorData	acs:ecs:*:$accountid:snapshot/*	Queries the monitoring data of changes in snapshot sizes in a region over the last 30 days.
DescribeSnapshots	• acs:ecs:$regionid:$accountid:snapshot/$snapshotId • acs:ecs:$regionid:$accountid:snapshot/*	Queries all the snapshots of an ECS instance or a cloud disk.
DetachClassicLinkVpc	acs:ecs:$regionid:$accountid:instance/$instanceId	Removes the ClassicLink connection between an ECS instance of the classic network type and a VPC.
DetachDisk	• acs:ecs:$regionid:$accountid:instance/$instanceId • acs:ecs:$regionid:$accountid:disk/$diskId	Detaches a pay-as-you-go disk from an ECS instance.
DetachKeyPair	• acs:ecs:$regionid:$accountid:instance/$instanceId • acs:ecs:$regionid:$accountid:keypair/$keypairName	Unbinds an SSH key pair from one or more Linux instances.
ExportImage	acs:ecs:$regionid:$accountid:image/$imageNo	Exports a custom image to an Object Storage Service (OSS) bucket in the same region.
ImportImage	acs:ecs:$regionid:$accountid:image/*	Imports an existing image to ECS. The imported image appears as a custom image in the destination region.
ImportKeyPair	acs:ecs:$regionid:$accountid:keypair/*	Imports the public key of an RSA-encrypted key pair that is generated by a third-party tool. After the key pair is imported, Alibaba Cloud stores the public key. You must securely store the private key.
JoinSecurityGroup	• acs:ecs:$regionid:$accountid:instance/$instanceId • acs:ecs:$regionid:$accountid:securitygroup/$groupNo	Adds an ECS instance to a security group.

API operation (Action)	ARN (Resource)	Description
LeaveSecurityGroup	• acs:ecs:$regionid:$accountid:instance/$instanceId • acs:ecs:$regionid:$accountid:securitygroup/$groupNo	Removes an ECS instance from a security group.
ListTagResources	acs:ecs:$regionid:$accountid:$resourceType/$resourceId	Queries tags that are added to one or more ECS resources.
ModifyDiskAttribute	acs:ecs:$regionid:$accountid:disk/$diskId	Modifies the attributes of one or more disks.
ModifyImageAttribute	acs:ecs:$regionid:$accountid:image/$imageNo	Modifies the name and description of a custom image.
ModifyInstanceAttribute	acs:ecs:$regionid:$accountid:instance/$instanceId	Modifies the information of an ECS instance, such as the password, name, description, hostname, and user data. For a burstable instance, you can also change its performance mode.
ModifyInstanceAutoReleaseTime	acs:ecs:$regionid:$accountid:instance/$instanceId	Sets or cancels the automatic release time for a pay-as-you-go ECS instance. If you set the automatic release time for an instance, the instance is automatically released at the specified time. Proceed with caution when you call this operation.
ModifyInstanceChargeType	acs:ecs:$regionid:$accountid:instance/$instanceId	Changes the billing method for one or more instances. You can change the billing methods of instances between pay-as-you-go and subscription, or change the billing method of all data disks attached to an instance from pay-as-you-go to subscription.
PurchaseReservedInstancesOffering	acs:ecs:$regionid:$accountid:reservedinstance	Purchases a reserved instance.
DescribeReservedInstances	acs:ecs:$regionid:$accountid:reservedinstance	Queries purchased reserved instances.
ModifyReservedInstances	acs:ecs:$regionid:$accountid:reservedinstance	Splits, merges, or modifies reserved instances.
ModifyInstanceNetworkSpec	acs:ecs:$regionid:$accountid:instance/$instanceId	Modifies the bandwidth configurations of an ECS instance.
ModifyInstanceVncPasswd	acs:ecs:$regionid:$accountid:instance/$instanceId	Modifies the VNC password of an ECS instance.
ModifyInstanceVpcAttribute	• acs:ecs:$regionid:$accountid:instance/$instanceId • acs:ecs:$regionid:$accountid:vswitch/$vSwitchId	Modifies the VPC attributes of an ECS instance.
ModifySecurityGroupAttribute	acs:ecs:$regionid:$accountid:securitygroup/$groupNo	Modifies the name or description of a security group.
ModifySecurityGroupEgressRule	acs:ecs:$regionid:$accountid:securitygroup/$groupNo	Modifies the description of an outbound rule in a security group.
ModifySecurityGroupRule	acs:ecs:$regionid:$accountid:securitygroup/$groupNo	Modifies the description of an inbound rule in a security group.
ModifyPrepayInstanceSpec	acs:ecs:$regionid:$accountid:	Upgrades or downgrades the instance type of a subscription instance. The new instance type takes effect for the remaining lifecycle of the instance.
ModifySnapshotAttribute	acs:ecs:$regionid:$accountid:snapshot/$snapshotId	Modifies the name or description of a snapshot.
RebootInstance	acs:ecs:$regionid:$accountid:instance/$instanceId	Restarts an ECS instance that is in the Running state.
ReInitDisk	acs:ecs:$regionid:$accountid:disk/$diskId	Re-initializes a disk to the state that it was in when it was created.

API operation (Action)	ARN (Resource)	Description
RenewInstance	acs:ecs:$regionid:$accountid:instance/$instanceId	Renews a subscription ECS instance.
ReplaceSystemDisk	• acs:ecs:$regionid:$accountid:instance/$instanceId • acs:ecs:$regionid:$accountid:image/$imageNo	Replaces the system disk or the operating system of an ECS instance.
ResetDisk	acs:ecs:$regionid:$accountid:disk/$diskId	Rolls back a disk to a specific point in time based on a snapshot of the disk.
ResizeDisk	acs:ecs:$regionid:$accountid:disk/$diskId	Resizes a cloud disk. You can resize a system disk or a data disk.
RevokeSecurityGroup	acs:ecs:$regionid:$accountid:securitygroup/$groupNo	Deletes an inbound security group rule. After the rule is deleted, the access control implemented by it is removed.
RevokeSecurityGroupEgress	acs:ecs:$regionid:$accountid:securitygroup/$groupNo	Deletes an outbound security group rule. After the rule is deleted, the access control implemented by it is removed.
RunInstances	• acs:ecs:$regionid:$accountid:instance/* • acs:ecs:$regionid:$accountid:image/$imageNo • acs:ecs:$regionid:$accountid:securitygroup/$groupNo • acs:ecs:$regionid:$accountid:snapshot/$snapshotId • acs:ecs:$regionid:$accountid:keypair/$keyPairName	Creates one or more pay-as-you-go or subscription ECS instances.
StartInstance	acs:ecs:$regionid:$accountid:instance/$instanceId	Starts an instance.
StopInstance	acs:ecs:$regionid:$accountid:instance/$instanceId	Stops an instance.
TagResources	acs:ecs:$regionid:$accountid:$resourceType/$resourceId	Creates and adds tags to specified ECS resources.
UntagResources	acs:ecs:$regionid:$accountid:$resourceType/$resourceId	Removes tags from specified ECS resources. After a tag is removed from a resource, it is automatically deleted if it is not added to other resources.

Tag-based authentication of requests to different API operations

After policies that contain tag-based conditions are attached to a RAM user, requests made by the RAM user to API operations are authenticated based on the tags specified in the policy conditions. The following table describes various cases in which requests to different API operations are authenticated based on tags.

API operation	Description
Operations used to create resources, such as RunInstances and CreateDisk	You do not need to specify resource IDs in API requests. When no resource IDs are specified in API requests, the requests are matched against the `acs:RequestTag` policy condition. • If a request contains no tags from the policy condition, authentication fails. • If the tags contained in a request match or include the tags from the policy condition, authentication succeeds.
Operations used to query resources, such as DescribeInstances and DescribeDisks	You can optionally specify resource IDs in API requests. API requests are matched against the `acs:ResourceTag` or `acs:RequestTag` policy condition. • If a request contains tags and resource IDs, authentication succeeds only when these tags and the tags of the resources both match the tags specified in the `acs:ResourceTag` policy condition. • If a request contains resource IDs but no tags, authentication succeeds only when the tags of the resources match the tags specified in the `acs:ResourceTag` policy condition. • If a request contains tags but no resource IDs, authentication succeeds only when these tags match those specified in the `acs:RequestTag` policy condition. • If a request contains no tags and no resource IDs, authentication fails. Note

API operation	Description
Operations used to modify resources, such as ModifyInstanceAttribute and ModifyDiskAttribute	You must specify resource IDs in API requests, and the requests are matched against the `acs:ResourceTag` policy condition. • If a request contains no tags and the tags of the specified resource match the tags specified in the policy condition, authentication succeeds. • If a request contains tags on which the RAM user has permissions, authentication succeeds only when these tags and the tags of the specified resource both match the tags specified in the policy condition.
Operations used to manage resources, such as StartInstance, RebootInstance, and StopInstance	You must specify resource IDs in requests, and the requests are matched against the `acs:ResourceTag` policy condition. • If the tags of the specified resource do not match the tags specified in the policy condition, authentication fails. • If the tags of the specified resource match the tags specified in the policy condition, authentication succeeds.

6.Instances

6.1. CreateInstance

Creates a subscription or pay-as-you-go Elastic Compute Service (ECS) instance.

Description

> **Note** You can call the DescribeAvailableResource operation to query available resources in a specific region or zone. If you want to batch create instances that automatically enter the Running state after they are created, we recommend that you call the RunInstances operation.

When you call this operation, take note of the following items:

- **Billing**:
  - You must fully understand the ECS billing methods before you create an instance because you may be charged for resources used by the instance. For more information, see Billing overview.
  - If you create a subscription instance (`PrePaid`), available coupons within your account are used by default.
- **Instance type**:
  - You can use the `IoOptimized` parameter to specify whether to create an I/O optimized instance.
  - Select an instance type. See Instance families or call the DescribeInstanceTypes operation to query the performance data of an instance type, or see Best practices for instance type selection to learn about how to select instance types.
  - Query available resources. Call the DescribeAvailableResource operation to query available resources in a specific region or zone.

> **Note** If the `QuotaExceed.ElasticQuota` error is returned when you call this operation, it indicates that you have reached the maximum number of instances of the specified instance type that can be created within the specified region or the maximum number of vCPUs for all instance types in a zone. You can go to the ECS console or Quota Center to request a quota increase.

- **Image**:
  - The image determines the system disk configurations of the new instance. The system disk of the new instance is a clone of the specified image.
  - If you want to create instances with 512 MiB of memory, you cannot use Windows Server images except for Windows Server Semi-Annual Channel images.
  - If you want to create instances with 4 GiB or more of memory, you cannot use 32-bit OS image.
- **Network type**:
  - Each instance located in a virtual private cloud (VPC must be connected to only a single vSwitch.
  - If the `VSwitchId` parameter is specified, the security group specified by `SecurityGroupId` and the vSwitch specified by `VSwitchId` must belong to the same VPC.
  - The value of `PrivateIpAddress` depends on that of `VSwitchId` and cannot be separately specified. If both the `VSwitchId` and `PrivateIpAddress` parameters are specified, the IP address specified by `PrivateIpAddress` must be available in the CIDR block of the specified vSwitch.
- **Public bandwidth**:
  - Starting from November 27, 2020, the maximum bandwidth value available for you to create ECS instances or to change ECS instance configurations is subject to the throttling policy of your account. To increase the maximum bandwidth value, submit a ticket. The throttling policy imposes the following restrictions: Within a single region, the total maximum bandwidth value of all instances that use the pay-by-traffic billing method for network usage cannot exceed 5 Gbit/s and that of all instances that use the pay-by-bandwidth billing method for network usage cannot exceed 50 Gbit/s.
  - If you call the `CreateInstance` operation to create an instance, no public IP address is assigned to the instance. You can call the AllocatePublicIpAddress operation to manually assign public IP addresses.
  - Bandwidth fees are determined based on the settings of `InternetChargeType` and `InternetMaxBandwidthOut` .
  - The `InternetMaxBandwidthIn` value is irrelevant to billing because inbound data traffic is free of charge.
  - If `InternetChargeType` is set to PayByBandwidth, `InternetMaxBandwidthOut` specifies the maximum bandwidth value.
  - If `InternetChargeType` is set to PayByTraffic, `InternetMaxBandwidthOut` specifies the maximum bandwidth value. Network usage costs are calculated based on the volume of network traffic.
- **Security group**:
  - If no security group is available in the region where you want to create an instance, you must call the CreateSecurityGroup operation to create a security group in that region first.
  - The maximum number of instances that a security group can contain varies based on the security group type. For more information, see the "Security group limits" section in Limits.

- Instances in the same security group can communicate with each other over the internal network. By default, instances in different security groups cannot communicate with each other. However, you can allow communication between instances by authorizing mutual access between their security groups. For more information, see AuthorizeSecurityGroup and AuthorizeSecurityGroupEgress.

- **Storage**:
  - The instance is assigned a system disk whose capacity is based on the specified image. The capacity of the system disk must be at least `20 GiB` and greater than or equal to the image size. For more information about system disk categories, see the description of the `SystemDisk.Category` parameter.
  - The system disk of an I/O optimized instance can only be an enhanced SSD (ESSD) (`cloud_essd`), a standard SSD (`cloud_ssd`), or an ultra disk (`cloud_efficiency`).
  - The maximum capacity of data disks varies based on their categories. For more information, see the description of the `DataDisk.N.Size` parameter.
  - A maximum of 16 data disks can be attached to each instance. The mount points of data disks are allocated by the system in alphabetical order from /dev/xvdb to /dev/xvdz.

- **User data**: If the instance type supports user data, you can use the UserData parameter to pass in user data. User data is encoded in Base64. We recommend that you do not pass in confidential information (such as passwords or private keys) in plaintext as use data. This is because the system does not encrypt `UserData` values when API requests are transmitted. If you must pass in confidential information, we recommend that you encrypt and encode the information in Base64, and then decode and decrypt the information in the same way within the instance.
- **Others**: When you call API operations by using Alibaba Cloud CLI or SDKs, you must delete periods (.) from some request parameters before you use the parameters. For example, use `SystemDiskCategory` instead of `SystemDisk.Category` as a request parameter.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateInstance	The operation that you want to perform. Set the value to **CreateInstance**.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which to create the instance. You can call the DescribeRegions operation to query the most recent region list.
ImageId	String	No	ubuntu_18_04_64_20G_alibase_20190624.vhd	The ID of the image used to create the instance. To use Alibaba Cloud Marketplace images, you can view `image IDs` on the product pages of Alibaba Cloud Marketplace images. This parameter is required if you do not specify the `ImageFamily` parameter to obtain the latest available custom image from the specified image family.
ImageFamily	String	No	hangzhou-daily-update	The name of the image family. You can set this parameter to obtain the latest available custom image from the specified image family to create the instance. • ImageFamily must be empty if `ImageId` is specified. • ImageFamily can be specified if `ImageId` is not specified.
InstanceType	String	Yes	ecs.g6.large	The instance type. • Select an instance type. See Instance families or call the DescribeInstanceTypes operation to query the performance data of an instance type, or see Best practices for instance type selection to learn about how to select instance types. • Query available resources. You can call the DescribeAvailableResource operation to query available resources in a specific region or zone.

Parameter	Type	Required	Example	Description
SecurityGroupId	String	No	sg-bp15ed6xe1yxeycg****	The ID of the security group to which to assign the instance. Instances in the same security group can communicate with each other.
InstanceName	String	No	2018-12-06T103200Z	The name of the instance. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), periods (.), and hyphens (-). If you do not specify this parameter, the instance ID is used as the instance name by default.
InternetChargeType	String	No	PayByTraffic	The billing method for network usage. Default value: PayByTraffic. Valid values: • PayByBandwidth: pay-by-bandwidth • PayByTraffic: pay-by-traffic **Note** When the **pay-by-traffic** billing method for network usage is used, the maximum inbound and outbound bandwidths are used as the upper limits of bandwidths instead of guaranteed performance specifications. In scenarios where demand outstrips resource supplies, these maximum bandwidths may be limited. If you want guaranteed bandwidths for your instance, use the **pay-by-bandwidth** billing method for network usage.
AutoRenew	Boolean	No	true	Specifies whether to enable auto-renewal for the instance. This parameter is valid only when the `InstanceChargeType` parameter is set to `PrePaid`. Default value: false. Valid values: • true: enables auto-renewal. • false: does not enable auto-renewal.
AutoRenewPeriod	Integer	No	2	The auto-renewal period of the instance. This parameter is required when AutoRenew is set to true. If PeriodUnit is set to Month, the valid values of the AutoRenewPeriod parameter are 1, 2, 3, 6, and 12.
InternetMaxBandwidthIn	Integer	No	50	The maximum inbound public bandwidth. Unit: Mbit/s. Valid values: • When the purchased outbound public bandwidth is less than or equal to 10 Mbit/s, the valid values of this parameter are 1 to 10 and the default value is 10. • When the purchased outbound public bandwidth is greater than 10 Mbit/s, the valid values of this parameter are 1 to the `InternetMaxBandwidthOut` value and the default value is the `InternetMaxBandwidthOut` value.
InternetMaxBandwidthOut	Integer	No	5	The maximum outbound public bandwidth. Unit: Mbit/s. Valid values: 0 to 100. Default value: 0.

Parameter	Type	Required	Example	Description
HostName	String	No	LocalHostName	The hostname of the instance. • The hostname cannot start or end with a period (.) or hyphen (-). It cannot contain consecutive periods (.) or hyphens (-). • For Windows instances, the hostname must be 2 to 15 characters in length and cannot contain periods (.) or contain only digits. It can contain letters, digits, and hyphens (-). • For instances that run other operating systems such as Linux, the hostname must be 2 to 64 characters in length. You can use periods (.) to separate the hostname into multiple segments. Each segment can contain letters, digits, and hyphens (-).
Password	String	No	TestEcs123!	The password of the instance. The password must be 8 to 30 characters in length and contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include: `( ) ` ~ ! @ # $ % ^ & * - _ + = | { } [ ] : ; ' < > , . ? /` Take note of the following items: • For security reasons, we recommend that you use HTTPS to send requests if the Password parameter is specified. • Passwords of Windows instances cannot start with a forward slash (/). • Passwords cannot be set for instances that run some types of operating systems such as Others Linux and Fedora CoreOS. For these instances, only key pairs can be set.
PasswordInherit	Boolean	No	false	Specifies whether to use the password preset in the image. When you use this parameter, leave Password empty and make sure that the selected image has a password preset.
DeploymentSetId	String	No	ds-bp1brhwhoqinyjd6****	The ID of the deployment set to which to deploy the instance.
DeploymentSetGroupNo	Integer	No	1	The number of the deployment set group to which to deploy the instance. If the deployment set specified by the DeploymentSetId parameter uses the high availability group strategy (AvailabilityGroup), you can use the DeploymentSetGroupNo parameter to specify a deployment set group in the deployment set. Valid values: 1 to 7.
ZoneId	String	No	cn-hangzhou-g	The ID of the zone in which to create the instance. You can call the DescribeZones operation to query the most recent zone list. **Note** If the `VSwitchId` parameter is specified, the zone specified by the `ZoneId` parameter must be the zone where the specified vSwitch is located. You can also leave the `ZoneId` parameter empty. Then, the system selects the zone where the specified vSwitch is located. This parameter is empty by default.

Parameter	Type	Required	Example	Description
ClusterId	String	No	c-bp67acfmxazb4p****	The ID of the cluster in which to create the instance. **Note** This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
VlanId	String	No	10	The ID of the virtual LAN (VLAN).
InnerIpAddress	String	No	192.168.**.**	The internal IP address to be assigned to the instance.
SystemDisk.Size	Integer	No	40	The size of the system disk. Unit: GiB. Valid values: 20 to 500. The value of this parameter must be at least 20 and greater than or equal to the image size. Default value: 40 or the image size, whichever is greater.
SystemDisk.Category	String	No	cloud_ssd	The category of the system disk. Valid values: • cloud_essd: ESSD. When the parameter is set to this value, you can use the `SystemDisk.PerformanceLevel` parameter to specify the performance level of the disk. • cloud_efficiency: ultra disk. • cloud_ssd: standard SSD. • cloud: basic disk. For non-I/O optimized instances of retired instance types, the default value is cloud. For other instances, the default value is cloud_efficiency.
SystemDisk.DiskName	String	No	SystemDiskName	The name of the system disk. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
SystemDisk.Description	String	No	TestDescription	The description of the system disk. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`. This parameter is empty by default.

Parameter	Type	Required	Example	Description
SystemDisk.PerformanceLevel	String	No	PL1	The performance level of the ESSD used as the system disk. Default value: PL1. Valid values: • PL0: A single ESSD can deliver up to 10,000 random read/write IOPS. • PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. • PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. • PL3: A single ESSD can deliver up to 1,000,000 random read/write IOPS. For more information about ESSD performance levels, see ESSDs.
Description	String	No	InstanceTest	The description of the instance. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`. This parameter is empty by default.
VSwitchId	String	No	vsw-bp1s5fnvk4gn2tws0****	The ID of the vSwitch to which to connect the instance. This parameter is required when you create an instance in a VPC. You can call the DescribeVSwitches operation to query available vSwitches. **Note** If the `VSwitchId` parameter is specified, the zone specified by the `ZoneId` parameter must be the zone where the specified vSwitch is located. You can also leave the `ZoneId` parameter empty. Then, the system selects the zone where the specified vSwitch is located.
PrivateIpAddress	String	No	172.16.236.*	The private IP address to be assigned to the instance. The private IP address must be an available IP address in the CIDR block of the specified vSwitch.
IoOptimized	String	No	optimized	Specifies whether the instance is I/O optimized. Valid values: • none: The instance is not I/O optimized. • optimized: The instance is I/O optimized. For retired instance types, the default value is none. For more information, see Retired instance types. For other instance types, the default value is optimized.
UseAdditionalService	Boolean	No	true	Specifies whether to use the system configurations for virtual machines provided by Alibaba Cloud (Windows: NTP and KMS. Linux: NTP and YUM).
InstanceChargeType	String	No	PrePaid	The billing method of the instance. Default value: PostPaid. Valid values: • PrePaid: subscription. If you set this parameter to PrePaid, make sure that you have sufficient balance or credit within your account. Otherwise, an `InvalidPayMethod` error is returned. • PostPaid: pay-as-you-go.

Parameter	Type	Required	Example	Description
Period	Integer	No	1	The subscription period of the instance. The unit is specified by the `PeriodUnit` parameter. This parameter is valid and required only when `InstanceChargeType` is set to `PrePaid`. If the `DedicatedHostId` parameter is specified, the value of Period must not exceed the subscription period of the specified dedicated host. Valid values: • Valid values when PeriodUnit is set to Month: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, 36, 48, and 60.
PeriodUnit	String	No	Month	The unit of the subscription period. Valid values: • Month Default value: Month.
UserData	String	No	ZWNobyBoZWxsbyBlY3Mh	The user data of the instance. The user data must be encoded in Base64. The maximum size of raw data is 16 KB.
SpotStrategy	String	No	NoSpot	The bidding policy for the pay-as-you-go instance. This parameter is valid only when the `InstanceChargeType` parameter is set to `PostPaid`. Default value: NoSpot. Valid values: • NoSpot: The instance is created as a regular pay-as-you-go instance. • SpotWithPriceLimit: The instance is created as a preemptible instance with a user-defined maximum hourly price. • SpotAsPriceGo: The instance is created as a preemptible instance whose price is based on the market price.
KeyPairName	String	No	KeyPairTestName	The name of the key pair. • For Windows instances, this parameter is ignored. This parameter is empty by default. The `Password` parameter takes effect even if the KeyPairName parameter is specified. • For Linux instances, the password-based logon method is disabled by default. To make the instance more secure, we recommend that you use a key pair for logons.
SpotPriceLimit	Float	No	0.98	The maximum hourly price of the instance. The value is accurate to three decimal places. This parameter is valid only when the `SpotStrategy` parameter is set to `SpotWithPriceLimit`.
SpotDuration	Integer	No	1	The protection period of the preemptible instance. Unit: hours. Valid values: 0, 1, 2, 3, 4, 5, and 6. • Protection periods of 2, 3, 4, 5, and 6 hours are in invitational preview. If you want to set this parameter to one of these values, submit a ticket. • If this parameter is set to 0, no protection period is configured for the preemptible instance. Default value: 1.

Parameter	Type	Required	Example	Description
SpotInterruptionBehavior	String	No	Terminate	The interruption mode of the preemptible instance. Default value: Terminate. Set the value to Terminate, which specifies to release the instance.
RamRoleName	String	No	RAMTestName	The name of the instance Resource Access Management (RAM) role. You can call the ListRoles operation provided by RAM to query the instance RAM roles that you created.
SecurityEnhancementStrategy	String	No	Active	Specifies whether to enable security hardening. Valid values: • Active: enables security hardening. This value is applicable only to public images. • Deactive: does not enable security hardening. This value is applicable to all images.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the instance.
HpcClusterId	String	No	hpc-bp67acfmxazb4p****	The ID of the HPC cluster to which to assign the instance.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Default value: false. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether required parameters are specified, the request format, service limits, and available ECS resources. If the check fails, the corresponding error code is returned. If the check succeeds, the `DryRunOperation` error code is returned. • false: The validity of the request is checked, and the request is made if the check succeeds.
DedicatedHostId	String	No	dh-bp67acfmxazb4p****	The ID of the dedicated host on which to create the instance. You can call the DescribeDedicatedHosts operation to query the list of dedicated host IDs. If the `DedicatedHostId` parameter is specified, the `SpotStrategy` and `SpotPriceLimit` parameters are ignored. This is because preemptible instances cannot be created on dedicated hosts.
CreditSpecification	String	No	Standard	The performance mode of the burstable instance. Valid values: • Standard: the standard mode. For more information, see the "Standard mode" section in Burstable instances. • Unlimited: the unlimited mode. For more information, see the "Unlimited mode" section in Burstable instances. This parameter is empty by default.

Parameter	Type	Required	Example	Description
DeletionProtection	Boolean	No	false	Specifies whether to enable release protection for the instance. This parameter determines whether you can use the ECS console or call the DeleteInstance operation to release the instance. Default value: false. Valid values: • true: enables release protection. • false: disables release protection. **Note** This parameter is applicable only to pay-as-you-go instances. It can protect instances against manual releases, but not against automatic releases.
Affinity	String	No	default	Specifies whether to associate the instance on a dedicated host with the dedicated host. Valid values: • default: does not associate the instance with the dedicated host. When you start an instance that was stopped in economical mode, the instance is automatically deployed to another dedicated host in the automatic deployment resource pool if the available resources of the original dedicated host are insufficient. • host: associates the instance with the dedicated host. When you start an instance that was stopped in economical mode, the instance remains on the original dedicated host. If the available resources of the original dedicated host are insufficient, the instance cannot be started. Default value: default.
Tenancy	String	No	default	Specifies whether to create the instance on a dedicated host. Valid values: • default: creates the instance on a non-dedicated host. • host: creates the instance on a dedicated host. If you do not specify the `DedicatedHostId` parameter, Alibaba Cloud selects a dedicated host for the instance. Default value: default.
StorageSetId	String	No	ss-bp1j4i2jdf3owlhe****	The ID of the storage set.
StorageSetPartitionNumber	Integer	No	2	The maximum number of partitions in the storage set. Valid values: greater than or equal to 2.
HttpEndpoint	String	No	enabled	Specifies whether to enable the access channel for instance metadata. Valid values: • enabled: enables the access channel for instance metadata. • disabled: disables the access channel for instance metadata. Default value: enabled. **Note** For more information about instance metadata, see Overview of ECS instance metadata.

Parameter	Type	Required	Example	Description
HttpTokens	String	No	optional	Specifies whether to forcibly use the security-enhanced mode (IMDSv2) to access instance metadata. Valid values: • optional: does not forcibly use the security-enhanced mode (IMDSv2). • required: forcibly uses the security-enhanced mode (IMDSv2). After you set this parameter to required, you cannot access instance metadata in normal mode. Default value: optional. **Note** For more information about modes of accessing instance metadata, see Access mode of instance metadata.
PrivatePoolOptions.MatchCriteria	String	No	Open	The type of the private pool. A private pool is generated after an elasticity assurance or a capacity reservation takes effect. You can select a private pool when you create an instance. Valid values: • Open: open private pool. The system selects a matching open private pool to create the instance. If no matching open private pools are found, resources in the public pool are used. When you set this parameter to Open, you can leave the `PrivatePoolOptions.Id` parameter empty. • Target: specified private pool. The system uses the capacity in a specified private pool to create the instance. If the specified private pool is unavailable, the instance cannot be created. If you set this parameter to Target, you must specify the `PrivatePoolOptions.Id` parameter. • None: no private pool. The capacity in private pools is not used. Default value: None. In the following scenarios, the PrivatePoolOptions.MatchCriteria parameter can be set only to `None` or left empty: • A preemptible instance is created. • The instance is created in the classic network. • The instance is created on a dedicated host.
PrivatePoolOptions.Id	String	No	eap-bp67acfmxazb4****	The ID of the private pool. The ID of a private pool is the same as that of the elasticity assurance or capacity reservation for which the private pool is generated.
SystemDisk	Object	No		The system disk-related parameter. You can set the SystemDisk. `StorageClusterId` parameter to specify the ID of the dedicated block storage cluster.
StorageClusterId	String	No	dbsc-j5e1sf2vaf5he8m2****	The ID of the dedicated block storage cluster. If you want to use a disk in a dedicated block storage cluster as the system disk when you create the instance, you must specify this parameter. For more information about dedicated block storage clusters, see What is Dedicated Block Storage Cluster?

Parameter	Type	Required	Example	Description
DataDisk.N.PerformanceLevel	String	No	PL2	The performance level of the ESSD used as data disk N. The N value must be the same as that in `DataDisk.N.Category` when DataDisk.N.Category is set to cloud_essd. Default value: PL1. Valid values: • PL0: A single ESSD can deliver up to 10,000 random read/write IOPS. • PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. • PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. • PL3: A single ESSD can deliver up to 1,000,000 random read/write IOPS. For more information about ESSD performance levels, see ESSDs.
DataDisk.N.Description	String	No	TestDescription	The description of data disk N. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`. This parameter is empty by default.
DataDisk.N.SnapshotId	String	No	s-bp17441ohwka0yuh****	The ID of the snapshot used to create data disk N. Valid values of N: 1 to 16. • When the `DataDisk.N.SnapshotId` parameter is specified, the `DataDisk.N.Size` parameter is ignored. The data disk is created based on the size of the specified snapshot. • Use snapshots created after July 15, 2013. Otherwise, an error is returned and your request is rejected.
DataDisk.N.Size	Integer	No	2000	The size of data disk N. Valid values of N: 1 to 16. Unit: GiB. Valid values: • Valid values when DataDisk.N.Category is set to cloud_efficiency: 20 to 32768 • Valid values when DataDisk.N.Category is set to cloud_ssd: 20 to 32768 • Valid values when DataDisk.N.Category is set to cloud_essd: 20 to 32768 • Valid values when DataDisk.N.Category is set to cloud: 5 to 2000 The value of this parameter must be greater than or equal to the size of the snapshot specified by the `SnapshotId` parameter.
DataDisk.N.Device	String	No	null	The mount point of data disk N. **Note** This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
DataDisk.N.DiskName	String	No	DataDiskName	The name of data disk N. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.

Parameter	Type	Required	Example	Description
DataDisk.N.Category	String	No	cloud_ssd	The category of data disk N. Valid values: • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • cloud_essd: ESSD • cloud: basic disk For I/O optimized instances, the default value is cloud_efficiency. For non-I/O optimized instances, the default value is cloud.
DataDisk.N.DeleteWithInstance	Boolean	No	true	Specifies whether to release data disk N when the instance is released. Default value: true.
DataDisk.N.KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d****	The ID of the Key Management Service (KMS) key to be used by data disk N.
DataDisk.N.Encrypted	Boolean	No	false	Specifies whether to encrypt data disk N. Default value: false.
DataDisk.N.StorageClusterId	String	No	dbsc-j5e1sf2vaf5he8m2****	The ID of the dedicated block storage cluster. If you want to use a disk in a dedicated block storage cluster as data disk N when you create the instance, you must specify this parameter.
Tag.N.key	String	No	null	The key of tag N **Note** This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N to be added to the instance, disks, and primary elastic network interface (ENI). Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.
Tag.N.Value	String	No	TestValue	The value of tag N to be added to the instance, disks, and primary ENI. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length. It cannot start with `acs:` or contain `http://` or `https://`.
Tag.N.value	String	No	null	The value of tag N. **Note** This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Parameter	Type	Example	Description
InstanceId	String	i-bp67acfmxazb4p****	The ID of the instance.
OrderId	String	1234567890	The ID of the order. This parameter is returned only when `InstanceChargeType` is set to PrePaid.
TradePrice	Float	0.165	The transaction price.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateInstance
&RegionId=cn-hangzhou
&ImageId=ubuntu_18_04_64_20G_alibase_20190624.vhd
&SecurityGroupId=sg-bp15ed6xe1yxeycg****
&HostName=LocalHostName
&InstanceType=ecs.g6.large
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateInstanceResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <InstanceId>i-bp67acfmxazb4p****</InstanceId>
    <OrderId>1234567890</OrderId>
    <TradePrice>0.165</TradePrice>
</CreateInstanceResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "InstanceId" : "i-bp67acfmxazb4p****",
  "OrderId" : "1234567890",
  "TradePrice" : "0.165"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid.	The error message returned because the specified InternetChargeType parameter is invalid.
400	InvalidParameter	The specified parameter "InternetMaxBandwidthOut" is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter " SystemDisk.Category " is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidDataDiskSize.ValueNotSupported	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified DataDisk.N.Size parameter is invalid or because the snapshot size exceeds the maximum capacity allowed for the specified disk category.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or because you are not authorized to manage instances of the specified instance type.
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidHostName.Malformed	The specified parameter "HostName" is not valid.	The error message returned because the specified HostName parameter is invalid.
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.
400	InvalidPasswordParam.Mismatch	The input password should be null when passwdInherit is true.	The error message returned because the Password parameter is not left empty when the PasswdInherit parameter is used.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidDiskName.Malformed	The specified parameter "SystemDisk.DiskName or DataDisk.n.DiskName" is not valid.	The error message returned because the specified SystemDisk.DiskName or DataDisk.N.DiskName parameter is invalid.
400	InvalidDiskDescription.Malformed	The specified parameter "SystemDisk.DiskDescription" or "DataDisk.n.Description" is not valid.	The error message returned because the specified SystemDisk.Description or DataDisk.N.Description parameter is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified DataDisk.N.Category parameter is invalid.
400	InvalidDataDevice.Malformed	The specified parameter "DataDisk.n.Device" is not valid.	The error message returned because the specified DataDisk.N.Device parameter is invalid.
400	InvalidNodeControllerId.Malformed	The specified parameter "NodeControllerId" is not valid.	The error message returned because the specified NodeControllerId parameter is invalid.
400	InvalidInnerIpAddress.Malformed	The specified parameter "InnerIpAddress" is not valid.	The error message returned because the specified InnerIpAddress parameter is invalid.
400	InvalidInnerIpAddress.Unusable	The specified InnerIpAddress is already used or not found in usable ip range.	The error message returned because the specified internal IP address is unavailable.
400	OperationDenied	The specified parameter "VlanId" is not valid or vlan has not enough IP address.	The error message returned because the specified VlanId parameter is invalid or because available IP addresses in the specified VLAN are insufficient.
400	InvalidParameter.Conflict	The specified image does not support the specified instance type.	The error message returned because the specified image cannot be used for instances of the specified instance type.
400	ImageNotSupportCloudInit	The specified image does not support cloud-init.	The error message returned because the specified image does not support cloud-init.
400	InvalidSnapshotId.BasedSnapshotTooOld	The specified snapshot is created before 2013-07-15.	The error message returned because the specified snapshot was created on or before July 15, 2013.

HTTP status code	Error code	Error message	Description
400	QuotaExceed.AfterpayInstance	The maximum number of Pay-As-You-Go instances is exceeded: %s	The error message returned because resources are insufficient to create pay-as-you-go instances of the specified instance type. Reduce the number of instances to be created.
400	InvalidMarketImageChargeType.NotSupport	The specified chargeType of marketImage is unsupported.	The error message returned because the billing method of the Alibaba Cloud Marketplace image is not supported.
400	InvalidInstanceName.Malformed	The specified parameter "InstanceName" is not valid.	The error message returned because the specified InstanceName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter but cannot start with http:// or https://.
400	InvalidDiskDescription.Malformed	The specified parameter "SystemDisk.DiskDescription or DataDisk.n.Description" is not valid.	The error message returned because the specified SystemDisk.Description or DataDisk.N.Description parameter is invalid.
400	InvalidParameter.Conflict	The specified region and cluster do not match.	The error message returned because the specified region and cluster do not correspond to each other.
400	InvalidParameter.Mismatch	Specified security group and virtual switch are not in the same VPC.	The error message returned because the specified security group and vSwitch do not belong to the same VPC.
400	InvalidNetworkType.Mismatch	Specified parameter "InternetChargeType" conflict with instance network type.	The error message returned because the network type of the instance does not support the specified billing method for network usage.
400	InvalidPrivateIpAddress	Specified private IP address is not in the CIDR block of virtual switch.	The error message returned because the specified private IP address is not within the CIDR block of the specified vSwitch.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address is already in use. Try another IP address.
400	QuotaExceeded.PrivateIpAddress	Don't have enough private IPs in this switch	The error message returned because all the private IP addresses within the CIDR block of the specified vSwitch are already in use. Try another vSwitch.
400	QuotaExceeded	Living instances quota exceeded in this VPC.	The error message returned because the maximum number of active instances has been reached.
400	IncorrectVSwitchStatus	The current status of virtual switch does not support this operation.	The error message returned because the specified vSwitch is in the Pending state and cannot be deleted.
400	InvalidParameter.Mismatch	Specified virtual switch is not in the specified zone.	The error message returned because the specified vSwitch does not exist in the specified zone.
400	ResourceNotAvailable	Resource you requested is not available in this region or zone.	The error message returned because VPC is not supported by the specified region or zone.
400	MissingParameter	The input parameter "VSwitchId" that is mandatory for processing this request is not supplied.	The error message returned because the VSwitchId parameter is not specified.
400	InvalidDiskCategory.Mismatch	The specified disk categories' combination is not supported.	The error message returned because the combination of specified disk categories is not supported.
400	InvalidIoOptimizedValue.ValueNotSupported	IoOptimized value not supported.	The error message returned because the specified IoOptimized parameter is invalid.

HTTP status code	Error code	Error message	Description
400	MissingParamter	The specified parameter "Period" is not null.	The error message returned because the Period parameter is not specified.
400	InvalidPeriod	The specified period is not valid.	The error message returned because the specified Period parameter is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter " DataDisk.n.Category " is not valid.	The error message returned because the specified DataDisk.N.Category parameter is invalid.
400	InstanceDiskCategoryLimitExceed	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified DataDisk.N.Size parameter is invalid or because the snapshot size exceeds the maximum capacity allowed for the specified disk category.
400	InvalidParameter	The specified vm bandwidth is not valid.	The error message returned because the specified bandwidth of the instance is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter SystemDisk.Category is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidParameter.Bandwidth	The specified parameter Bandwidth is not valid.	The error message returned because the specified bandwidth is invalid.
400	InvalidIPAddress.AlreadyUsed	The specified IPAddress is already used by other resource.	The error message returned because the specified IP address is already in use. Try another one.
400	InvalidUserData.SizeExceeded	The specified parameter "UserData" exceeds the size.	The error message returned because the size of user data specified by the UserData parameter exceeds the upper limit.
400	InvalidUserData.NotSupported	The specified parameter "UserData" only support the vpc and IoOptimized Instance.	The error message returned because the specified UserData parameter is not supported. UserData is supported only by I/O optimized instances located in VPCs.
400	InstanceDiskNumber.LimitExceed	The total number of specified disk in an instance exceeds.	The error message returned because the number of specified disks exceeds the upper limit for an instance.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned because you have overdue payments in your account.
400	InvalidDiskCategory.ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidAutoRenewPeriod.ValueNotSupported	The specified autoRenewPeriod is not valid.	The error message returned because the specified AutoRenewPeriod parameter is invalid.
400	QuotaExceed.AfterpayInstance	The maximum number of Pay-As-You-Go instances is exceeded.	The error message returned because resources are insufficient to create pay-as-you-go instances of the specified instance type. Reduce the number of instances to be created.
400	InvalidSpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
400	InvalidSpotParam.EmptyZoneID	The specified ZoneId is empty when SpotStrategy is set.	The error message returned because the ZoneId parameter is not specified while the SpotStrategy parameter is specified.
400	InvalidSpotPriceLimit	The specified SpotPriceLimitis not valid.	The error message returned because the specified SpotPriceLimit parameter is invalid.
400	InvalidSpotDuration	The specified SpotDuration is not valid.	The error message returned because the specified SpotDuration parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidSpotAuthorized	The specified Spot param is unauthorized.	The error message returned because you are not authorized to set the SpotDuration parameter.
400	InvalidSpotPrepaid	The specified Spot type is not support PrePay Instance.	The error message returned because preemptible instances do not support the subscription billing method.
400	InvalidSpotAliUid	The specified UID is not authorized to use SPOT instance.	The error message returned because you are not authorized to create preemptible instances.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidParameter.Bandwidth	%s	The error message returned because the specified bandwidth is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned because the specified data disk category is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	%s	The error message returned because the operation is not applicable to the specified system disk category.
400	InvalidParameter.Conflict	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified InternetChargeType parameter is invalid.
400	InvalidInstanceType.ValueNotSupported	%s	The error message returned because the operation is not applicable to the specified instance type.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to perform the operation in the specified region.
400	Zone.NotOnSale	%s	The error message returned because the requested resources are unavailable in the specified zone.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	InvalidDataDiskSize.ValueNotSupported	%s	The error message returned because the specified data disk size is invalid.
400	InvalidInstanceType.ValueNotSupported	The specified parameter "KeyPairName" only support IoOptimized Instance.	The error message returned because non-I/O optimized instances do not support key pairs.
400	OperationDenied	The specified InstanceType or Zone is not available or not authorized.	The error message returned because the specified instance type or zone is unavailable or because you are not authorized to use resources of the specified instance type or within the specified zone.
400	InvalidParameter.EncryptedIllegal	%s	The error message returned because the specified parameter is invalid. Check whether your encryption operation is valid.
400	InvalidParameter.EncryptedNotSupported	%s	The error message returned because the specified parameter is invalid and your encryption operation is not supported.
400	EncryptedOption.Conflict	%s	The error message returned because the parameter used to encrypt disks is not supported.

HTTP status code	Error code	Error message	Description
400	InvalidSpotPriceLimit.LowerThanPublicPrice	The specified parameter "soptPriceLimit" can't be lower than current public price.	The error message returned because the specified value of SpotPriceLimit is lower than the current market price.
400	InvalidHpcClusterId.Unnecessary	The specified HpcClusterId is unnecessary.	The error message returned because the HpcClusterId parameter is specified.
400	InvalidVSwitchId.Necessary	The VSwitchId is necessary.	The error message returned because the VSwitchId parameter is not specified.
400	InvalidHpcClusterId.Necessary	The HpcClusterId is necessary.	The error message returned because the HpcClusterId parameter is not specified.
400	InvalidHpcClusterId.NotFound	The specified HpcClusterId is not found.	The error message returned because the specified HpcClusterId parameter does not exist.
400	InvalidHpcClusterId.Creating	The specified HpcClusterId is creating.	The error message returned because the specified HPC cluster is being created.
400	QuotaExceeded.PrivateIpAddress	Don't have enough private IPs in this switch.	The error message returned because no private IP address is available in the CIDR block of the vSwitch. Try another vSwitch.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.
400	IncorrectImageStatus	Encrypted snapshots do not support this operation.	The error message returned because the operation is not supported by encrypted snapshots.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	InvalidSecurityGroup.NotInDefaultVpc	%s	The error message returned because the specified security group is not in the default VPC. Check whether the specified SecurityGroupId parameter is correct.
400	VpcNotFound	Vpc is not found according to the specified VSwitch or the vpc does not belong to you.	The error message returned because no VPC is found based on the specified vSwitch or because the corresponding VPC does not belong to you.
400	InvalidSpotInterruptionBehavior	%s	The error message returned because the specified SpotInterruptionBehavior parameter is invalid.
400	OperationDenied.IllegalPaymentPolicy	The current payment policy is illegal, please connect your service provider to authenticate relative agreement.	The error message returned because the current payment policy is invalid. Contact your service provider to validate agreements relevant to the payment policy.
400	InvalidDeploymentOnHost	%s	The error message returned because the instance cannot be deployed in the specified deployment set.
400	InvalidInstanceChargeType.NotSupport	The Dedicated host not support the specified Instance charge type.	The error message returned because the dedicated host does not support instances that use the specified billing method.
400	InvalidNetworkType.NotSupported	The classic networkType not support create ECS on dedicatedHost	The error message returned because dedicated hosts do not support instances located in the classic network.
400	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.
400	InvalidDedicatedHostStatus.NotSupport	Operation denied due to dedicated host status.	The error message returned because the operation is not supported while the dedicated host is in the current state.

HTTP status code	Error code	Error message	Description
400	IncorrectDedicatedHostStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	ChargeTypeViolation.PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed	The error message returned because subscription instances cannot be deployed on pay-as-you-go dedicated hosts.
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned because the expiration date of the instance is later than that of the dedicated host.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorize.	The error message returned because you are not authorized to use the specified instance type.
400	DedicatedHostType.Unmatched	The specified DedicatedHostType doesn?t match the instance type.	The error message returned because the specified dedicated host type does not correspond to the specified instance type.
400	ChargeTypeViolation.PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed.	The error message returned because subscription instances cannot be deployed on pay-as-you-go dedicated hosts.
400	InvalidParam.Tenancy	The specified Tenancy is invalid.	The error message returned because the specified Tenancy parameter is invalid.
400	InvalidParameter.CreditSpecification	The specified CreditSpecification is not supported in this region.	The error message returned because the specified credit specification is not supported in this region.
400	InvalidInstanceType.NotSupported	The specified instanceType is not supported by the deployment set.	The error message returned because the specified instance type is not supported by the deployment set. Try another instance type.
400	InvalidVpcZone.NotSupported	Zone of the specified VSwitch is not available for creating, please try in other zones.	The error message returned because the default vSwitch cannot be created in the specified zone. Try another zone.
400	IncorrectDefaultVpcStatus	The status of the default VPC is invalid.	The error message returned because the state of the default VPC is invalid.
400	InvalidParameter.EncryptedIllegal	The specified parameter Encrypted must be true when kmsKeyId is not empty.	The error message returned because the encryption feature is not enabled after a KMS key ID is specified.
400	IoOptimized.NotSupported	The specified instance must be IoOptimized instance when kmsKeyId is not empty.	The error message returned because I/O optimized instances must be used after the KMSKeyId parameter is specified.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
400	OperationDenied	The current user does not support this operation.	The error message returned because your account does not support the operation.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidHttpEndpoint.NotSupported	The specified HttpEndpoint not supported, you can use enabled(default) or disabled.	The error message returned because the specified HttpEndpoint parameter is invalid. The valid values of this parameter are enabled and disabled. The default value is enabled.
400	InvalidHttpTokens.NotSupported	The specified HttpTokens not supported, you can use optional(default) or required.	The error message returned because the specified HttpTokens parameter is invalid. The valid values of this parameter are optional and required. The default value is optional.

HTTP status code	Error code	Error message	Description
400	InvalidHttpPutResponseHopLimit.NotSupported	The specified HttpPutResponseHopLimit not supported, more than 1 and less than 64 is reasonable.	The error message returned because the specified HttpPutResponseHopLimit parameter is invalid. The valid values of this parameter are 1 to 64.
400	InvalidPrivateIpAddress.Malformed	Specified private IP address is malformed.	The error message returned because the specified PrivateIpAddress parameter is invalid.
400	InvalidOperation.VpcHasEnabledAdvancedNetworkFeature	The specified vpc has enabled advanced network feature.	The error message returned because advanced features are enabled for the specified VPC. You cannot create low-specification instances in the VPC.
400	MissingParameter.PrivatePoolOptionsId	The specified PrivatePoolOptions.Id should not be null.	The error message returned because the PrivatePoolOptions.Id parameter is not specified.
400	Invalid.PrivatePoolOptionsId	The specified PrivatePoolOptions.Id is invalid.	The error message returned because the specified PrivatePoolOptions.Id parameter is invalid.
400	Invalid.PrivatePoolOptionsId	The parameter PrivatePoolOptions.Id should be null when PrivatePoolOptions.MatchCriteria is not Target.	The error message returned because the PrivatePoolOptions.Id parameter is specified when the PrivatePoolOptions.MatchCriteria parameter is set to Open or None.
400	DedicatedHostNotSupported	DedicatedHost is not supported for PrivatePool.	The error message returned because private pools cannot be used to create instances on dedicated hosts.
400	SpotNotSupported	Spot is not supported for PrivatePool.	The error message returned because private pools cannot be used to create preemptible instances.
400	ClassicNetworkNotSupported	Classic network is not supported for PrivatePool.	The error message returned because private pools cannot be used to create instances in the classic network.
400	Invalid.InstanceId	Instance does not exist.	The error message returned because the instance does not exist.
400	Invalid.PrivatePoolOptions.MatchCriteria	Target mode does not support this operation.	The error message returned because the operation is not supported while the PrivatePoolOptions.MatchCriteria parameter is set to Target.
400	MissingParameter.PrivatePoolOptions.Id	The specified PrivatePoolOptions.Id should not be null.	The error message returned because the PrivatePoolOptions.Id parameter is not specified.
400	Invalid.PrivatePoolOptions.Id	The PrivatePool does not exist.	The error message returned because the specified private pool does not exist.
400	Invalid.InstanceType	The InstanceType does not match the PrivatePool.	The error message returned because the specified instance type does not match the specified private pool.
400	Invalid.InstanceChargeType	The InstanceChargeType does not match the PrivatePool.	The error message returned because the specified instance billing method does not match the specified private pool.
400	Invalid.ZoneId	The ZoneId does not match the PrivatePool.	The error message returned because the specified zone does not match the specified private pool.
400	Invalid.PrivatePoolOptions.MatchCriteria	The PrivatePoolOptions.MatchCriteria does not match the PrivatePool.	The error message returned because the specified PrivatePoolOptions.MatchCriteria parameter does not match the private pool.
400	InvalidPlatform.ValueNotSupported	The Platform does not match the PrivatePool.	The error message returned because the specified Platform parameter does not match the private pool.

HTTP status code	Error code	Error message	Description
400	InvalidAliUid	The PrivatePool does not belong to the user of the Instance.	The error message returned because the specified private pool does not belong to the user who attempted to create the instance.
400	Invalid.InstanceId	The Instance dose not attached to a PrivatePool.	The error message returned because the instance does not match the private pool.
401	InvalidRamRole.NotEcsRole	The specified ram role is not authorized for ecs, please check your role policy.	The error message returned because the specified RAM role is not authorized to use ECS. Check your role policy.
403	InvalidDiskCategory.NotSupported	The specified disk category is not support the specified instance type.	The error message returned because the specified disk category does not support the instance type.
403	ImageNotSubscribed	The specified image has not be subscribed.	The error message returned because you have not subscribed to the specified Alibaba Cloud Marketplace image.
403	OperationDenied	The specified Image is disabled or is deleted.	The error message returned because the specified image is disabled or deleted.
403	InvalidSystemDiskCategory.ValueUnauthorized	The disk category is not authorized.	The error message returned because you are not authorized to use the specified disk category.
403	InvalidSnapshotId.NotReady	The specified snapshot has not completed yet.	The error message returned because the specified snapshot is being created.
403	OperationDenied	The specified snapshot is not allowed to create disk.	The error message returned because the specified snapshot cannot be used to create disks.
403	InstanceDiskCategoryLimitExceed	The total size of specified disk category in an instance exceeds.	The error message returned because the total size of disks of the specified category exceeds the maximum capacity allowed for an instance.
403	InvalidDevice.InUse	The specified device has been occupied.	The error message returned because the specified device already has a disk attached.
403	ImageRemovedInMarket	The specified market image is not available, Or the specified user defined image includes product code because it is based on an image subscribed from marketplace, and that image in marketplace includeing exact the same product code has been removed.	The error message returned because the specified Alibaba Cloud Marketplace image is unavailable, or because the specified custom image contains the product code of the Alibaba Cloud Marketplace image from which the custom image is derived and the Alibaba Cloud Marketplace image was removed from Alibaba Cloud Marketplace.
403	OperationDenied	The creation of Instance to the specified Zone is not allowed.	The error message returned because instances cannot be created in the specified zone.
403	CategoryNotSupported	The specified zone does not offer the specified disk category.	The error message returned because the specified disk category is unavailable in the specified zone.
403	OperationDenied	The specified Zone or cluster does not offer the specified disk category or the speicified zone and cluster do not match.	The error message returned because the specified disk category is unavailable in the specified zone or cluster, or because the specified zone and cluster do not correspond to each other.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because requested resources are unavailable in the specified zone. Try another instance type or zone. You can call the DescribeZones operation to query available resources.
403	QuotaExceed.PortableCloudDisk	The quota of portable cloud disk exceeds.	The error message returned because the maximum number of removable disks has been reached.

HTTP status code	Error code	Error message	Description
403	OperationDenied	Sales of this resource are temporarily suspended in the specified region; please try again later.	The error message returned because the requested resource is unavailable in the specified region. Try again later.
403	SecurityGroupInstanceLimitExceed	The maximum number of instances in a security group is exceeded.	The error message returned because the maximum number of instances in the security group has been reached.
403	NodeControllerUnavailable	The Node Controller is temporarily unavailable.	The error message returned because the node controller is unavailable.
403	RegionUnauthorized	There is no authority to create instance in the specified region.	The error message returned because you are not authorized to create instances in the specified region.
403	CategoryNotSupported	The specified Zone or cluster does not offer the specified disk category.	The error message returned because the specified disk category is unavailable in the specified zone or cluster.
403	InvalidSnapshotId.NotDataDiskSnapshot	The specified snapshot is system disk snapshot.	The error message returned because the specified snapshot is a system disk snapshot.
403	CategoryNotSupported	The specified cluster does not offer the specified disk category.	The error message returned because the specified disk category is unavailable in the specified cluster.
403	DeleteWithInstance.Conflict	The specified disk is not a portable disk and cannot be set to DeleteWithInstance attribute.	The error message returned because the specified disk is not removable and cannot be released along with the instance.
403	InstanceDiskNumLimitExceed	The number of specified disk in an instance exceeds.	The error message returned because the number of specified disks exceeds the upper limit for an instance.
403	IoOptimized.NotSupported	The specified image is not support IoOptimized Instance.	The error message returned because the specified image does not support I/O optimized instances.
403	ImageNotSupportInstanceType	The specified image don't support the InstanceType instance.	The error message returned because the specified image does not support the instance type.
403	InvalidDiskSize.TooSmall	Specified disk size is less than the size of snapshot	The error message returned because the specified disk size is smaller than the snapshot size.
403	OperationDenied	The type of the disk does not support the operation	The error message returned because the specified disk category does not support this operation.
403	InvalidDiskCategory.Mismatch	The specified disk categories combination is not supported.	The error message returned because the combination of specified disk categories is not supported.
403	IoOptimized.NotSupported	Vpc is not support IoOptimized instance.	The error message returned because the VPC does not support I/O optimized instances.
403	OperationDenied	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the specified operation is valid.
403	QuotaExceed.BuyImage	The specified image is from the image market, You have not bought it or your quota has been exceeded.	The error message returned because you have not purchased the specified Alibaba Cloud Marketplace image or because your image quota has been used up.
403	InvalidVSwitchId.NotFound	The VSwitchId provided does not exist in our records.	The error message returned because the specified VSwitchId parameter does not exist.
403	InvalidParameter.ResourceOwnerAccount	ResourceOwnerAccount is Invalid.	The error message returned because the specified ResourceOwnerAccount parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidUserData.Forbidden	User not authorized to input the parameter "UserData", please apply for permission "UserData"	The error message returned because you are not authorized to manage user data. Apply for the permissions first.
403	Zone.NotOpen	The specified zone is not granted to you to buy resources yet.	The error message returned because you are not authorized to purchase resources in the specified zone.
403	Zone.NotOnSale	The specified zone is not available for purchase.	The error message returned because the requested resources are unavailable in the specified zone. Try other instance types or select other regions or zones.
403	InvalidClusterId.NotFound	The specified clusterId does not exist.	The error message returned because the specified ClusterId parameter does not exist.
403	InvalidInstanceType.ZoneNotSupported	The specified zone does not support this instancetype.	The error message returned because the specified instance type is not supported in the specified zone.
403	InvalidPayMethod	The specified pay method is not valid.	The error message returned because the specified payment method is invalid.
403	OperationDenied.ImageNotValid	The specified Image is disabled or is deleted.	The error message returned because the specified ImageId parameter does not exist.
403	InstanceType.Offline	%s	The error message returned because the operation is not supported while the instance type is retired or while resources of the instance type are insufficient.
403	DependencyViolation.WindowsInstance	The instance creating is window, cannot use ssh key pair to login.	The error message returned because the specified instance is a Windows instance and does not support logons using SSH key pairs.
403	RealNameAuthenticationError	Your account has not passed the real-name authentication yet.	The error message returned because you have not completed real-name verification. Complete real-name verification and try again.
403	InvalidNetworkType.MismatchRamRole	Ram role cannot be applied to instances of Classic network type.	The error message returned because instance RAM roles can be used only for instances in VPCs, not for instances in the classic network.
403	InvalidUser.PassRoleForbidden	The RAM user does not have the privilege to pass a RAM role.	The error message returned because the RAM user is not authorized to pass the RAM role.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	IncorrectVpcStatus	Current VPC status does not support this operation.	The error message returned because the operation is not supported while the VPC is in the current state.
403	InvalidParameter.NotMatch	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
403	OperationDenied.InvalidNetworkType	%s	The error message returned because the operation is not supported by the specified network type.
403	InvalidSpotInterruptionBehavior.ClassicNetworkNotSupport	The specified SpotInterruptionBehavior does not support Classic network Instance.	The error message returned because the operation is not supported by instances in the classic network.
403	InvalidSpotInterruptionBehavior.LocalDiskNotSupport	The specified SpotInterruptionBehavior does not support local disk instance.	The error message returned because the operation is not supported by instances that have local disks attached.
403	OperationDenied.ImageNotValid	%s	The error message returned because the image does not support the operation.

HTTP status code	Error code	Error message	Description
403	QuotaExceed.PostPaidDisk	Living postPaid disks quota exceeded.	The error message returned because the maximum number of pay-as-you-go disks has been reached.
403	QuotaExceed.DeploymentSetInstanceQuotaFull	instance quota in one deployment set exceeded.	The error message returned because the maximum number of instances in the deployment set has been reached.
403	InvalidDiskCategory.NotSupported	The specified disk category is not supported.	The error message returned because the specified disk category does not support the operation.
403	OperationDenied.ImageNotValid	the specified image is not published in the region.	The error message returned because the specified image is unavailable in the region.
403	OperationDenied.ImageNotValid	the specified image is not found in marketplace.	The error message returned because the specified image does not exist in Alibaba Cloud Marketplace.
403	OperationDenied.LocalDiskUnsupported	The configuration change is not allowed when the specified instance has local disks mounted.	The error message returned because the instance types of instances that have local disks attached cannot be changed.
403	OperationDenied.InconsistentNetwork	The specified security group and vswitch are not in the same vpc.	The error message returned because the specified security group and vSwitch do not belong to the same VPC.
403	OperationDenied	If the network segment of the vswitch is the same as that of its VPC. Therefore, the VPC cannot create other vswitchs across the region.	The error message returned because the VPC and vSwitch have the same CIDR block and no additional vSwitches can be created for zones in the VPC.
403	DefaultVswitch.Existed	The default vswitch for VPC already exists.	The error message returned because a default vSwitch already exists in the current VPC.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	CategoryViolation	The specified instance does not support this operation because of its disk category.	The error message returned because the configurations of instances that have local disks attached cannot be changed.
403	ResourcesNotInSameZone	The specified instance and dedicated host are not in the same zone.	The error message returned because the specified instance and dedicated host are not located in the same region.
403	InvalidRegion.NotSupport	The specified region does not support byok.	The error message returned because the bring your own key (BYOK) feature is not supported in the region.
403	UserNotInTheWhiteList	The user is not in byok white list.	The error message returned because you are not in the BYOK whitelist. Try again when you are in the whitelist.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a KMS key ID is specified for a disk. You can call the DescribeKey operation of KMS to query the information of the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
403	SecurityRisk.3DVerification	We have detected a security risk with your default credit or debit card. Please proceed with verification via the link in your email.	The error message returned because risks are detected in your default credit card or debit card. Click the URL in the email for verification.
403	InvalidDisk.SystemDiskSize	The specified SystemDiskSize beyond the permitted range.	The error message returned because the specified system disk size exceeds the upper limit.

HTTP status code	Error code	Error message	Description
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your Alibaba Cloud account and try again.
403	InvalidVSwitchId.IpInvalid	%s	The error message returned because the specified PrivateIpAddress parameter is invalid.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit.
403	EnterpriseGroupLimited.MutliGroupType	The specified instance can not join multi SecurityGroup types.	The error message returned because the specified instance cannot belong to both a basic and an advanced security group. You can call the DescribeSecurityGroups operation to query the type of a specific security group.
403	QuotaExceed.ElasticQuota	No additional quota is available for the specified ECS instance type.	The error message returned because the maximum number of instances of the specified instance type in the current region has been reached. Try another region or instance type, or reduce the purchase quantity. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type.	The error message returned because the maximum number of instances of the specified instance type in the current region has been reached. Try another region or instance type, or reduce the purchase quantity. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of vCPUs for all instance types in the zone has been reached. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type, or the number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of instances of the specified instance type in the region has been reached or because the maximum number of vCPUs for all instance types has been reached. You can go to the ECS console or Quota Center to request a quota increase.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because you cannot modify security groups managed by cloud services.
404	IoOptimized.NotSupported	The specified instancetype is not support IoOptimized instance	The error message returned because the specified instance type does not support I/O optimization.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist within this account. Check whether the security group ID is correct.
404	InvalidDataDiskSnapshotId.NotFound	The specified parameter "DataDisk.n.SnapshotId" is not valid.	The error message returned because the specified DataDisk.N.SnapshotId parameter is invalid.
404	InvalidClusterId.NotFound	The ClusterId provided does not exist in our records.	The error message returned because the specified ClusterId parameter does not exist.
404	InvalidVSwitchId.NotFound	Specified virtual switch does not exist.	The error message returned because the specified VSwitchId parameter does not exist.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist within this account. Check whether the image ID is correct.

HTTP status code	Error code	Error message	Description
404	OperationDenied	Another Instance has been creating	The error message returned because no other instances can be created while an instance is being created.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified InstanceChargeType parameter does not exist.
404	DependencyViolation.IoOptimized	The specified instancetype must be IoOptimized instance.	The error message returned because the specified instance type is not I/O optimized.
404	PaymentMethodNotFound	No payment method has been registered on the account.	The error message returned because you have not configured a payment method for your account.
404	HOSTNAME_ILLEGAL	hostname is not valid.	The error message returned because the specified HostName parameter is invalid.
404	InvalidSystemDiskSize.LessThanImageSize	The specified parameter SystemDisk.Size is less than the image size.	The error message returned because the specified system disk size is smaller than the image size.
404	InvalidSystemDiskSize.LessThanMinSize	The specified parameter SystemDisk.Size is less than the min size.	The error message returned because the specified system disk size is smaller than the minimum allowable size.
404	InvalidSystemDiskSize.MoreThanMaxSize	The specified SystemDisk.Size parameter exceeds the maximum size.	The error message returned because the specified system disk size exceeds the upper limit.
404	InvalidDataDiskSnapshotId.NotFound	The specified parameter DataDisk.n.SnapshotId is not valid.	The error message returned because the specified DataDisk.N.SnapshotId parameter is invalid.
404	InvalidSystemDiskSize	The specified parameter SystemDisk.Size is invalid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
404	InvalidRamRole.NotFound	The specified RAMRoleName does not exist.	The error message returned because the specified RamRoleName parameter does not exist.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
404	InvalidMarketImage.NotFound	The specified marketplace image does not exist, please change the imageId and try again.	The error message returned because the specified Alibaba Cloud Marketplace image does not exist. Modify the ImageId parameter value and try again later.
404	DeploymentSet.NotFound	The specified deployment set does not exist.	The error message returned because the specified DeploymentSetId parameter does not exist.
404	InvalidParameter.KMSKeyId.NotFound	The specified KMSKeyId does not exist.	The error message returned because the specified DataDisk.N.KMSKeyId parameter does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified SecurityGroupId parameter does not exist.
404	InvalidDiskIds.NotPortable	The specified DiskId is not portable.	The error message returned because the specified disk is not removable.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	%s	The error message returned because an internal error has occurred.

HTTP status code	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

6.2. DescribeInstances

Queries the details of one or more Elastic Compute Service (ECS) instances.

Description

- You can specify multiple request parameters to be queried. Specified parameters have logical AND relations. Only the specified parameters are included in the filter conditions. However, if InstanceIds is set to an empty JSON array, it is regarded as a valid filter condition and an empty result is returned.
- If you are using a RAM user or RAM role that does not have the permissions to call this operation, an empty list is returned. You can include the `DryRun` parameter in your request to check whether the empty list is caused by lack of permissions.
- When you call an API operation by using Alibaba Cloud CLI, you must specify request parameter values of different data types in the required formats. For more information, see Parameter format overview.
- You can use one of the following methods to check the responses:
  - Method 1: During a paged query, when you call the DescribeInstances operation to retrieve the first page of results, set `MaxResults` to specify the maximum number of entries to return in the call. The return value of `NextToken` is a pagination token, which can be used in the next call to retrieve a new page of results. When you call the DescribeInstances operation to retrieve a new page of results, set `NextToken` to the `NextToken` value returned in the previous call and set `MaxResults` to specify the maximum number of entries to return in this call.
  - Method 2: Use `PageSize` to specify the number of entries to return on each page and then use `PageNumber` to specify the number of the page to return.

    You can use only one of the preceding methods. If a large number of entries are to be returned, we recommend that you use method 1. When `MaxResults` or `NextToken` is specified, the `PageSize` and `PageNumber` request parameters do not take effect and the `TotalCount` response parameter is invalid.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstances	The operation that you want to perform. Set the value to **DescribeInstances**.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	No	v-bp67acfmxazb4p****	The ID of the virtual private cloud (VPC) to which the instance belongs.
VSwitchId	String	No	vsw-bp67acfmxazb4p****	The ID of the vSwitch to which the instance is connected.
ZoneId	String	No	cn-hangzhou-g	The zone ID of the instance.
InstanceNetworkType	String	No	vpc	The network type of the instance. Valid values: • classic: classic network • vpc: VPC

Parameter	Type	Required	Example	Description
SecurityGroupId	String	No	sg-bp67acfmxazb4p****	The ID of the security group to which the instance belongs.
InstanceIds	String	No	["i-bp67acfmxazb4p****", "i-bp67acfmxazb4p****", ... "i-bp67acfmxazb4p****"]	The IDs of instances. The value can be a JSON array that consists of up to 100 instance IDs. Separate the instance IDs with commas (,).
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The query token. Set the value to the `NextToken` value returned in the last call to the DescribeInstances operation.
MaxResults	Integer	No	10	The maximum number of entries to return on each page. Maximum value: 100. Default value: • If this parameter is not specified or is set to a value smaller than 10, the default value is 10. • If this parameter is set to a value greater than 100, the default value is 100.
InnerIpAddresses	String	No	["10.1.1.1", "10.1.2.1", ... "10.1.10.1"]	The internal IP addresses of instances located in the classic network. This parameter is valid when InstanceNetworkType is set to classic. The value can be a JSON array that consists of up to 100 IP addresses. Separate the IP addresses with commas (,).
PrivateIpAddresses	String	No	["172.16.1.1", "172.16.2.1", ... "172.16.10.1"]	The private IP addresses of instances located in VPCs. This parameter is valid when InstanceNetworkType is set to vpc. The value can be a JSON array that consists of up to 100 IP addresses. Separate the IP addresses with commas (,).
PublicIpAddresses	String	No	["42.1.1.**", "42.1.2.**", ... "42.1.10.**"]	The public IP addresses of instances. The value can be a JSON array that consists of up to 100 IP addresses. Separate the IP addresses with commas (,).
EipAddresses	String	No	["42.1.1.**", "42.1.2.**", ... "42.1.10.**"]	The elastic IP addresses (EIPs) of instances. This parameter is valid when InstanceNetworkType is set to vpc. The value can be a JSON array that consists of up to 100 IP addresses. Separate the IP addresses with commas (,).
InstanceChargeType	String	No	PostPaid	The billing method of the instance. Valid values: • PostPaid: pay-as-you-go • PrePaid: subscription

Parameter	Type	Required	Example	Description
InternetChargeType	String	No	PayByTraffic	The billing method for network usage. Valid values: • PayByBandwidth: pay-by-bandwidth • PayByTraffic: pay-by-traffic **Note** When the **pay-by-traffic** billing method for network usage is used, the maximum inbound and outbound bandwidth values are used as upper limits of bandwidths instead of guaranteed performance specifications. In scenarios where demand outstrips resource supplies, these maximum bandwidths may be limited. If you want guaranteed bandwidths for your instance, use the **pay-by-bandwidth** billing method for network usage.
InstanceName	String	No	Test	The name of the instance. Fuzzy search with the asterisk (*) wildcard is supported.
ImageId	String	No	m-bp67acfmxazb4p****	The ID of the image.
Status	String	No	Running	The state of the instance. Valid values: • Pending: The instance is being created. • Running: The instance is running. • Starting: The instance is being started. • Stopping: The instance is being stopped. • Stopped: The instance is stopped.
LockReason	String	No	security	The reason why the instance is locked. Valid values: • financial: The instance is locked due to overdue payments. • security: The instance is locked due to security reasons. • recycling: The preemptible instance is locked and pending release. • dedicatedhostfinancial: The instance is locked due to overdue payments for the dedicated host. • refunded: The instance is locked because a refund is made for the instance.
Filter.1.Key	String	No	CreationStartTime	The key of filter 1 used to query resources. Set the value to `CreationStartTime`. You can specify a time by setting both `Filter.1.Key` and `Filter.1.Value` to query resources that were created after the time.
Filter.2.Key	String	No	CreationEndTime	The key of filter 2 used to query resources. Set the value to `CreationEndTime`. You can specify a time by setting both `Filter.2.Key` and `Filter.2.Value` to query resources that were created before the time.
Filter.3.Key	String	No	ExpiredStartTime	The key of filter 3 used to query resources. Set the value to `ExpiredStartTime`. You can specify a time by setting both `Filter.3.Key` and `Filter.3.Value` to query resources that expire after the time.

Parameter	Type	Required	Example	Description
Filter.4.Key	String	No	ExpiredEndTime	The key of filter 4 used to query resources. Set the value to `ExpiredEndTime`. You can specify a time by setting both `Filter.4.Key` and `Filter.4.Value` to query resources that expire before the time.
Filter.1.Value	String	No	2017-12-05T22:40Z	The value of filter 1 used to query resources. Set the value to a time. If you specify this parameter, you must also specify the `Filter.1.Key` parameter. Specify the time in the `yyyy-MM-ddTHH:mmZ` format. The time must be in UTC.
Filter.2.Value	String	No	2017-12-06T22:40Z	The value of filter 2 used to query resources. Set the value to a time. If you specify this parameter, you must also specify the `Filter.2.Key` parameter. Specify the time in the `yyyy-MM-ddTHH:mmZ` format. The time must be in UTC.
Filter.3.Value	String	No	2017-12-07T22:40Z	The value of filter 3 used to query resources. Set the value to a time. If you specify this parameter, you must also specify the `Filter.3.Key` parameter. Specify the time in the `yyyy-MM-ddTHH:mmZ` format. The time must be in UTC.
Filter.4.Value	String	No	2017-12-08T22:40Z	The value of filter 4 used to query resources. Set the value to a time. If you specify this parameter, you must also specify the `Filter.4.Key` parameter. Specify the time in the `yyyy-MM-ddTHH:mmZ` format. The time must be in UTC.
IoOptimized	Boolean	No	true	Specifies whether the instance is I/O optimized.
InstanceType	String	No	ecs.g5.large	The instance type of the instance.
InstanceTypeFamily	String	No	ecs.g5	The instance family of the instance.
KeyPairName	String	No	KeyPairNameTest	The name of the SSH key pair bound to the instance.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the instance belongs. When this parameter is specified to query resources, up to 1,000 resources that belong to the specified resource group can be displayed in the response.
HpcClusterId	String	No	hpc-bp67acfmxazb4p****	The ID of the High Performance Computing (HPC) cluster to which the instance belongs.
RdmaIpAddresses	String	No	10.10.10.102	The Remote Direct Memory Access (RDMA) IP addresses of HPC instances.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Default value: false. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are granted required permissions, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the DryRunOperation error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned and the request is made.
HttpEndpoint	String	No	enabled	Specifies whether the access channel for the instance metadata is enabled. Valid values: • enabled • disabled Default value: enabled. **Note** For more information about instance metadata, see Overview of ECS instance metadata.
HttpTokens	String	No	optional	Specifies whether the security hardening mode (IMDSv2) is forcefully used to access instance metadata. Valid values: • optional: The security hardening mode (IMDSv2) is not forcefully used. • required: The security hardening mode (IMDSv2) is forcefully used. After you set this parameter to required, you cannot access instance metadata in normal mode. Default value: optional. **Note** For more information about modes of accessing instance metadata, see Access mode of instance metadata.
Ipv6Address.N	String	No	2408:4321:180:1701:94c7:bc38:3bfa:****	IPv6 address N of the elastic network interface (ENI). You can specify multiple IPv6 addresses. Valid values of N: 1 to 100.
Tag.N.key	String	No	keyTest	The tag key of the ENI. **Note** This parameter will be removed in the future. We recommend that you use the `Tag.N.Key` parameter to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N. Valid values of N: 1 to 20. If a single tag is specified to query resources, up to 1,000 resources that have this tag added can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources that have all these tags added can be displayed in the response. To query more than 1,000 resources that have specified tags added, call the ListTagResources operation.

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	TestValue	The value of tag N. Valid values of N: 1 to 20.
Tag.N.value	String	No	valueTest	The value of tag N. **Note** This parameter will be removed in the future. We recommend that you use the `Tag.N.Value` parameter to ensure future compatibility.
AdditionalAttributes.N	String	No	META_OPTIONS	The value of attribute N. Valid values of N: 1 to 20. Valid values: • META_OPTIONS: instance metadata • DDH_CLUSTER: dedicated host cluster • NETWORK_PRIMARY_ENI_IP: secondary IP address associated with the primary ENI of the instance

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The query token that is returned in this call.
PageSize	Integer	10	The number of entries returned per page.
PageNumber	Integer	1	The page number of the returned page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of instances returned. **Note** If you specify the `MaxResults` and `NextToken` parameters to perform a paged query, the value of the `TotalCount` response parameter is invalid.
Instances	Array of Instance		Details about the instances.
Instance			
CreationTime	String	2017-12-10T04:04Z	The time when the instance was created. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC. For more information, see ISO 8601.
SerialNumber	String	51d1353b-22bf-4567-a176-8b3e12e4****	The serial number of the instance.
Status	String	Running	The state of the instance.
DeploymentSetId	String	ds-bp67acfmxazb4p****	The ID of the deployment set in which the instance is deployed.
KeyPairName	String	testKeyPairName	The name of the key pair bound to the instance.
SaleCycle	String	month	The billing cycle of the instance.

Parameter	Type	Example	Description
SpotStrategy	String	NoSpot	The bidding policy for the pay-as-you-go instance. Valid values: • NoSpot: The instance is a regular pay-as-you-go instance. • SpotWithPriceLimit: The instance is a preemptible instance with a user-defined maximum hourly price. • SpotAsPriceGo: The instance is a preemptible instance for which the market price is automatically used as the bid price. The market price can be up to the pay-as-you-go price.
DeviceAvailable	Boolean	true	Indicates whether data disks can be attached to the instance.
LocalStorageCapacity	Long	1000	The capacity of local disks attached to the instance.
Description	String	testDescription	The description of the instance.
SpotDuration	Integer	1	The protection period of the preemptible instance. Unit: hours. Valid values: 0, 1, 2, 3, 4, 5, and 6. • Protection periods of 2, 3, 4, 5, and 6 hours are in invitational preview. If you want to set this parameter to one of these values, submit a ticket. • A value of 0 indicates that the preemptible instance has no protection period. **Note** This parameter is returned when the SpotStrategy parameter is set to SpotWithPriceLimit or SpotAsPriceGo.
InstanceNetworkType	String	vpc	The network type of the instance. Valid values: • classic • vpc
InstanceName	String	InstanceNameTest	The name of the instance.
OSNameEn	String	CentOS 7.4 64 bit	The English name of the operating system of the instance.
HpcClusterId	String	hpc-bp67acfmxazb4p****	The ID of the HPC cluster to which the instance belongs.
SpotPriceLimit	Float	0.98	The maximum hourly price of the instance. It can be accurate to three decimal places. This parameter is valid only when the SpotStrategy parameter is set to SpotWithPriceLimit.
Memory	Integer	16384	The memory size of the instance. Unit: MiB.
OSName	String	CentOS 7.4 64-bit	The name of the operating system of the instance.
DeploymentSetGroupNo	Integer	1	The number of the deployment set group to which the instance belongs in a deployment set.
ImageId	String	m-bp67acfmxazb4p****	The ID of the image that the instance is running.
VlanId	String	10	The virtual LAN (VLAN) ID of the instance. **Note** This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.

Parameter	Type	Example	Description
ClusterId	String	c-bp67acfmxazb4p****	The ID of the cluster to which the instance belongs. **Note** This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
GPUSpec	String	NVIDIA V100	The GPU model used by the instance type.
AutoReleaseTime	String	2017-12-10T04:04Z	The time when to automatically release the pay-as-you-go instance.
DeletionProtection	Boolean	false	The release protection attribute of the instance. This parameter indicates whether you can use the ECS console or call the DeleteInstance operation to release the instance. • true: Release protection is enabled for the instance. • false: Release protection is disabled for the instance. **Note** This parameter is applicable only to pay-as-you-go instances. It can protect instances against manual releases, but not against automatic releases.
StoppedMode	String	KeepCharging	Indicates whether the instance continues to be billed after it is stopped. Valid values: • KeepCharging: standard mode. Billing of the instance continues after the instance is stopped, and resources are retained for the instance. • StopCharging: economical mode. Billing of some resources of the instance stops after the instance is stopped. When the instance is stopped, its resources such as vCPUs, memory, and public IP address are released. You may be unable to restart the instance if some types of resources are out of stock in the current region. • Not-applicable: Economical mode is not applicable to the instance.
GPUAmount	Integer	4	The number of GPUs for the instance type.
HostName	String	testHostName	The hostname of the instance.
InstanceId	String	i-bp67acfmxazb4p****	The IDs of instances.
InternetMaxBandwidthOut	Integer	5	The maximum outbound public bandwidth. Unit: Mbit/s.
InternetMaxBandwidthIn	Integer	50	The maximum inbound public bandwidth. Unit: Mbit/s.
InstanceType	String	ecs.g5.large	The instance type of the instance.
InstanceChargeType	String	PostPaid	The billing method of the instance. Valid values: • PrePaid: subscription • PostPaid: pay-as-you-go
RegionId	String	cn-hangzhou	The region ID of the instance.
IoOptimized	Boolean	true	Indicates whether the instance is I/O optimized.

Parameter	Type	Example	Description
StartTime	String	2017-12-10T04:04Z	The time when the instance was last started. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC. For more information, see ISO 8601.
Cpu	Integer	8	The number of vCPUs.
LocalStorageAmount	Integer	2	The number of local disks attached to the instance.
ExpiredTime	String	2017-12-10T04:04Z	The time when the instance expires. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC. For more information, see ISO 8601.
ResourceGroupId	String	rg-bp67acfmxazb4p****	The ID of the resource group to which the instance belongs.
InternetChargeType	String	PayByTraffic	The billing method for network usage. Valid values: • PayByBandwidth: pay-by-bandwidth • PayByTraffic: pay-by-traffic
ZoneId	String	cn-hangzhou-g	The zone ID of the instance.
Recyclable	Boolean	false	Indicates whether the instance can be recycled.
ISP	String	null	**Note** This parameter is in invitational preview and is unavailable for general users.
CreditSpecification	String	Standard	The performance mode of the burstable instance. Valid values: • Standard: standard mode. For more information, see the "Standard mode" section in Overview. • Unlimited: unlimited mode. For more information, see the "Unlimited mode" section in Overview.
InstanceTypeFamily	String	ecs.g5	The instance family of the instance.
OSType	String	linux	The type of the operating system of the instance. Valid values: • windows • linux
NetworkInterfaces	Array of NetworkInterface		Details about the ENIs bound to the instance.
NetworkInterface			
Type	String	Primary	The type of the ENI. Valid values: • Primary • Secondary
MacAddress	String	00:16:3e:32:b4:**	The media access control (MAC) address of the ENI.
PrimaryIpAddress	String	172.17.**.***	The primary private IP address of the ENI.
NetworkInterfaceId	String	eni-2zeh9atclduxvf1z****	The ID of the ENI.

Parameter	Type	Example	Description
PrivateIpSets	Array of PrivateIpSet		Details about the private IP addresses.
PrivateIpSet			
PrivateIpAddress	String	172.17.**.**	The private IP address of the instance.
Primary	Boolean	true	Indicates whether the IP address is the primary private IP address.
Ipv6Sets	Array of Ipv6Set		The IPv6 addresses assigned to the ENI. This parameter has a value only when the `AdditionalAttributes.N` request parameter is set to `NETWORK_PRIMARY_ENI_IP`.
Ipv6Set			
Ipv6Address	String	2408:4321:180:1701:94c7:bc38:3bfa:***	The IPv6 address assigned to the ENI.
OperationLocks	Array of LockReason		The reasons why the instance was locked.
LockReason			
LockMsg	String	The specified instance is locked due to financial reason.	The message returned when the instance was locked.
LockReason	String	Recycling	The reason why the instance was locked. Valid values: • financial: The instance was locked due to overdue payments. • security: The instance was locked due to security reasons. • recycling: The preemptible instance was locked and pending release. • dedicatedhostfinancial: The instance was locked due to overdue payments for the dedicated host. • refunded: The instance was locked because a refund was made for the instance.
Tags	Array of Tag		The tags of the instance.
Tag			
TagValue	String	TestValue	The tag value of the instance.
TagKey	String	TestKey	The tag key of the instance.
RdmaIpAddress	Array of String	10.10.10.102	The RDMA IP address of the HPC instance.
SecurityGroupIds	Array of String	sg-bp67acfmxazb4p****	The IDs of the security groups to which the instance belongs.
PublicIpAddress	Array of String	121.40.**.**	The public IP address of the instance.
InnerIpAddress	Array of String	10.170.**.**	The internal IP address of the instance located in the classic network.
VpcAttributes	Object		The VPC attributes of the instance.
VpcId	String	vpc-2zeuphj08tt7q3brd****	The ID of the VPC.

Parameter	Type	Example	Description
NatIpAddress	String	172.17.**.**	The NAT IP address of the instance. It is used by ECS instances in different VPCs for communication.
VSwitchId	String	vsw-2zeh0r1pabwtg6wcs****	The ID of the vSwitch.
PrivateIpAddress	Array of String	172.17.**.**	The private IP address of the instance.
EipAddress	Object		Details about the EIP associated with the instance.
IsSupportUnassociate	Boolean	true	Indicates whether the EIP can be disassociated.
InternetChargeType	String	PayByTraffic	The billing method of the EIP. Valid values: • PayByBandwidth • PayByTraffic
IpAddress	String	42.112.**.**	The EIP.
Bandwidth	Integer	5	The maximum public bandwidth of the EIP. Unit: Mbit/s.
AllocationId	String	eip-2ze88m67qx5z****	The ID of the EIP.
HibernationOptions	Object		**Note** This parameter is in invitational preview and is unavailable for general users.
Configured	Boolean	false	**Note** This parameter is in invitational preview and is unavailable for general users.
DedicatedHostAttribute	Object		Details about the dedicated host. It is an array that consists of the DedicatedHostClusterId, DedicatedHostId, and DedicatedHostName parameters.
DedicatedHostId	String	dh-bp67acfmxazb4p****	The ID of the dedicated host.
DedicatedHostName	String	testDedicatedHostName	The name of the dedicated host.
DedicatedHostClusterId	String	dc-bp67acfmxazb4h****	The ID of the dedicated host cluster.
EcsCapacityReservationAttr	Object		Details about the capacity reservation related to the instance.
CapacityReservationPreference	String	cr-bp67acfmxazb4p****	The preference of the capacity reservation.
CapacityReservationId	String	cr-bp67acfmxazb4p****	The ID of the capacity reservation.
DedicatedInstanceAttribute	Object		The attributes of the instance on the dedicated host.

Parameter	Type	Example	Description
Affinity	String	default	Indicates whether the instance on the dedicated host is associated with the dedicated host. Valid values: • default: The instance is not associated with the dedicated host. When the instance is started from economical mode, the instance may be automatically deployed to another dedicated host in the automatic deployment resource pool. • host: The instance is associated with the dedicated host. When the instance is started from economical mode, the instance still resides on the original dedicated host.
Tenancy	String	default	Indicates whether the instance is hosted on a dedicated host. Valid values: • default: The instance is not hosted on a dedicated host. • host: The instance is hosted on a dedicated host.
CpuOptions	Object		Details about the CPU options.
Numa	String	2	The number of threads allocated. Valid value: 2.
CoreCount	Integer	2	The number of CPU cores.
ThreadsPerCore	Integer	4	The number of threads per core.
MetadataOptions	Object		Details about the metadata options.
HttpEndpoint	String	enabled	Indicates whether the access channel is enabled for instance metadata. Valid values: • enabled • disabled
HttpPutResponseHopLimit	Integer	0	Note This parameter is unavailable.
HttpTokens	String	optional	Indicates whether the security hardening mode (IMDSv2) is forcefully used to access instance metadata. Valid values: • optional: The security hardening mode (IMDSv2) is not forcefully used. • required: The security hardening mode (IMDSv2) is forcefully used.
ImageOptions	Object		Details about the image options.
LoginAsNonRoot	Boolean	false	Indicates whether the instance that uses the image supports logons of the ecs-user user. Valid values: • true • false

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstances
&RegionId=cn-hangzhou
&PageSize=1
&PageNumber=1
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeInstancesResponse>
    <Instances>
        <Instance>
            <ResourceGroupId>rg-bp67acfmxazb4p****</ResourceGroupId>
            <Memory>16384</Memory>
            <InstanceChargeType>PostPaid</InstanceChargeType>
            <Cpu>8</Cpu>
            <OSName>CentOS  7.4 64-bit</OSName>
            <InstanceNetworkType>vpc</InstanceNetworkType>
            <InnerIpAddress>
            </InnerIpAddress>
            <ExpiredTime>2017-12-10T04:04Z</ExpiredTime>
            <ImageId>m-bp67acfmxazb4p****</ImageId>
            <EipAddress>
                <AllocationId>eip-2ze88m67qx5z****</AllocationId>
                <IpAddress>42.112.**.**</IpAddress>
                <InternetChargeType>PayByTraffic</InternetChargeType>
            </EipAddress>
            <HostName>testHostName</HostName>
            <Tags>
                <Tag>
                    <TagKey>TestKey</TagKey>
                    <TagValue>TestValue</TagValue>
                </Tag>
            </Tags>
            <VlanId/>
            <Status>Running</Status>
            <MetadataOptions>
                <HttpTokens>optional</HttpTokens>
                <HttpEndpoint>enabled</HttpEndpoint>
            </MetadataOptions>
            <InstanceId>i-bp67acfmxazb4p****</InstanceId>
            <StoppedMode>KeepCharging</StoppedMode>
            <CpuOptions>
                <ThreadsPerCore>2</ThreadsPerCore>
                <Numa>2</Numa>
                <CoreCount>4</CoreCount>
            </CpuOptions>
            <StartTime>2017-12-10T04:04Z</StartTime>
            <DeletionProtection>false</DeletionProtection>
            <SecurityGroupIds>
                <SecurityGroupId>sg-bp67acfmxazb4p****</SecurityGroupId>
            </SecurityGroupIds>
            <VpcAttributes>
                <PrivateIpAddress>
                    <IpAddress>172.17.**.**</IpAddress>
                </PrivateIpAddress>
                <VpcId>vpc-2zeuphj08tt7q3brd****</VpcId>
                <VSwitchId>vsw-2zeh0rlpabwtg6wcs****</VSwitchId>
                <NatIpAddress>172.17.**.**</NatIpAddress>
            </VpcAttributes>
            <InternetChargeType>PayByTraffic</InternetChargeType>
            <InstanceName>InstanceNameTest</InstanceName>
            <DeploymentSetId/>
            <InternetMaxBandwidthOut>5</InternetMaxBandwidthOut>
            <SerialNumber>51d1353b-22bf-4567-a176-8b3e12e4****</SerialNumber>
            <OSType>linux</OSType>
            <CreationTime>2017-12-10T04:04Z</CreationTime>
            <AutoReleaseTime>2017-12-10T04:04Z</AutoReleaseTime>
            <Description>testDescription</Description>
            <InstanceTypeFamily>ecs.g5</InstanceTypeFamily>
            <DedicatedInstanceAttribute>
                <Tenancy>default</Tenancy>
                <Affinity>default</Affinity>
            </DedicatedInstanceAttribute>
            <PublicIpAddress>
                <IpAddress>121.40.**.**</IpAddress>
            </PublicIpAddress>
            <GPUSpec/>
            <NetworkInterfaces>
                <NetworkInterface>
```

```
                <Type>Primary</Type>
                <PrimaryIpAddress>172.17.**.***</PrimaryIpAddress>
                <NetworkInterfaceId>eni-2zeh9atcldux vf1z****</NetworkInterfaceId>
                <MacAddress>00:16:3e:32:b4:**</MacAddress>
                <PrivateIpSets>
                    <PrivateIpSet>
                        <PrivateIpAddress>172.17.**.**</PrivateIpAddress>
                        <Primary>true</Primary>
                    </PrivateIpSet>
                </PrivateIpSets>
            </NetworkInterface>
        </NetworkInterfaces>
        <SpotPriceLimit>0.98</SpotPriceLimit>
        <DeviceAvailable>true</DeviceAvailable>
        <SaleCycle>month</SaleCycle>
        <InstanceType>ecs.g5.large</InstanceType>
        <OSNameEn>CentOS  7.4 64 bit</OSNameEn>
        <SpotStrategy>NoSpot</SpotStrategy>
        <IoOptimized>true</IoOptimized>
        <ZoneId>cn-hangzhou-g</ZoneId>
        <ClusterId>c-bp67acfmxazb4p****</ClusterId>
        <EcsCapacityReservationAttr>
            <CapacityReservationPreference/>
            <CapacityReservationId/>
        </EcsCapacityReservationAttr>
        <DedicatedHostAttribute>
            <DedicatedHostId>dh-bp67acfmxazb4p****</DedicatedHostId>
            <DedicatedHostName>testDedicatedHostName</DedicatedHostName>
            <DedicatedHostClusterId>dc-bp67acfmxazb4h****</DedicatedHostClusterId>
        </DedicatedHostAttribute>
        <GPUAmount>4</GPUAmount>
        <OperationLocks>
        </OperationLocks>
        <InternetMaxBandwidthIn>50</InternetMaxBandwidthIn>
        <Recyclable>false</Recyclable>
        <RegionId>cn-hangzhou</RegionId>
        <CreditSpecification/>
    </Instance>
  </Instances>
  <TotalCount>1</TotalCount>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <PageSize>10</PageSize>
  <PageNumber>1</PageNumber>
  <NextToken>caeba0bbb2be03f84eb48b699f0a4883</NextToken>
</DescribeInstancesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "Instances" : {
    "Instance" : [ {
      "ResourceGroupId" : "rg-bp67acfmxazb4p****",
      "Memory" : 16384,
      "InstanceChargeType" : "PostPaid",
      "Cpu" : 8,
      "OSName": "CentOS 7.4 64-bit",
      "InstanceNetworkType" : "vpc",
      "InnerIpAddress" : {
        "IpAddress" : [ ]
      },
      "ExpiredTime" : "2017-12-10T04:04Z",
      "ImageId" : "m-bp67acfmxazb4p****",
      "EipAddress" : {
        "AllocationId" : "eip-2ze88m67qx5z****",
        "IpAddress" : "42.112.**.**",
        "InternetChargeType" : "PayByTraffic"
      },
      "HostName" : "testHostName",
      "Tags" : {
        "Tag" : [ {
          "TagKey" : "TestKey",
          "TagValue" : "TestValue"
```

```
      } ]
    },
    "VlanId" : "",
    "Status" : "Running",
    "MetadataOptions" : {
      "HttpTokens" : "optional",
      "HttpEndpoint" : "enabled"
    },
    "InstanceId" : "i-bp67acfmxazb4p****",
    "StoppedMode" : "KeepCharging",
    "CpuOptions" : {
      "ThreadsPerCore" : 2,
      "Numa" : "2",
      "CoreCount" : 4
    },
    "StartTime" : "2017-12-10T04:04Z",
    "DeletionProtection" : false,
    "SecurityGroupIds" : {
      "SecurityGroupId" : [ "sg-bp67acfmxazb4p****" ]
    },
    "VpcAttributes" : {
      "PrivateIpAddress" : {
        "IpAddress" : [ "172.17.**.**" ]
      },
      "VpcId" : "vpc-2zeuphj08tt7q3brd****",
      "VSwitchId" : "vsw-2zeh0r1pabwtg6wcs****",
      "NatIpAddress" : "172.17.**.**"
    },
    "InternetChargeType" : "PayByTraffic",
    "InstanceName" : "InstanceNameTest",
    "DeploymentSetId" : "",
    "InternetMaxBandwidthOut" : 5,
    "SerialNumber" : "51d1353b-22bf-4567-a176-8b3e12e4****",
    "OSType" : "linux",
    "CreationTime" : "2017-12-10T04:04Z",
    "AutoReleaseTime" : "2017-12-10T04:04Z",
    "Description" : "testDescription",
    "InstanceTypeFamily" : "ecs.g5",
    "DedicatedInstanceAttribute" : {
      "Tenancy" : "default",
      "Affinity" : "default"
    },
    "PublicIpAddress" : {
      "IpAddress" : [ "121.40.**.**" ]
    },
    "GPUSpec" : "",
    "NetworkInterfaces" : {
      "NetworkInterface" : [ {
        "Type" : "Primary",
        "PrimaryIpAddress" : "172.17.**.***",
        "NetworkInterfaceId" : "eni-2zeh9atclduxvf1z****",
        "MacAddress" : "00:16:3e:32:b4:**",
        "PrivateIpSets" : {
          "PrivateIpSet" : [ {
            "PrivateIpAddress" : "172.17.**.**",
            "Primary" : true
          } ]
        }
      } ]
    },
    "SpotPriceLimit" : 0.98,
    "DeviceAvailable" : true,
    "SaleCycle" : "month",
    "InstanceType" : "ecs.g5.large",
    "OSNameEn" : "CentOS  7.4 64 bit",
    "SpotStrategy" : "NoSpot",
    "IoOptimized" : true,
    "ZoneId" : "cn-hangzhou-g",
    "ClusterId" : "c-bp67acfmxazb4p****",
    "EcsCapacityReservationAttr" : {
      "CapacityReservationPreference" : "",
      "CapacityReservationId" : ""
    },
    "DedicatedHostAttribute" : {
      "DedicatedHostId" : "dh-bp67acfmxazb4p****"
```

```
        "DedicatedHostId" : "dh-bp67acfmxazb4p****",
        "DedicatedHostName" : "testDedicatedHostName",
        "DedicatedHostClusterId" : "dc-bp67acfmxazb4h****"
      },
      "GPUAmount" : 4,
      "OperationLocks" : {
        "LockReason" : [ ]
      },
      "InternetMaxBandwidthIn" : 50,
      "Recyclable" : false,
      "RegionId" : "cn-hangzhou",
      "CreditSpecification" : ""
    } ]
  },
  "TotalCount" : 1,
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "PageSize" : 10,
  "PageNumber" : 1,
  "NextToken" : "caeba0bbb2be03f84eb48b699f0a4883"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not correspond to each other.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags exceeds the upper limit.
400	InvalidHpcClusterId.NotFound	The specified HpcClusterId is not found.	The error message returned because the specified HpcClusterId parameter does not exist.
400	InvalidHpcClusterId.Creating	The specified HpcClusterId is creating.	The error message returned because the specified HPC cluster is being created.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified InstanceChargeType parameter does not exist.
404	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid	The error message returned because the specified InternetChargeType parameter is invalid.
404	InvalidLockReason.NotFound	The specified LockReason is not found	The error message returned because the specified LockReason parameter does not exist.
404	InvalidNetworkType.NotFound	The specified InstanceNetworkType is not found	The error message returned because the specified InstanceNetworkType parameter does not exist.
404	InvalidStatus.NotFound	The specified Status is not found	The error message returned because the specified Status parameter does not exist.

For a list of error codes, visit the API Error Center.

6.3. DeleteInstances

You can call this operation to release one or more pay-as-you-go instances or expired subscription instances.

Description

- After an instance is released, all the physical resources used by the instance are recycled. Relevant data is erased and cannot be recovered.
- Disks attached to the instance:
  - The disks for which `DeleteWithInstance` is set to false are retained as pay-as-you-go disks.
  - The disks for which `DeleteWithInstance` is set to true are released along with the instance.
  - For disks for which `DeleteAutoSnapshot` is set to false, the automatic snapshots are retained.

- For disks for which `DeleteAutoSnapshot` is set to true, the automatic snapshots are released.
- Manual snapshots are retained.
- If `OperationLocks` in the DescribeInstances response contains `"LockReason" : "security"` for an instance, the instance is locked for security reasons. Even if `DeleteWithInstance` is set to `false` for the data disks that are attached to the instance, this parameter is ignored and the data disks are released along with the instance. For more information, see API behavior when an instance is locked for security reasons.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteInstances	The operation that you want to perform. Set the value to DeleteInstances.
InstanceId.N	RepeatList	Yes	i-bp1g6zv0ce8oghu7****	The ID of instance N that you want to release. Valid values of N: 1 to 100.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Default value: false. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are authorized, and whether the required parameters are set. If the check fails, the corresponding error message is returned. If the check succeeds, DRYRUN.SUCCESS is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned and the request is made.
Force	Boolean	No	false	Specifies whether to forcibly release the instance in the **Running** (`Running`) state. Default value: false. Valid values: • true: forcibly releases the instance in the **Running** (`Running`) state. This operation is equivalent to the power-off operation. Temporary data in the memory and storage of the instance is erased and cannot be recovered. • false: normally releases the instance. This value is valid only for an instance in the **Stopped** (`Stopped`) state.
TerminateSubscription	Boolean	No	false	Specifies whether to release an expired subscription instance. Default value: false.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example	Description
RequestId	String	7B7813C6-57BF-41XX-B12B-F172F65A6046	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteInstances
&InstanceId.1=i-bp1g6zv0ce8oghu7****
&Force=false
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteInstancesResponse>
      <RequestId>7B7813C6-57BF-41XX-B12B-F172F65A6046</RequestId>
</DeleteInstancesResponse>
```

`JSON` format

```
{
    "RequestId": "7B7813C6-57BF-41XX-B12B-F172F65A6046"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidOperation.DeletionProtection	%s	The error message returned because the operation is invalid. Disable release protection for the instance first.
403	InvalidOperation.EniLinked	%s	The error message returned because the operation is not supported while the instance is bound with elastic network interfaces (ENIs).
403	IncorrectInstanceStatus	%s	The error message returned because the operation is not supported while the instance is in the current state.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
500	InternalError	%s	The error message returned because an internal error has occurred.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
400	DependencyViolation.SLBConfiguring	Specified operation is denied as your instance is using by another product.	The error message returned because the instance is referenced by an SLB instance that is being configured.
400	DependencyViolation.RouteEntry	Specified instance is used by route entry.	The error message returned because custom routing entries that include the IP address of the specified instance exist in the current VPC.

For more information about error codes, see API Error Center.

6.4. StartInstance

Starts an Elastic Compute Service (ECS) instance. After the operation is called, the instance enters the Starting state.

Description

When you call this operation, take note of the following items:

- The instance to be started must be in the **Stopped** (`Stopped`) state.
- If `OperationLocks` in the DescribeInstances response contains `"LockReason" : "security"` for an instance, the instance is locked for security reasons and cannot be started.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	StartInstance	The operation that you want to perform. Set the value to **StartInstance**.
InstanceId	String	Yes	i-bp67acfmxazb4p****	The ID of the instance that you want to start.
InitLocalDisk	Boolean	No	true	Specifies whether to restore the instance to its initial health state. This parameter is applicable to instances of instance families that are equipped with local disks, such as d1, i1, and i2 instances. If a local disk of a d1, i1, or i2 instance fails, you can use this parameter to specify whether to restore the instance to its initial health state on startup. Valid values: • true: restores the instance to its initial health state on startup. After the instance is restored to its initial health state, data stored on the local disks of the instance is lost. • false: does not perform operations and keeps the instance in the current state. Default value: false.
DryRun	Boolean	No	true	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether Resource Access Management (RAM) users are granted required permissions, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the DryRunOperation error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned and the request is made. Default value: false.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=StartInstance
&InstanceId=i-bp67acfmxazb4p****
&InitLocalDisk=true
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<StartInstanceResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</StartInstanceResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	DiskError	IncorrectDiskStatus.	The error message returned because the state of the specified disk is invalid.
403	InstanceExpired	The postPaid instance has been expired. Please ensure your account have enough balance.	The error message returned because the pay-as-you-go instance has expired. When a pay-as-you-go instance is stopped due to an overdue payment, the instance enters the Expired state. Make sure that your account balance is sufficient.
403	InstanceNotReady	The specified instance is not ready for use.	The error message returned because the operation is not supported while the resource is in the current state. Try again later.
403	DiskInArrears	The specified operation is denied as your disk has expired.	The error message returned because the disk has expired due to overdue payments.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because requested resources are unavailable in the specified zone. Try another instance type or zone. You can call the DescribeZones operation to query available resources in zones.
403	OperationDenied.SpotPriceLowerThanPublicPrice	The spot instance price is lower than public price.	The error message returned because the user-defined maximum hourly price of a preemptible instance is lower than the spot price.
403	IncorrectInstanceStatus	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a Key Management Service (KMS) key ID is specified for a disk. You can call the DescribeKey operation of KMS to query information of the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.

HTTP status code	Error code	Error message	Description
403	QuotaExceed.ElasticQuota	No additional quota is available for the specified ECS instance type.	The error message returned because the maximum number of instances of the specified instance type in the region has been reached. Try another region or instance type, or reduce the purchase quantity. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type.	The error message returned because the maximum number of instances of the specified instance type in the region has been reached. Try another region or instance type, or reduce the purchase quantity. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of vCPUs for all instance types in the zone has been reached. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type, or the number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of instances of the specified instance type in the region has been reached or because the maximum number of vCPUs for all instance types has been reached. You can go to the ECS console or Quota Center to request a quota increase.
403	OperationDenied.HostRepairing	The specified operation is denied as the host of ECS instance is being repaired.	The error message returned because the operation is not supported while the physical machine that hosts the ECS instance is being repaired.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter is invalid.
500	InstanceNotReady	The specified instance is not ready for use	The error message returned because the specified instance cannot be connected for the moment. Try again later.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

6.5. RebootInstance

You can call this operation to restart an instance that is in the Running state.

Description

- Only instances that are in the **Running** (`Running`) state can be restarted.
- After this operation is called, the status of the instance changes to **Starting** (`Starting`).
- An instance can be forcibly restarted. A forced restart (`ForceStop`) is equivalent to powering off traditional servers to restart them. This operation can cause data loss if data in the instance is not written to disks.
- You cannot call this operation on ECS instances that are locked for security reasons. An instance is locked for security reasons if `OperationLocks` in the response contains "LockReason": "security" when you query information of the instance. For more information, see API behavior when an instance is locked for security reasons.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates a sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RebootInstance	The operation that you want to perform. Set the value to RebootInstance.
InstanceId	String	Yes	i-bp67acfmxazb4ph****	The ID of the instance.
ForceStop	Boolean	No	false	Specifies whether to forcibly stop the instance to restart it. Default value: false. Valid values: • true: forcibly stops the instance. This operation is equivalent to the typical power-off operation. Cache data that is not written to storage in the instance will be lost. • false: normally stops the instance.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include the required parameters, request format, service limits, and available ECS resources. If the check fails, the corresponding error is returned. If the check succeeds, the `DryRunOperation` error code is returned. • false: The validity of the request is checked, and the request is made if the check succeeds. Default value: false.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RebootInstance
&InstanceId=i-bp67acfmxazb4ph****
&ForceStop=false
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RebootInstanceResponse>
      <RequestId>F2E2C40D-AB09-45A1-B5C5-EB9F5C4E4E4A</RequestId>
</RebootInstanceResponse>
```

`JSON` format

```
{
    "RequestId": "F2E2C40D-AB09-45A1-B5C5-EB9F5C4E4E4A"
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	DiskError	IncorrectDiskStatus.	The error message returned because the specified disk status is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	IncorrectInstanceStatus	%s	The error message returned because this operation is not supported while the instance is in the current state.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

For a list of error codes, visit the API Error Center.

6.6. StopInstance

Stops an Elastic Compute Service (ECS) instance in the Running state. After the operation is called, the state of the instance changes to Stopping and then to Stopped.

Description

- If you call the DescribeInstances operation to query the details of an instance and `OperationLocks` in the response contains "LockReason": "security", the instance is locked for security reasons and cannot be stopped. For more information, see API behavior when an instance is locked for security reasons.
- If economical mode is enabled, you can set `StoppedMode` to KeepCharging to enable standard mode. Then, after your instance is stopped in standard mode, you continue to be charged for it, and its instance type resources and public IP address are retained.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	StopInstance	The operation that you want to perform. Set the value to **StopInstance**.
InstanceId	String	Yes	i-bp67acfmxazb4ph****	The ID of the instance.
ConfirmStop	Boolean	No	true	**Note** This parameter will be removed in the future and is retained only to ensure compatibility. We recommend that you ignore this parameter.

Parameter	Type	Required	Example	Description
ForceStop	Boolean	No	false	Specifies whether to forcibly stop the instance. Valid values: • true: forcibly stops the instance. • false: normally stops the instance. Default value: false.
StoppedMode	String	No	KeepCharging	The stop mode of the pay-as-you-go instance. Valid values: • StopCharging: economical mode. For information about how `StopCharging` takes effect, see the "Prerequisites" section in Economical mode. • KeepCharging: standard mode. After the instance is stopped in standard mode, you continue to be charged for it. Default value: If the prerequisites required for enabling economical mode are met and you have enabled this mode in the ECS console, the default value is StopCharging. For more information, see the "Enable economical mode" section in `Economical mode`. Otherwise, the default value is `KeepCharging`.
DryRun	Boolean	No	true	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked, but the request is not made. Check items include the required parameters, service limits, available ECS resources, and the request format. If the check fails, the corresponding error message is returned. If the check succeeds, the `DryRunOperation` error code is returned. • false: The validity of the request is checked, and the request is made if the check succeeds. Default value: false.

Response parameters

Parameter	Type	Example	Description
RequestId	String	1C488B66-B819-4D14-8711-C4EAAA13AC01	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=StopInstance
&InstanceId=i-bp67acfmxazb4ph****
&ForceStop=false
&StoppedMode=KeepCharging
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<StopInstanceResponse>
    <RequestId>1C488B66-B819-4D14-8711-C4EAAA13AC01</RequestId>
</StopInstanceResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "1C488B66-B819-4D14-8711-C4EAAA13AC01"
}
```

Error codes

Http status code	Error code	Error message	Description
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	DiskError	IncorrectDiskStatus	The error message returned because the state of the specified disk is invalid.
403	InstanceType.ParameterMismatch	The input parameter ConfirmStop must be true when an instance have localstorage.	The error message returned because the ConfirmStop parameter is set to false for the instance that uses local storage.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance and try later.
403	InvalidInstanceId.NotSupport	Classic network Instance does not support this operation.	The error message returned because the operation is not supported by the instance located in the classic network.
403	InvalidInstanceId.NotSupport	Pre pay instance does not support this operation.	The error message returned because the operation is not supported by the subscription instance.
403	InvalidInstanceId.NotSupport	Local disk instance does not support this operation.	The error message returned because the operation is not supported by the instance that uses local disks.
403	InvalidInstanceId.NotSupport	Spot instance does not support this operation.	The error message returned because the operation is not supported by the preemptible instance.
403	IncorrectInstanceStatus	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a Key Management Service (KMS) key ID is specified for a disk. You can call the DescribeKey operation of KMS to query information about the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

6.7. StartInstances

Starts one or more Elastic Compute Service (ECS) instances that are in the Stopped state. After the operation is called, the instances enter the Starting state.

Description

When you call this operation, take note of the following items:

- The instances to be started must be in the **Stopped** (`Stopped`) state.
- If a response contains `{"OperationLocks": {"LockReason" : "security"}}` when you query instance information, the instance is locked for security reasons and all operations are prohibited on it.
- Batch operations are supported. You can use the `BatchOptimization` parameter to specify the batch operation mode.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	StartInstances	The operation that you want to perform. Set the value to **StartInstances**.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include the request format, instance status, and whether the required parameters are specified. If the check fails, the corresponding error message is returned. If the check succeeds, `DRYRUN.SUCCESS` is returned. **Note** If you set `BatchOptimization` to `SuccessFirst` and `DryRun` to true, only `DRYRUN.SUCCESS` is returned regardless of whether the check succeeds. • false: The validity of the request is checked, and the instances are started if the check succeeds. Default value: false.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
BatchOptimization	String	No	AllTogether	The batch operation mode. Valid values: • AllTogether: In this mode, if all instances are started, a success message is returned. If an instance fails the check when DryRun is set to false, all the specified instances cannot be started and an error message is returned. • SuccessFirst: In this mode, each instance is started separately. The response contains the operation results of each instance. Default value: AllTogether.
InstanceId.N	String	Yes	i-bp67acfmxazb4p****	The ID of instance N. Valid values of N: 1 to 100.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.

Parameter	Type	Example	Description
InstanceResponses	Array of InstanceResponse		Details about the responses returned for the instances, which contains the state of each instance before and after the operation is called and the operation results.
InstanceResponse			
Code	String	200	The error code returned for the instance. A return value of 200 indicates success. For more information, see the "Error codes" section in this topic.
Message	String	success	The error message returned for the instance. A return value of success indicates operation success. For more information, see the "Error codes" section in this topic.
InstanceId	String	i-bp67acfmxazb4p****	The ID of the instance.
CurrentStatus	String	Starting	The current state of the instance.
PreviousStatus	String	Stopped	The state of the instance before the operation is called.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=StartInstances
&RegionId=cn-hangzhou
&BatchOptimization=AllTogether
&InstanceId=["i-bp67acfmxazb4p****"]
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<StartInstancesResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
    <InstanceResponses>
        <InstanceResponse>
            <Message>success</Message>
            <InstanceId>i-bp67acfmxazb4p****</InstanceId>
            <PreviousStatus>Stopped</PreviousStatus>
            <CurrentStatus>Starting</CurrentStatus>
            <Code>200</Code>
        </InstanceResponse>
        <InstanceResponse>
            <Message>success</Message>
            <InstanceId>i-bp67acfmxazb4p****</InstanceId>
            <PreviousStatus>Stopped</PreviousStatus>
            <CurrentStatus>Starting</CurrentStatus>
            <Code>200</Code>
        </InstanceResponse>
        <InstanceResponse>
            <Message>The specified InstanceId does not exist.</Message>
            <InstanceId>i-TestID</InstanceId>
            <PreviousStatus/>
            <CurrentStatus/>
            <Code>InvalidInstanceId.NotFound</Code>
        </InstanceResponse>
    </InstanceResponses>
</StartInstancesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****",
  "InstanceResponses" : {
    "InstanceResponse" : [ {
      "Message" : "success",
      "InstanceId" : "i-bp67acfmxazb4p****",
      "PreviousStatus" : "Stopped",
      "CurrentStatus" : "Starting",
      "Code" : "200"
    }, {
      "Message" : "success",
      "InstanceId" : "i-bp67acfmxazb4p****",
      "PreviousStatus" : "Stopped",
      "CurrentStatus" : "Starting",
      "Code" : "200"
    }, {
      "Message" : "The specified InstanceId does not exist.",
      "InstanceId" : "i-TestID",
      "PreviousStatus" : "",
      "CurrentStatus" : "",
      "Code" : "InvalidInstanceId.NotFound"
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a Key Management Service (KMS) key ID is specified for a disk. You can call the DescribeKey operation of KMS to query information of the specified CMK.
400	DRYRUN.SUCCESS	This request is a dryrun request with successful result.	The error message returned because the validity of the request is checked and the check succeeds.
403	IncorrectInstanceStatus	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	InvalidInstance.NotFoundSystemDisk	%s	The error message returned because the specified instance has no system disk and cannot be started. For more information, see the return value of the %s placeholder in the error message. You must call the AttachDisk operation to attach a system disk to the specified instance.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because requested resources are unavailable in the specified zone. Try another instance type or zone. You can call the DescribeZones operation to query available resources.
403	OperationDenied.SpotPriceLowerThanPublicPrice	The spot instance price is lower than public price.	The error message returned because the user-defined maximum hourly price of a preemptible instance is lower than the current market price.
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InstanceNotReady	The specified instance is not ready for use.	The error message returned because the operation is not supported while the resource is in the current state. Try again later.

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance does not exist. Check whether the specified instance ID is valid.
404	InvalidInstanceIds.NotFound	The specified InstanceIds does not exist.	The error message returned because the specified instances do not exist. Check whether the specified instance IDs are valid. You can call the DescribeInstances operation to query the states of specific instances.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance ID does not exist. Check whether the instance ID is correct.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

6.8. RebootInstances

You can call this operation to restart one or more ECS instances that are in the Running state. After this operation is called, the ECS instances enter the Stopping state and then the Running state.

Description

- The ECS instances to be restarted must be in the **Running** (`Running`) state.
- Batch operations are supported. You can use the `BatchOptimization` parameter to specify the batch operation mode.
- Instances can be forcibly restarted. A forced restart (`ForceStop`) is equivalent to powering off traditional servers to restart them. This operation can cause data loss if data in the instance is not written to Elastic Block Storage devices.
- If the response contains `{"OperationLocks": {"LockReason" : "security"}}` when you query information of an instance, the instance is locked for security reasons and all operations are prohibited on the instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RebootInstances	The operation that you want to perform. Set the value to RebootInstances.
InstanceId.N	RepeatList	Yes	i-bp67acfmxazb4p****	The ID of instance N that you want to restart. Valid values of N: 1 to 100.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include the request format, instance status, and whether the required parameters are specified. If the check fails, the corresponding error message is returned. If the check succeeds, `DRYRUN.SUCCESS` is returned. **Note** If you set `BatchOptimization` to `SuccessFirst` and `DryRun` to true, only `DRYRUN.SUCCESS` is returned regardless of whether the check succeeds. • false: The validity of the request is checked, and the request is made if the check succeeds. Default value: false.
ForceReboot	Boolean	No	false	Specifies whether to forcibly restart the instance. Valid values: • true: forcibly restarts the instance. This operation is equivalent to the typical power-off operation. Cache data that is not written to storage in the instance will be lost. • false: normally restarts the instance. Default value: false.
BatchOptimization	String	No	AllTogether	The batch operation mode. Valid values: • AllTogether: In this mode, if all instances are restarted, a success message is returned. If an instance fails the verification, all instances fail to restart and an error message is returned. • SuccessFirst: In this mode, each instance is restarted separately. The response contains the operation results for each instance. Default value: AllTogether.

Response parameters

Parameter	Type	Example	Description
InstanceResponses	Array of InstanceResponse		Details about the instance responses, which contain the status of each instance before and after the operation is called and the result of the operation.
InstanceResponse			
Code	String	200	The error code of the operation result. The return value 200 indicates success. For more information, see the "Error codes" section in this topic.
CurrentStatus	String	Stopping	The current status of the instance.
InstanceId	String	i-bp1g6zv0ce8oghu7****	The ID of the instance.
Message	String	success	The error message for an instance operation. The return value Success indicates operation success. For more information, see the "Error codes" section in this topic.

Parameter	Type	Example	Description
PreviousStatus	String	Running	The status of the instance before the operation is called.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RebootInstances
&InstanceId.1=i-bp1g6zv0ce8oghu7****
&InstanceId.2=i-bp1g6zv0ce8oghu7****
&InstanceId.3=i-TestID
&RegionId=cn-hangzhou
&ForceReboot=false
$BatchOptimization=SuccessFirst
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RebootInstancesResponse>
      <RequestId>FF53E96D-3F1A-42F0-8373-1C2B39D72D44</RequestId>
      <InstanceResponses>
            <InstanceResponse>
                  <Message>success</Message>
                  <InstanceId>i-bp1g6zv0ce8oghu7****</InstanceId>
                  <PreviousStatus>Running</PreviousStatus>
                  <CurrentStatus>Stopping</CurrentStatus>
                  <Code>200</Code>
            </InstanceResponse>
            <InstanceResponse>
                  <Message>success</Message>
                  <InstanceId>i-bp1g6zv0ce8oghu7****</InstanceId>
                  <PreviousStatus>Running</PreviousStatus>
                  <CurrentStatus>Stopping</CurrentStatus>
                  <Code>200</Code>
            </InstanceResponse>
            <InstanceResponse>
                  <Message>The specified InstanceId does not exist. </Message>
                  <InstanceId>i-TestID</InstanceId>
                  <PreviousStatus></PreviousStatus>
                  <CurrentStatus></CurrentStatus>
                  <Code>InvalidInstanceId.NotFound</Code>
            </InstanceResponse>
      </InstanceResponses>
</RebootInstancesResponse>
```

`JSON` format

```
{
    "RequestId": "FF53E96D-3F1A-42F0-8373-1C2B39D72D44",
    "InstanceResponses": {
        "InstanceResponse": [
            {
                "Message": "success",
                "InstanceId": "i-bp1g6zv0ce8oghu7****",
                "PreviousStatus": "Running",
                "CurrentStatus": "Stopping",
                "Code": "200"
            },
            {
                "Message": "success",
                "InstanceId": "i-bp1g6zv0ce8oghu7****",
                "PreviousStatus": "Running",
                "CurrentStatus": "Stopping",
                "Code": "200"
            },
            {
                "Message": "The specified InstanceId does not exist.",
                "InstanceId": "i-TestID",
                "PreviousStatus": "",
                "CurrentStatus": "",
                "Code": "InvalidInstanceId.NotFound"
            }
        ]
    }
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance ID does not exist.
403	IncorrectInstanceStatus	%s	The error message returned because the operation is not supported while the instance is in the current state.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance ID does not exist.
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InstanceNotReady	The specified instance is not ready for use.	The error message returned because the operation is not supported while the resource is in the current state. Try again later.

For a list of error codes, visit the API Error Center.

6.9. StopInstances

Stops one or more Elastic Compute Service (ECS) instances in the Running state. After the operation is called, the state of the instances changes to Stopping and then to Stopped.

Description

- If you call the DescribeInstances operation and the response contains `{"OperationLocks": {"LockReason" : "security"}}`, the instances are locked for security reasons and cannot be stopped.
- If the economical mode is enabled for pay-as-you-go instances, you can set `StoppedMode` to KeepCharging to enable the standard mode for the instances. Then, after the instances are stopped in standard mode, you continue to be charged for them, and their instance type resources and public IP addresses are retained.
- Batch operations are supported. You can use the `BatchOptimization` parameter to specify the batch operation mode.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	StopInstances	The operation that you want to perform. Set the value to **StopInstances**.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked, but the request is not made. Check items include the request format, instance status, and whether the required parameters are specified. If the check fails, the corresponding error message is returned. If the check succeeds, `DRYRUN.SUCCESS` is returned. **Note** If you set `BatchOptimization` to `SuccessFirst` and `DryRun` to true, only `DRYRUN.SUCCESS` is returned regardless of whether the check succeeds. • false: The validity of the request is checked, and the request is made if the check succeeds. Default value: false.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
ForceStop	Boolean	No	false	Specifies whether to forcibly stop the instance. Valid values: • true: forcibly stops the instance. This operation is equivalent to the typical power-off operation. Cache data that is not written to storage in the instance will be lost. • false: normally stops the instance. Default value: false.
StoppedMode	String	No	KeepCharging	The stop mode of the pay-as-you-go instance. Valid values: • StopCharging: economical mode. For information about how `StopCharging` takes effect, see the "Prerequisites" section in Economical mode. • KeepCharging: standard mode. After the instances are stopped in standard mode, you continue to be charged for them. Default value: If the prerequisites required for enabling the economical mode are met and you have enabled this mode in the ECS console, the default value is `StopCharging`. For more information, see "Enable the economical mode" in Economical mode. Otherwise, the default value is `KeepCharging`.

Parameter	Type	Required	Example	Description
BatchOptimization	String	No	AllTogether	The batch operation mode. Valid values: • AllTogether: In this mode, if all instances are stopped, a success message is returned. If an instance fails the verification, all instances fail to stop and an error message is returned. • SuccessFirst: In this mode, each instance is separately stopped. The response contains the operation results for each instance. Default value: AllTogether.
InstanceId.N	String	Yes	i-bp67acfmxazb4p****	The ID of instance N. Valid values of N: 1 to 100

Response parameters

Parameter	Type	Example	Description
RequestId	String	1C488B66-B819-4D14-8711-C4EAAA13AC01	The ID of the request.
InstanceResponses	Array of InstanceResponse		Details about instance-specific responses, which contain the states of each instance before and after the operation is called and the results of the operation.
InstanceResponse			
Code	String	200	The error code of the instance operation result. The return value 200 indicates success. For more information, see the "Error codes" section in this topic.
Message	String	success	The error message for instance operation. The return value Success indicates operation success. For more information, see the "Error codes" section in this topic.
InstanceId	String	i-bp67acfmxazb4p****	The ID of instance N.
CurrentStatus	String	Stopping	The current state of the instance.
PreviousStatus	String	Running	The state of the instance before the operation is called.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=StopInstances
&InstanceId.1=i-bp67acfmxazb4p****
&InstanceId.2=i-bp67acfmxazb4p****
&RegionId=cn-hangzhou
&ForceStop=false
&StoppedMode=KeepCharging
$BatchOptimization=SuccessFirst
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<StopInstancesResponse>
    <RequestId>FF53E96D-3F1A-42F0-8373-1C2B39D72D44</RequestId>
    <InstanceResponses>
        <InstanceResponse>
            <Message>success</Message>
            <InstanceId>i-bp67acfmxazb4p****</InstanceId>
            <PreviousStatus>Running</PreviousStatus>
            <CurrentStatus>Stopping</CurrentStatus>
            <Code>200</Code>
        </InstanceResponse>
        <InstanceResponse>
            <Message>success</Message>
            <InstanceId>i-bp67acfmxazb4p****</InstanceId>
            <PreviousStatus>Running</PreviousStatus>
            <CurrentStatus>Stopping</CurrentStatus>
            <Code>200</Code>
        </InstanceResponse>
        <InstanceResponse>
            <Message>The specified InstanceId does not exist.</Message>
            <InstanceId>i-TestID</InstanceId>
            <PreviousStatus/>
            <CurrentStatus/>
            <Code>InvalidInstanceId.NotFound</Code>
        </InstanceResponse>
    </InstanceResponses>
</StopInstancesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "FF53E96D-3F1A-42F0-8373-1C2B39D72D44",
  "InstanceResponses" : {
    "InstanceResponse" : [ {
      "Message" : "success",
      "InstanceId" : "i-bp67acfmxazb4p****",
      "PreviousStatus" : "Running",
      "CurrentStatus" : "Stopping",
      "Code" : "200"
    }, {
      "Message" : "success",
      "InstanceId" : "i-bp67acfmxazb4p****",
      "PreviousStatus" : "Running",
      "CurrentStatus" : "Stopping",
      "Code" : "200"
    }, {
      "Message" : "The specified InstanceId does not exist.",
      "InstanceId" : "i-TestID",
      "PreviousStatus" : "",
      "CurrentStatus" : "",
      "Code" : "InvalidInstanceId.NotFound"
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a Key Management Service (KMS) key ID is specified for a disk. You can call the DescribeKey operation of KMS to query information about the specified CMK.

HTTP status code	Error code	Error message	Description
400	DRYRUN.SUCCESS	This request is a dryrun request with successful result.	The error message returned because the validity of the request is checked and the check succeeds.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	IncorrectInstanceStatus	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your Alibaba Cloud account does not have a sufficient balance. Add funds to your account and try again later.
403	InstanceNotReady	The specified instance is not ready for use.	The error message returned because the operation is not supported while the resource is in the current state. Try again later.
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance does not exist.
404	InvalidInstanceIds.NotFound	The specified InstanceIds does not exist.	The error message returned because the specified InstanceId.N parameter does not exist. Check whether the InstanceId.N parameter is valid. You can call the DescribeInstances operation to query the states of specific instances.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId.N parameter does not exist. Check whether the instance ID is correct.

For a list of error codes, visit the API Error Center.

6.10. DeleteInstance

Releases a pay-as-you-go instance or an expired subscription instance.

Description

- After an instance is released, all the physical resources used by the instance are recycled. Relevant data is erased and cannot be restored.
- Disks attached to the instance:
  - The disks for which `DeleteWithInstance` is set to false are retained as pay-as-you-go disks.
  - The disks for which `DeleteWithInstance` is set to true are released along with the instance.
  - For disks for which `DeleteAutoSnapshot` is set to false, the automatic snapshots of the disks are retained.
  - For disks for which `DeleteAutoSnapshot` is set to true, the automatic snapshots of the disks are released.
  - Manual snapshots of the disks are retained.
  - If `OperationLocks` in the response contains `"LockReason" : "security"` for an instance, the instance is locked for security reasons. For more information, see API behavior when an instance is locked for security reasons. Even if `DeleteWithInstance` is set to `false` for the data disks that are attached to the instance, this parameter is ignored and the data disks are released along with the instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteInstance	The operation that you want to perform. Set the value to **DeleteInstance**.
InstanceId	String	Yes	i-bp1g6zv0ce8oghu7****	The ID of the instance that you want to release.

Parameter	Type	Required	Example	Description
Force	Boolean	No	false	Specifies whether to forcefully release the instance in the **Running** (`Running`) state. Valid values: • true: forcefully releases the instance in the **Running** (`Running`) state. When the Force parameter is set to true, this operation is equivalent to the power-off operation. Temporary data in the memory and storage of the instance is erased and cannot be restored. • false: normally releases the instance. This value is valid only for instances in the **Stopped** (`Stopped`) state. Default value: false.
TerminateSubscription	Boolean	No	false	Specifies whether to release the expired subscription instance. Default value: false.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteInstance
&InstanceId=i-bp1g6zv0ce8oghu7****
&Force=false
&TerminateSubscription=false
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DeleteInstanceResponse>
    <RequestId>928E2273-5715-46B9-A730-238DC996A533</RequestId>
</DeleteInstanceResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "928E2273-5715-46B9-A730-238DC996A533"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	DependencyViolation.SLBConfiguring	Specified operation is denied as your instance is using by another product.	The error message returned because the instance is referenced by an Server Load Balancer (SLB) instance that is being configured.
400	DependencyViolation.RouteEntry	Specified instance is used by route entry.	The error message returned because custom routing rules still exist in the virtual private cloud (VPC).

HTTP status code	Error code	Error message	Description
400	InvalidParameter	The input parameter InstanceId is invalid.	The error message returned because the specified InstanceId parameter is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the billing method of the instance does not support this operation.
403	IncorrectInstanceStatus.Initializing	The specified instance status does not support this operation.	The error message returned because the instance is being initialized and cannot be released. Try again later.
403	IncorrectInstanceStatus	The specified instance is still attached by volumes.	The error message returned because the specified instance still has data volumes.
403	InvalidOperation.DeletionProtection	%s	The error message returned because the operation is invalid. Disable release protection for the instance first.
403	InvalidOperation.EniLinked	%s	The error message returned because the operation is not supported while the instance is bound with elastic network interfaces (ENIs). You must unbind the ENIs before you can release the instance.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter is invalid.

For a list of error codes, visit the API Error Center.

6.11. AttachInstanceRamRole

You can call this operation to bind an instance RAM role to one or more ECS instances. If an instance already has an instance RAM role, an error is returned when you bind another instance RAM role to the instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachInstanceRamRole	The operation that you want to perform. Set the value to AttachInstanceRamRole.
InstanceIds	String	Yes	["i-bp14ss25xca5ex1u****", "i-bp154z5o1qjalfse****", "i-bp10ws62o04ubhvi****"...]	The IDs of instances to which you want to bind the instance RAM role. It can be a JSON array that consists of up to 100 instance IDs. Separate multiple instance IDs with commas (,).
RamRoleName	String	Yes	testRamRoleName	The name of the instance RAM role. You can call the ListRoles operation provided by RAM to query the RAM roles that you have created.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
Policy	String	No	{"Statement": [{"Action": ["*"],"Effect": "Allow","Resource": ["*"]}],"Version":"1"}	The permission policy. The policy must be 1 to 1,024 characters in length. When you bind a RAM role to one or more instances, you can specify an additional policy to further restrict the permissions of the RAM role. For more information, see Policy overview.

Response parameters

Parameter	Type	Example	Description
AttachInstanceRamRoleResults	Array of AttachInstanceRamRoleResult		Details about the results of binding the instance RAM role.
AttachInstanceRamRoleResult			
Code	String	200	Indicates whether the instance RAM role was bound. If 200 is returned, the RAM role was bound. If any other value is returned, the RAM role failed to be bound. For more information, see the "Error codes" section of this topic.
InstanceId	String	i-bp10ws62o04ubhvi****	The ID of the instance.
Message	String	success	Indicates whether the instance RAM role was bound. If success is returned, the RAM role was bound. If any other value is returned, the RAM role failed to be bound. For more information, see the "Error codes" section of this topic.
Success	Boolean	true	Indicates whether the RAM role was bound.
FailCount	Integer	0	The number of RAM roles that fail to be bound.
RamRoleName	String	testRamRoleName	The name of the instance RAM role.
RequestId	String	D9553E4C-6C3A-4D66-AE79-9835AF705639	The ID of the request.
TotalCount	Integer	1	The total number of instances to which you attempted to attach the instance RAM role.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AttachInstanceRamRole
&InstanceIds=["i-bp10ws62o04ubhvi****"]
&RamRoleName=testRamRoleName
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AttachInstanceRamRoleResponse>
      <RequestId>E6352369-5C2B-41CD-AB50-471550C8F674</RequestId>
      <AttachInstanceRamRoleResults>
            <AttachInstanceRamRoleResult>
                  <InstanceId>i-bp10ws62o04ubhvi****</InstanceId>
                  <Code>200</Code>
                  <Message>success</Message>
            </AttachInstanceRamRoleResult>
      </AttachInstanceRamRoleResults>
      <TotalCount>1</TotalCount>
      <FailCount>0</FailCount>
      <RamRoleName>testRamRoleName</RamRoleName>
</AttachInstanceRamRoleResponse>
```

`JSON` format

```
{
    "RequestId": "D9553E4C-6C3A-4D66-AE79-9835AF705639",
    "AttachInstanceRamRoleResults": {
        "AttachInstanceRamRoleResult": [
            {
                "Message": "success",
                "InstanceId": "i-bp10ws62o04ubhvi****",
                "Code": "200"
            }
        ]
    },
    "TotalCount": 1,
    "FailCount": 0,
    "RamRoleName": "testRamRoleName"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceIds.Malformed	The specified instanceIds are not valid.	The error message returned because the specified InstanceIds parameter is invalid.
404	InvalidInstanceId.NotFound	The specified instanceId does not exist	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.
403	InvalidNetworkType.Mismatch RamRole	Ram role cannot be applied to instances of Classic network type.	The error message returned because an instance RAM role can be used only for instances in VPCs, not for instances in the classic network.
403	InvalidUser.PassRoleForbidden	The RAM user does not have the privilege to pass a RAM role.	The error message returned because the RAM user is not authorized to pass the RAM role.
404	InvalidRamRole.NotFound	The specified RAMRoleName does not exist.	The error message returned because the specified RamRoleName parameter does not exist.
404	InvalidRamRole.NotEcsRole	The specified ram role is not authorized for ecs, please check your role policy.	The error message returned because the specified RAM role is not authorized to use ECS. Check your role policy.

For a list of error codes, visit the API Error Center.

6.12. DetachInstanceRamRole

You can call this operation to detach an instance RAM role from one or more ECS instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DetachInstanceRamRole	The operation that you want to perform. Set the value to DetachInstanceRamRole.
InstanceIds	String	Yes	["i-bp67acfmxazb4p****", "i-bp67acfmxazb5p****", "i-bp67acfmxazb6p****"...]	The IDs of instances from which you want to detach an instance RAM role. It can be a JSON array that consists of up to 100 instance IDs. Separate multiple instance IDs with commas (,).
RegionId	String	Yes	cn-hangzhou	The region ID of the instances. You can call the DescribeRegions operation to query the most recent region list.
RamRoleName	String	No	RamRoleTest	The name of the instance RAM role to be detached. You can call the ListRoles operation provided by RAM to query the instance RAM roles that you have created.

Response parameters

Parameter	Type	Example	Description
DetachInstanceRamRoleResults	Array of DetachInstanceRamRoleResult		Details about the results of detaching the instance RAM role from the instances.
DetachInstanceRamRoleResult			
Code	String	200	The code that indicates whether the instance RAM role was detached. If 200 is returned, the instance RAM role was detached. If any other value is returned, the instance RAM role failed to be detached. For more information, see the "Error codes" section.
InstanceId	String	i-bp67acfmxazb4p****	The ID of the instance from which you attempted to detach the instance RAM role.
InstanceRamRoleSets	Array of InstanceRamRoleSet		The details about the instance RAM roles of the instances.
InstanceRamRoleSet			
InstanceId	String	i-bp67acfmxazb4p****	The ID of the instance from which the RAM role was detached.
RamRoleName	String	RamRoleTest	The name of the instance RAM role.
Message	String	success	The message that indicates whether the instance RAM role was detached. If success is returned, the instance RAM role was detached. If any other value is returned, the instance RAM role failed to be detached. For more information, see the "Error codes" section.
Success	Boolean	true	Indicates whether the RAM role was detached.
FailCount	Integer	0	The number of the instances from which the RAM role failed to be detached.
RamRoleName	String	RamRoleTest	The name of the instance RAM role.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Parameter	Type	Example	Description
TotalCount	Integer	1	The total number of the instances from which you detached the RAM role.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DetachInstanceRamRole
&InstanceIds=["i-bp67acfmxazb4p****", "i-bp67acfmxazb5p****", "i-bp67acfmxazb6p****"…]
&RegionId=cn-hangzhou
&RamRoleName=RamRoleTest
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DetachInstanceRamRoleResponse>
      <TotalCount>1</TotalCount>
      <DetachInstanceRamRoleResults>
            <DetachInstanceRamRoleResult>
                  <Message>success</Message>
                  <InstanceId>i-bp16qng6jnvt6g7t****</InstanceId>
                  <Code>200</Code>
                  <InstanceRamRoleSets>
                        <InstanceId>i-bp16qng6jnvt6g7t****</InstanceId>
                        <RamRoleName>RamRoleTest</RamRoleName>
                  </InstanceRamRoleSets>
            </DetachInstanceRamRoleResult>
      </DetachInstanceRamRoleResults>
      <RequestId>14D5B163-CE6C-4489-B979-DBE5D0495A63</RequestId>
      <RamRoleName></RamRoleName>
      <FailCount>0</FailCount>
</DetachInstanceRamRoleResponse>
```

`JSON` format

```
{
    "TotalCount": 1,
    "DetachInstanceRamRoleResults": {
        "DetachInstanceRamRoleResult": [
            {
                "Message": "success",
                "InstanceId": "i-bp16qng6jnvt6g7t****",
                "Code": "200",
                "InstanceRamRoleSets": {
                    "InstanceId": "i-bp16qng6jnvt6g7t****",
                    "RamRoleName": "RamRoleTest"
                }
            }
        ]
    },
    "RequestId": "14D5B163-CE6C-4489-B979-DBE5D0495A63",
    "RamRoleName": "",
    "FailCount": 0
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceIds.Malformed	The specified instanceIds are not valid.	The error message returned because the specified InstanceIds parameter is invalid.
403	InvalidNetworkType.Mismatch RamRole	Ram role cannot be applied to instances of Classic network type.	The error message returned because an instance RAM role can be used only for instances in VPCs, not for instances in the classic network.

HTTP status code	Error code	Error message	Description
403	InvalidUser.PassRoleForbidden	The RAM user does not have the privilege to pass a RAM role.	The error message returned because the RAM user is not authorized to pass a RAM role.

For a list of error codes, visit the API Error Center.

6.13. DescribeInstanceStatus

Queries the status information of multiple Elastic Compute Service (ECS) instances.

Description

- For information about the lifecycle states of an ECS instance, see Instance states.
- You can also call this operation to query the list of ECS instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceStatus	The operation that you want to perform. Set the value to **DescribeInstanceStatus**.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-hangzhou-d	The zone ID of the instance. You can call the DescribeZones operation to query the most recent zone list.
ClusterId	String	No	cls-bp67acfmxazb4p****	The cluster ID of the instance.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 50. Default value: 10.
InstanceId.N	String	No	i-bp1j4i2jdf3owlhe****	The ID of instance N. Valid values of N: 1 to 100. When you specify multiple instance IDs, separate the IDs with commas (,). Example: `["bp1j4i2jdf3owlhe****","i-bp1j4i2jdf3o1234****"]`.

Response parameters

Parameter	Type	Example	Description
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
PageNumber	Integer	1	The page number of the returned page.

Parameter	Type	Example	Description
TotalCount	Integer	58	The total number of instances.
InstanceStatuses	Array of InstanceStatus		The status information of the instances.
InstanceStatus			
Status	String	Running	The state of the instance. Valid values: • Pending: The instance is being created. • Running: The instance is running. • Starting: The instance is being started. • Stopping: The instance is being stopped. • Stopped: The instance is stopped.
InstanceId	String	i-bp1j4i2jdf3owlhe****	The ID of the instance.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=DescribeInstanceStatus
&ResourceOwnerId=155780923770
&RegionId=cn-hangzhou
&ZoneId=cn-hangzhou-d
&ClusterId=cls-bp67acfmxazb4p****
&PageNumber=1
&PageSize=10
&InstanceId=["i-bp1j4i2jdf3owlhe****"]
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeInstanceStatusResponse>
    <PageNumber>1</PageNumber>
    <InstanceStatuses>
        <InstanceStatus>
            <Status>Running</Status>
            <InstanceId>i-bp1j4i2jdf3owlhe****</InstanceId>
        </InstanceStatus>
    </InstanceStatuses>
    <TotalCount>58</TotalCount>
    <PageSize>1</PageSize>
    <RequestId>746C3444-9A24-4D7D-B8A8-DCBF7AC8BD66</RequestId>
</DescribeInstanceStatusResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "PageNumber" : 1,
  "InstanceStatuses" : {
    "InstanceStatus" : [ {
      "Status" : "Running",
      "InstanceId" : "i-bp1j4i2jdf3owlhe****"
    } ]
  },
  "TotalCount" : 58,
  "PageSize" : 1,
  "RequestId" : "746C3444-9A24-4D7D-B8A8-DCBF7AC8BD66"
}
```

Error codes

For a list of error codes, visit the API Error Center.

6.14. RenewInstance

You can call this operation to renew a subscription ECS instance.

Description

Before you call this operation, make sure that you fully understand the billing methods and pricing schedule of ECS.

When you call this operation, take note of the following items:

- This operation is applicable only to subscription ECS instances.
- By default, the renewal operation first uses available coupons in your account. This does not apply to discount services.
- Your account must support credit card payment.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RenewInstance	The operation that you want to perform. Set the value to RenewInstance.
InstanceId	String	Yes	i-bp67acfmxazb4p****	The ID of the instance.
Period	Integer	Yes	1	The renewal period of the subscription instance. If the DedicatedHostId parameter is specified, the value of the Period parameter must be within the subscription period of the dedicated host. Valid values: • If `PeriodUnit` is set to `Month`, the valid values of `Period` are 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 24, 36, 48, and 60.
PeriodUnit	String	No	Month	The unit of the renewal period. Default value: Month. Set the value to Month. • Month
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example	Description
OrderId	String	1234567890	The ID of the order.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RenewInstance
&InstanceId=i-bp67acfmxazb4p****
&Period=1
&PeriodUnit=Month
&ClientToken=0c593ea1-3bea-11e9-b96b-88e9fe637760
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RenewInstanceResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
      <OrderId>1234567890</OrderId>
</RenewInstanceResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
    "OrderId": "1234567890"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid.	The error message returned because the specified InternetChargeType parameter is invalid.
400	InvalidInstanceType.NotSupported	The specified InstanceType is not Supported.	The error message returned because the specified InstanceType parameter is invalid.
400	InvalidParameter	The specified parameter "InternetMaxBandwidthOut" is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
400	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records.	The error message returned because the specified InstanceChargeType parameter does not exist.
400	InvalidRebootTime.ValueNotSupported	The specified RebootTime is out of the permitted range.	The error message returned because the specified restart time is out of the permitted range.
400	IdempotenceParamNotMatch	Request uses a client token in a previous request but is not identical to that request.	The error message returned because the ClientToken value in this request is identical to that in the previous request but some other parameters in this request are different from those in the previous request.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the operation is not supported while the instance uses the current billing method.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or because you are not authorized to manage the instance type.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
403	Diskcategory.Mismatch	The disk specified to convert to portable is not allowed due to the disk category does not support.	The error message returned because the specified disk cannot be converted to a removable disk due to disk category restrictions.

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	InvalidInstanceType.codeUnauthorized	The specified InstanceType is not authorized.	The error message returned because the specified InstanceType parameter is invalid.
400	InvalidInternetChargeType.InstanceNotSupported	The specified instance which is in vpc is not support the parameter InternetChargeType.	The error message returned because the specified billing method for network usage is not supported by the specified VPC-type instance.
400	InvalidPeriod	The specified period is not valid.	The error message returned because the specified Period parameter is invalid.
403	InstanceSpecModification.NotEffective	The specified instance has been reserved for making a spec modification and not taken effective in the current contract period.	The error message returned because the instance is reserved due to instance type changes. Changes made to it cannot take effect during the current contract period.
400	Upgrade.NotSupported	Upgrade operation is not supported.	The error message returned because the upgrade operation is invalid.
403	LastTokenProcessing	The last token request is processing.	The error message returned because the previous token request is being processed. Try again later.
403	Instance.UnPaidOrder	The specified instance has unpaid order.	The error message returned because you have overdue payments for the instance.
400	OperationDenied	Specified instance is in VPC.	The error message returned because the specified instance is in a VPC.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
400	InvalidParameter	The specified parameter " InternetMaxBandwidthOut " is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InvalidDisk.NotAllowed	The specified disk is not allowed to be converted to portable.	The error message returned because the specified disk cannot be converted to a removable disk.
400	DependencyViolation.InstanceType	Current instancetype cannot be changed to the specified one.	The error message returned because the current instance type cannot be changed to the specified one.
403	InstanceTypeNotSupported	The specified zone does not offer the specified instancetype.	The error message returned because instances of the specified instance type cannot be created in the specified zone.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.
400	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.
400	InvalidDedicatedHostStatus.NotSupport	Operation denied due to dedicated host status.	The error message returned because the operation is not supported while the dedicated host is in the current state.

HTTP status code	Error code	Error message	Description
400	IncorrectDedicatedHostStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned because the expiration date of the instance is later than that of the dedicated host.
400	InvalidStatus.Upgrading	The instance is upgrading; please try again later.	The error message returned because the specified instance is being upgraded. Try again later.
400	InvalidPeriod.ExceededMaximumExpirationDate	The specified renewal period cannot exceed the maximum expiration date. We recommend you try shortening the renewal period at next attempt.	The error message returned because the specified renewal period exceeds the maximum allowed value. We recommend that you shorten the renewal period on your next attempt.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	LastOrderProcessing	The previous order is still processing, please try again later.	The error message returned because the order is being processed. Try again later.
400	Idempotence.Processing	The previous request is still processing, please try again later.	The error message returned because the previous request is being processed. Try again later.
403	InvalidChargeType.NotSupported	The chargeType of the instance does not support this operation.	The error message returned because the operation is not supported while the instance uses the current billing method.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone, try other types of resources or other regions and zones.	The error message returned because the requested resources are sold out in the specified zone. Try another instance type or zone.
403	OperationDenied.NoStock	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the operation is valid.
400	OperationDenied	The current user does not support this operation.	The error message returned because your account does not support this operation.
403	InvalidPeriod.StarterPackage	This instance was created by using a Starter Package plan and can only be renewed monthly, not yearly.	The error message returned because the instance was created by using a Starter Package plan and can only be automatically renewed on a monthly basis.

For a list of error codes, visit the API Error Center.

6.15. ReActivateInstances

You can call this operation to reactivate a pay-as-you-go instance that has expired or for which you have overdue payments.

Description

When you call this operation, take note of the following items:

- The instance must be in the **Expired** (`Stopped`) state.
- You must pay the bills and reactivate the instance within 15 days after the instance is stopped due to overdue payments. If you fail to reactivate the instance within the preceding period, the instance is released and data on the instance cannot be recovered. If you cannot reactivate a VPC-type instance, try again later or submit a ticket.
- After the operation is called, the instance enters the **Starting** (`Starting`) state.
- You cannot call this operation on ECS instances that are locked for security reasons. An instance is locked for security reasons if `OperationLocks` in the response returned when you query information of the instance contains `"LockReason": "security"` . For more information, see API behavior when an instance is locked for security reasons.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ReActivateInstances	The operation that you want to perform. Set the value to ReActivateInstances.
InstanceId	String	Yes	i-bp67acfmxazb4p****	The ID of the instance that you want to reactivate.
RegionId	String	No	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	51AB7717-6E1A-4D1D-A44D-54CB123ABC	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ReActivateInstances
&RegionId=cn-hangzhou
&InstanceId=i-bp67acfmxazb4p****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ReActivateInstancesResponse>
      <RequestId>51AB7717-6E1A-4D1D-A44D-54CB123ABC</RequestId>
</ReActivateInstancesResponse>
```

`JSON` format

```
{
    "RequestId": "51AB7717-6E1A-4D1D-A44D-54CB123ABC"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
404	InvalidPayType.NotSupport	The specified pre pay instance not support.	The error message returned because subscription instances do not support this operation.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.

HTTP status code	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	ReopenInstance.InstanceStatusNotValid	Instance status is not Expired, ImageExpired or EcsAndImageExpired.	The error message returned because the instance fails to be reactivated. A possible cause is that the instance or the image has expired.

For a list of error codes, visit the API Error Center.

6.16. DescribeInstanceVncUrl

You can call this operation to query the URL of an VNC management terminal of an ECS instance.

Description

When you call this operation, take note of the following items:

- The URL of an VNC management terminal is valid only for 15 seconds. If a connection is not established within 15 seconds after a successful query, the URL expires and you must query it again.
- The **KeepAlive** time of a connection to an VNC management terminal is 60 seconds. If you do not interact with the VNC management terminal within 60 seconds, the VNC management terminal is automatically disconnected.
- When the VNC management terminal is disconnected, you can only reconnect to the VNC management terminal a maximum of 30 times a minute.
- You must append the following parameters to the end of the `https://g.alicdn.com/aliyun/ecs-console-vnc2/0.0.8/index.html?` URL: `vncUrl`, `instanceId`, `isWindows` (True or `False`), and `password`. Connect these parameters with ampersands (`&`).
  - `vncUrl` : the `VncUrl` value returned after a successful query.
  - `instanceId` : the ID of your instance.
  - `isWindows` : specifies whether the operating system of the instance is Windows. If the parameter is set to `true`, the operating system is Windows. If the value is set to `false`, the operating system is not Windows.
  - `password` : Optional. The VNC password used to connect to the VNC management terminal. It must be six characters in length and can contain digits and letters. You can use this parameter to eliminate the need to enter your password when you connect to the VNC management terminal.

    Examples:

    ```
    https://g.alicdn.com/aliyun/ecs-console-vnc2/0.0.8/index.html?vncUrl=ws%3A%2F%****&instanceId=i-wz9hhwq5a6tm****&isWindows=true
    ```

    Or:

    ```
    https://g.alicdn.com/aliyun/ecs-console-vnc2/0.0.8/index.html?vncUrl=ws%3A%2F%****&instanceId=i-wz9hhwq5a6tm****&isWindows=true&password=****
    ```

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceVncUrl	The operation that you want to perform. Set the value to DescribeInstanceVncUrl.
InstanceId	String	Yes	i-bp1hzoinajzkh91h****	The ID of the instance.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
VncUrl	String	wss%3A%2F%2Fhz01-vncproxy.aliyun.com%2Fwebsockify%2F%3Fs%3DDvh%252FIA%252BYc73gWO48cBx2gBxUDVzaAnSKr74pq30mzqUYgeUMcB%252FbkNixDxdEA996	The URL of the VNC management terminal.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceVncUrl
&InstanceId=i-bp1hzoinajzkh91h****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeInstanceVncUrlResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
      <VncUrl>wss%3A%2F%2Fhz01-vncproxy.aliyun.com%2Fwebsockify%2F%3Fs%3DDvh%252FIA%252BYc73gWO48cBx2gBxUDVzaAnSKr74pq30mzqUYgeU
McB%252FbkNixDxdEA996</VncUrl>
</DescribeInstanceVncUrlResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
    "VncUrl": "wss%3A%2F%2Fhz01-vncproxy.aliyun.com%2Fwebsockify%2F%3Fs%3DDvh%252FIA%252BYc73gWO48cBx2gBxUDVzaAnSKr74pq30mzqUYge
UMcB%252FbkNixDxdEA996"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InstanceNotReady	The specified instance is not ready for use	The error message returned because the specified instance cannot be connected for the moment. Try again later.
400	InvalidRegionInstance	The specified InstanceId does not exist in given region.	The error message returned because the instance does not exist in the specified region. Check whether the RegionId and InstanceId parameters are correct.

For a list of error codes, visit the API Error Center.

6.17. DescribeUserData

Queries the user data of an Elastic Compute Service (ECS) instance.

Description

- The returned user data is encoded in Base64.
- If the instance does not have user data configured, an empty result is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeUserData	The operation that you want to perform. Set the value to **DescribeUserdata**.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	Yes	i-bp14bnftyqhxg9ij****	The ID of the instance.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
InstanceId	String	i-bp14bnftyqhxg9ij****	The ID of the instance.
UserData	String	ZWNobyBoZWxsbyBlY321ABC	The user data of the instance.
RegionId	String	cn-hangzhou	The region ID of the instance.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action= DescribeUserdata
&RegionId=cn-shenzhen
&InstanceId=i-bp14bnftyqhxg9ij****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeUserdataResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <UserData>ZWNobyBoZWxsbyBlY321ABC</UserData>
    <InstanceId>i-bp14bnftyqhxg9ij****</InstanceId>
    <RegionId>cn-shenzhen</RegionId>
</DescribeUserdataResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  " UserData " : "ZWNobyBoZWxsbyBlY321ABC",
  " InstanceId " : "i-bp14bnftyqhxg9ij****",
  " RegionId" : "cn-shenzhen"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter is invalid.

For a list of error codes, visit the API Error Center.

6.18. DescribeInstanceAutoRenewAttribute

You can call this operation to query the auto-renewal status of one or more subscription ECS instances.

Description

- Before you configure auto-renewal or manual renewal for subscription instances, you can query the auto-renewal status of the instances.
- This operation is applicable only to subscription instances. An error is returned if you call this operation on pay-as-you-go instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceAutoRenewAttribute	The operation that you want to perform. Set the value to DescribeInstanceAutoRenewAttribute.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	No	i-bp18x3z4hc7bixhx****,i-bp1g6zv0ce8oghu7****	The IDs of the instances. You can specify a maximum of 100 subscription instance IDs at a time. Separate multiple instance IDs with commas (,). **Note** The `InstanceId` and `RenewalStatus` parameters cannot be empty at the same time.
RenewalStatus	String	No	AutoRenewal	The auto-renewal status of the instance. Valid values: • AutoRenewal: Auto-renewal is enabled for the instance. • Normal: Auto-renewal is disabled for the instance. • NotRenewal: The instance is not to be renewed. The system sends no more expiration reminders, but sends only a non-renewal reminder three days before the expiration date. For an instance that is not to be renewed, you can call the ModifyInstanceAutoRenewAttribute operation to change its auto-renewal status to `Normal`. Then you can manually renew the instance or enable auto-renewal for the instance.

Parameter	Type	Required	Example	Description
PageSize	String	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.
PageNumber	String	No	1	The number of the page to return. Pages start from page 1. Default value: 1.

Response parameters

Parameter	Type	Example	Description
InstanceRenewAttributes	Array of InstanceRenewAttribute		Details about the renewal attributes of instances.
InstanceRenewAttribute			
AutoRenewEnabled	Boolean	false	Indicates whether auto-renewal was enabled.
Duration	Integer	1	The auto-renewal period.
InstanceId	String	i-bp18x3z4hc7bixhx****	The ID of the instance.
PeriodUnit	String	week	The unit of the auto-renewal period.
RenewalStatus	String	Normal	The auto-renewal status of the instance. Valid values: • AutoRenewal: Auto-renewal is enabled for the instance. • Normal: Auto-renewal is disabled for the instance. • NotRenewal: The instance is not to be renewed. The system sends no more expiration reminders, but sends only a non-renewal reminder three days before the expiration date. For an instance that is not to be renewed, you can call the ModifyInstanceAutoRenewAttribute operation to change its auto-renewal status to `Normal`. Then you can manually renew the instance or enable auto-renewal for the instance.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	6	The total number of instances.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceAutoRenewAttribute
&RegionId=cn-hangzhou
&PageNumber=1
&PageSize=1
&RenewalStatus=AutoRenewal
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeInstanceAutoRenewAttributeResponse>
      <PageNumber>1</PageNumber>
      <TotalCount>1</TotalCount>
      <InstanceRenewAttributes>
            <InstanceRenewAttribute>
                  <RenewalStatus>AutoRenewal</RenewalStatus>
                  <Duration>1</Duration>
                  <InstanceId>i-bp18x3z4hc7bixhx****</InstanceId>
                  <AutoRenewEnabled>true</AutoRenewEnabled>
                  <PeriodUnit>Week</PeriodUnit>
            </InstanceRenewAttribute>
      </InstanceRenewAttributes>
      <PageSize>1</PageSize>
      <RequestId>DAE023B4-A78F-4B39-8860-96F17B54F772</RequestId>
</DescribeInstanceAutoRenewAttributeResponse>
```

`JSON` format

```
{
    "PageNumber": 1,
    "TotalCount": 1,
    "InstanceRenewAttributes": {
        "InstanceRenewAttribute": [
            {
                "RenewalStatus": "AutoRenewal",
                "Duration": 1,
                "InstanceId": "i-bp18x3z4hc7bixhx****",
                "AutoRenewEnabled": true,
                "PeriodUnit": "Week"
            }
        ]
    },
    "PageSize": 1,
    "RequestId": "DAE023B4-A78F-4B39-8860-96F17B54F772"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	MissingParameter.InstanceId	InstanceId should not be null.	The error message returned because the required InstanceId parameter is not specified.
403	InvalidParameter.ToManyInstanceIds	InstanceId should be less than 100.	The error message returned because more than 100 instances are specified.
403	InvalidParameter.InvalidInstanceId	%s	The error message returned because the specified InstanceId parameter is invalid.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
403	ChargeTypeViolation	Pay-As-You-Go instances do not support this operation.	The error message returned because the operation is not supported by pay-as-you-go instances. Check the billing method of your instance.
403	InvalidParameter.RenewalStatus	The specified parameter RenewalStatus is not valid.	The error message returned because the specified RenewalStatus parameter is invalid.
403	InvalidParameter.RenewalStatusInstanceId	The parameter RenewalStatus and InstanceId can not be both empty.	The error message returned because neither of the RenewalStatus and InstanceId parameters is specified.

For a list of error codes, visit the API Error Center.

6.19. DescribeInstanceRamRole

You can call this operation to query the instance RAM roles assigned to one or more ECS instances.

Description

When you call an API operation by using Alibaba Cloud CLI, you must specify request parameter values of different data types in required formats. For more information, see CLI parameter format.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceRamRole	The operation that you want to perform. Set the value to DescribeInstanceRamRole.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance RAM role. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 50. Default value: 10.
InstanceIds	String	No	["i-bp67acfmxazb1p****", "i-bp67acfmxazb2p****", "bp67acfmxazb3p****"...]	The IDs of instances. A maximum of 100 instance IDs can be entered at a time. You must specify at least one of the `InstanceIds` and `RamRoleName` parameters.
RamRoleName	String	No	EcsServiceRole-EcsDocGuideTest	The name of the instance RAM role. This parameter can be used to query all the ECS instances to which the instance RAM role is assigned. You can call the ListRoles operation provided by RAM to query the instance RAM roles that you have created. You must specify at least one of the `InstanceIds` and `RamRoleName` parameters.

Response parameters

Parameter	Type	Example	Description
InstanceRamRoleSets	Array of InstanceRamRoleSet		Details about the instance RAM roles.
InstanceRamRoleSet			
InstanceId	String	i-bp67acfmxazb4p****	The ID of the instance.
RamRoleName	String	EcsServiceRole-EcsDocGuideTest	The name of the instance RAM role.
RegionId	String	cn-hangzhou	The region ID of the instance RAM role.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of returned instance RAM roles.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceRamRole
&RegionId=cn-hangzhou
&InstanceIds=["i-bp67acfmxazb1p****", "i-bp67acfmxazb2p****", "bp67acfmxazb3p****"]
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeInstanceRamRoleResponse>
      <RequestId>8F4CAE3F-7892-4662-83A5-2C2FFD639553</RequestId>
      <InstanceRamRoleSets>
            <InstanceRamRoleSet>
                  <InstanceId>i-bp67acfmxazb4p****</InstanceId>
                  <RamRoleName>EcsServiceRole-EcsDocGuideTest</RamRoleName>
            </InstanceRamRoleSet>
      </InstanceRamRoleSets>
      <TotalCount>1</TotalCount>
      <PageNumber>1</PageNumber>
      <PageSize>1</PageSize>
</DescribeInstanceRamRoleResponse>
```

`JSON` format

```
{
    "RequestId": "8F4CAE3F-7892-4662-83A5-2C2FFD639553",
    "InstanceRamRoleSets": {
        "InstanceRamRoleSet": [
            {
                "InstanceId": "i-bp67acfmxazb4p****",
                "RamRoleName": "EcsServiceRole-EcsDocGuideTest"
            }
        ]
    },
    "TotalCount": 1,
    "PageNumber": 1,
    "PageSize": 1
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceIds.Malformed	The specified instanceIds are not valid.	The error message returned because the specified InstanceIds parameter is invalid.
404	InvalidInstanceId.NotFound	The specified instanceId does not exist	The error message returned because a specified instance does not exist.
403	InvalidNetworkType.Mismatch RamRole	Ram role cannot be applied to instances of Classic network type.	The error message returned because an instance RAM role can be used only for instances in VPCs, not for instances in the classic network.
403	InvalidParameter.AllEmpty	%s	The error message returned because no parameters are specified. Specify required parameters.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

For a list of error codes, visit the API Error Center.

6.20. DescribeSpotPriceHistory

Queries the price history of a preemptible instance over the last 30 days.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSpotPriceHistory	The operation that you want to perform. Set the value to **DescribeSpotPriceHistory**.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-hangzhou-g	The zone ID of the instance.
NetworkType	String	Yes	vpc	The network type of the preemptible instance. Valid values: • classic • vpc
InstanceType	String	Yes	ecs.t1.xsmall	The instance type of the instance.
SpotDuration	Integer	No	1	The protection period of the preemptible instance. Unit: hours. Valid values: 0, 1, 2, 3, 4, 5, and 6. • Protection periods of 2, 3, 4, 5, and 6 hours are in invitational preview. If you want to set this parameter to one of these values, submit a ticket. • If this parameter is set to 0, no protection period is configured for the preemptible instance. Default value: 1.
IoOptimized	String	No	optimized	Specifies whether the instance is I/O optimized. Valid values: • optimized: The instance is I/O optimized. • none: The instance is not I/O optimized. For generation I instance families, the default value is none. For other instance families, the default value is optimized.
StartTime	String	No	2017-08-22T08:45:08Z	The beginning of the time range to query. Specify the time in the ISO 8601 standard in the `yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC`. This parameter is empty by default. If this parameter is empty, it indicates 3 hours earlier than the specified EndTime value. You can specify a StartTime value of up to 30 days earlier than the specified EndTime value.
EndTime	String	No	2017-08-22T08:45:08Z	The end of the time range to query. Specify the time in the ISO 8601 standard in the `yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC`. This parameter is empty by default. If this parameter is empty, the current time is used.
OSType	String	No	linux	The type of the operating system platform. Valid values: • linux • windows

Parameter	Type	Required	Example	Description
Offset	Integer	No	0	The line from which the next query starts. Default value: 0.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Currency	String	CNY	The currency unit of the price. Alibaba Cloud China site (aliyun.com): CNY. Alibaba Cloud International site (alibabacloud.com): USD.
NextOffset	Integer	1000	The start row of the next page. It is the value of the `Offset` parameter.
SpotPrices	Array of SpotPriceType		Details about the spot prices.
SpotPriceType			
IoOptimized	String	optimized	Indicates whether the preemptible instance is I/O optimized.
ZoneId	String	cn-hangzhou-c	The zone ID of the preemptible instance.
SpotPrice	Float	0.036	The spot price of the preemptible instance.
Timestamp	String	2019-11-19T06:00:00Z	The time that corresponds to the queried spot price. The time is in the `yyyy-MM-ddTHH:mm:ssZ` format.
NetworkType	String	vpc	The network type of the preemptible instance.
InstanceType	String	ecs.g5.large	The instance type of the preemptible instance.
OriginPrice	Float	0.354	The price for a pay-as-you-go instance that has the same configuration as the specified preemptible instance.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSpotPriceHistory
&NetworkType=vpc
&RegionId=cn-hangzhou
&InstanceType=ecs.g5.large
&StartTime=2019-11-19T00:00:00Z
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeSpotPriceHistoryResponse>
    <RequestId>5E2D59BA-4EB0-45C4-A0D7-D98C1A4B320B</RequestId>
    <SpotPrices>
        <SpotPriceType>
            <IoOptimized>optimized</IoOptimized>
            <OriginPrice>0.354</OriginPrice>
            <NetworkType>vpc</NetworkType>
            <ZoneId>cn-hangzhou-g</ZoneId>
            <Timestamp>2019-11-19T06:00:00Z</Timestamp>
            <SpotPrice>0.036</SpotPrice>
            <InstanceType>ecs.g5.large</InstanceType>
        </SpotPriceType>
        <SpotPriceType>
            <IoOptimized>optimized</IoOptimized>
            <OriginPrice>0.354</OriginPrice>
            <NetworkType>vpc</NetworkType>
            <ZoneId>cn-hangzhou-g</ZoneId>
            <Timestamp>2019-11-19T07:00:00Z</Timestamp>
            <SpotPrice>0.036</SpotPrice>
            <InstanceType>ecs.g5.large</InstanceType>
        </SpotPriceType>
    </SpotPrices>
    <Currency>CNY</Currency>
</DescribeSpotPriceHistoryResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "5E2D59BA-4EB0-45C4-A0D7-D98C1A4B320B",
  "SpotPrices" : {
    "SpotPriceType" : [ {
      "IoOptimized" : "optimized",
      "OriginPrice" : 0.354,
      "NetworkType" : "vpc",
      "ZoneId" : "cn-hangzhou-g",
      "Timestamp" : "2019-11-19T06:00:00Z",
      "SpotPrice" : 0.036,
      "InstanceType" : "ecs.g5.large"
    }, {
      "IoOptimized" : "optimized",
      "OriginPrice" : 0.354,
      "NetworkType" : "vpc",
      "ZoneId" : "cn-hangzhou-g",
      "Timestamp" : "2019-11-19T07:00:00Z",
      "SpotPrice" : 0.036,
      "InstanceType" : "ecs.g5.large"
    } ]
  },
  "Currency" : "CNY"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	UnsupportedParameter	%s	The error message returned because a specified parameter is not supported.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceID.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParams.StartTime	%s	The error message returned because the specified StartTime parameter is invalid.
400	InvalidParams.EndTime	%s	The error message returned because the specified EndTime parameter is invalid.
400	Abs.Abs.InvalidSpotInstanceUID	%s	The error message returned because the format of the preemptible instance ID is invalid.
400	InvalidParams.NetworkType	%s	The error message returned because the specified NetworkType parameter is invalid.
400	InvalidParams.IoOptimized	%s	The error message returned because the specified IoOptimized parameter is invalid.
400	InvalidParams.OSType	%s	The error message returned because the specified OSType parameter is invalid.
400	Abs.IoOptimized.ValueNotSupported	%s	The error message returned because the specified IoOptimized parameter is invalid.
400	InvalidZoneId.NotFound	The specified zone does not exist.	The error message returned because the specified ZoneId parameter does not exist.
400	InvalidParams.ZoneId	%s	The error message returned because the specified ZoneId parameter is invalid.
400	InvalidParams.RegionId	%s	The error message returned because the specified RegionId parameter is invalid.
400	InvalidParams.InstanceType	%s	The error message returned because the specified InstanceType parameter is invalid.
400	InvalidParams.PageSize	%s	The error message returned because the specified PageSize parameter is invalid.
400	InvalidParams.Offset	%s	The error message returned because the specified Offset parameter is invalid.
400	InvalidInstanceType.ValueNotSupported	%s	The error message returned because the operation is not supported by the specified instance type.
400	DependencyViolation.IoOptimized	The specified instancetype must be IoOptimized instance.	The error message returned because the specified instance type is not I/O optimized.
400	InvalidSpotDuration	The specified SpotDuration is not valid.	The error message returned because the specified SpotDuration parameter is invalid.
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or because your AccessKey pair has expired.
403	Forbedden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
403	Forbbiden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Contact the owner of the Alibaba Cloud account for authorization.

For a list of error codes, visit the API Error Center.

6.21. DescribeSpotAdvice

Queries information such as the average release rate and the percentage of the average price relative to the pay-as-you-go instance price that is generated for preemptible instances in the last 30 days in a specified region.

Description

- You can call this operation to query information that is generated for preemptible instances in the last 30 days and select suitable instance types based on the query results. The information that you can query by calling this operation includes:
  - Average release rate of preemptible instances
  - Percentage of the average preemptible instance price relative to the pay-as-you-go instance price
  - Average preemptible instance price that is calculated based on the preceding percentage
- This operation is applicable only to I/O optimized preemptible instances that are located in virtual private clouds (VPCs).
- You can use one of the following methods to query information that is generated for preemptible instances in the last 30 days:
  - Set the `Cores` and `Memory` parameters or the `MinCores` and `MinMemory` parameters to query information about instance types that have the specified number of vCPUs and memory size.
  - Set the `InstanceTypes.N` parameter to query information of the specified instance types.
  - Set the `Cores` and `Memory` parameters or the `MinCores` and `MinMemory` parameters, and set the `InstanceTypeFamily` or `InstanceFamilyLevel` parameter to query information of the instance types that have the specified number of vCPUs and memory size within the specified instance family or at the specified instance family level.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	No	DescribeSpotAdvice	The operation that you want to perform. Set the value to DescribeSpotAdvice.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
Cores	Integer	No	2	The number of vCPUs of the instance type. For information about the valid values, see Instance families.
Memory	Float	No	8.0	The memory size of the instance type. Unit: GiB. For information about the valid values, see Instance families.
MinCores	Integer	No	2	The minimum number of vCPUs of the instance type. For information about the valid values, see Instance families.
MinMemory	Float	No	8.0	The minimum memory size of the instance type. For information about the valid values, see Instance families.
ZoneId	String	No	cn-hangzhou-i	The ID of the zone. This parameter is empty by default, which indicates that all zones in the specified region are queried.
InstanceTypes.N	RepeatList	No	ecs.c5.large	Instance type N. Valid values of N: 1 to 10. For information about the valid values, see Instance families.
InstanceTypeFamily	String	No	ecs.c5	The instance family. For information about the valid values, see Instance families.

Parameter	Type	Required	Example	Description
InstanceFamilyLevel	String	No	EntryLevel	The level of the instance family. Valid values: • EntryLevel • EnterpriseLevel • CreditEntryLevel. For more information, see Burstable instance overview. This parameter is empty by default, which indicates that instance families of all levels are queried.
GpuSpec	String	No	NVIDIA T4	The GPU type. Valid values: • NVIDIA P4 • NVIDIA T4 • NVIDIA P100 • NVIDIA V100 • NVIDIA A100 This parameter is empty by default, which indicates that all GPU types are queried. For more information, see GPU-accelerated compute optimized instance types.
GpuAmount	Integer	No	2	The number of GPUs per GPU-accelerated instance. For information about the valid values, see GPU-accelerated compute optimized instance types.

Response parameters

Parameter	Type	Example	Description
AvailableSpotZones	Array of AvailableSpotZone		Details about preemptible instances in the zones of the specified region. **Note** The return values are sorted based on the historical percentages of average preemptible instance prices relative to pay-as-you-go instance prices for instance types.
AvailableSpotZone			
AvailableSpotResources	Array of AvailableSpotResource		Details about preemptible instances in the last 30 days, including release rates and percentages of average preemptible instance prices relative to pay-as-you-go instance prices.
AvailableSpotResource			
AverageSpotDiscount	Integer	20	The percentage of the average preemptible instance relative to the pay-as-you-go instance price in the last 30 days. Unit: percent (%). Valid values: 1 to 100. You can calculate the average preemptible instance price based on the return value. For example, if the pay-as-you-go instance price is 1 and the return value of this parameter is 20, the average preemptible instance price in the last 30 days is 0.2.
InstanceType	String	ecs.c5.large	The instance type.
InterruptRateDesc	String	0-3%	The release rate range of preemptible instances in the last 30 days, which corresponds to the `InterruptionRate` value. Valid values: • 0-3% • 3-5% • 5-10% • 10-100%

Parameter	Type	Example	Description
InterruptionRate	Float	0	The average release rate of preemptible instances in the last 30 days. Unit: percent (%).
ZoneId	String	cn-hangzhou-i	The ID of the zone.
RegionId	String	cn-hangzhou	The ID of the region.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSpotAdvice
&RegionId=cn-hangzhou
&ZoneId=cn-hangzhou-i
&InstanceTypes.1=ecs.c5.large
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeSpotAdviceResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
      <AvailableSpotZones>
            <AvailableSpotZone>
                  <ZoneId>cn-hangzhou-i</ZoneId>
            </AvailableSpotZone>
            <AvailableSpotZone>
                  <AvailableSpotResources>
                        <AvailableSpotResource>
                              <InterruptRateDesc>0-3%</InterruptRateDesc>
                              <InstanceType>ecs.c5.large</InstanceType>
                              <AverageSpotDiscount>20</AverageSpotDiscount>
                              <InterruptionRate>0</InterruptionRate>
                        </AvailableSpotResource>
                  </AvailableSpotResources>
            </AvailableSpotZone>
      </AvailableSpotZones>
      <RegionId>cn-hangzhou</RegionId>
</DescribeSpotAdviceResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
    "AvailableSpotZones": {
        "AvailableSpotZone": [
            {
                "ZoneId": "cn-hangzhou-i"
            },
            {
                "AvailableSpotResources": {
                    "AvailableSpotResource": [
                        {
                            "InterruptRateDesc": "0-3%",
                            "InstanceType": "ecs.c5.large",
                            "AverageSpotDiscount": "20",
                            "InterruptionRate": "0"
                        }
                    ]
                }
            }
        ]
    },
    "RegionId": "cn-hangzhou"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	Invalid.RegionId	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter is invalid.
404	Unavailable.Regions	The available regions does not exists	The error message returned because the specified RegionId parameter is invalid.
400	Invalid.Param	The input parameter DestinationResource that is mandatory for processing this request is not supplied.	The error message returned because the specified DestinationResource parameter is invalid.
404	Invalid.ResourceType	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter is invalid.
404	Invalid.DestinationResource	The specified DestinationResource is not valid.	The error message returned because the specified DestinationResource parameter is invalid.
404	Invalid.IoOptimized	The specified IoOptimized is not valid.	The error message returned because the specified IoOptimized parameter is invalid.
404	Invalid.NetworkType	The specified NetworkType is not valid.	The error message returned because the specified NetworkType parameter is invalid.
403	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist in our records.	The error message returned because the specified dedicated host does not exist in the current region.
403	InvalidParam.TypeAndCpuMem.Conflict	The specified 'InstanceType' and 'Cores','Memory' are not blank at the same time.	The error message returned because the InstanceTypes.N, Cores, and Memory parameters are all empty.
400	InvalidRegionId.MalFormed	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.

For a list of error codes, visit the API Error Center.

6.22. DescribeInstanceTypeFamilies

You can call this operation to query the instance families provided by ECS.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceTypeFamilies	The operation that you want to perform. Set the value to DescribeInstanceTypeFamilies.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
Generation	String	No	ecs-5	The generation of the instance family. For more information, see Instance families. Valid values: • ecs-1: Generation I, which consists of the earliest and cost-effective instance types • ecs-2: Generation II, which provides upgraded software and hardware and higher performance than Generation I • ecs-3: Generation III, which consists of high-performance instance families and is suitable for different business scenarios • ecs-4: Generation IV, which consists of enterprise-level instance families (such as g5, c5, and r5), Bare Metal Instance families (such as ebmc5s, ebmg5s, and ebmr5s), and burstable instance families (such as t5) that can meet a wide variety of business requirements with lower latency • ecs-5: Generation V, which consists of enterprise-level instance families (such as g6, c6, and r6), Bare Metal Instance families (such as ebmg6, ebmg6e, and ebmc6), and storage enhanced instance families (such as g6e) and delivers quick response and higher performance • ecs-6: Generation VI, which consists of enterprise-level instance families (such as hfc7, hfg7, and hfr7) and Bare Metal Instance families (such as ebmhfg7) and is in invitational preview

Response parameters

Parameter	Type	Example	Description
InstanceTypeFamilies	Array of InstanceTypeFamily		Details about instance families.
InstanceTypeFamily			
Generation	String	ecs-5	The generation of the instance family.
InstanceTypeFamilyId	String	ecs.g6	The ID of the instance family.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceTypeFamilies
&RegionId=cn-hangzhou
&Generation=ecs-5
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeInstanceTypeFamiliesResponse>
      <InstanceTypeFamilies>
            <InstanceTypeFamily>
                  <InstanceTypeFamilyId>ecs.g6</InstanceTypeFamilyId>
                  <Generation>ecs-5</Generation>
            </InstanceTypeFamily>
            <InstanceTypeFamily>
                  <InstanceTypeFamilyId>ecs.ebmg6</InstanceTypeFamilyId>
                  <Generation>ecs-5</Generation>
            </InstanceTypeFamily>
            <InstanceTypeFamily>
                  <InstanceTypeFamilyId>ecs.ebmg6e</InstanceTypeFamilyId>
                  <Generation>ecs-5</Generation>
            </InstanceTypeFamily>
            <InstanceTypeFamily>
                  <InstanceTypeFamilyId>ecs.g6e</InstanceTypeFamilyId>
                  <Generation>ecs-5</Generation>
            </InstanceTypeFamily>
            <InstanceTypeFamily>
                  <InstanceTypeFamilyId>ecs.c6</InstanceTypeFamilyId>
                  <Generation>ecs-5</Generation>
            </InstanceTypeFamily>
            <InstanceTypeFamily>
                  <InstanceTypeFamilyId>ecs.r6</InstanceTypeFamilyId>
                  <Generation>ecs-5</Generation>
            </InstanceTypeFamily>
            <InstanceTypeFamily>
                  <InstanceTypeFamilyId>ecs.t6</InstanceTypeFamilyId>
                  <Generation>ecs-5</Generation>
            </InstanceTypeFamily>
            <InstanceTypeFamily>
                  <InstanceTypeFamilyId>ecs.hfc6</InstanceTypeFamilyId>
                  <Generation>ecs-5</Generation>
            </InstanceTypeFamily>
            <InstanceTypeFamily>
                  <InstanceTypeFamilyId>ecs.hfg6</InstanceTypeFamilyId>
                  <Generation>ecs-5</Generation>
            </InstanceTypeFamily>
            <InstanceTypeFamily>
                  <InstanceTypeFamilyId>ecs.hfr6</InstanceTypeFamilyId>
                  <Generation>ecs-5</Generation>
            </InstanceTypeFamily>
            <InstanceTypeFamily>
                  <InstanceTypeFamilyId>ecs.ebmc6</InstanceTypeFamilyId>
                  <Generation>ecs-5</Generation>
            </InstanceTypeFamily>
            <InstanceTypeFamily>
                  <InstanceTypeFamilyId>ecs.ebmr6</InstanceTypeFamilyId>
                  <Generation>ecs-5</Generation>
            </InstanceTypeFamily>
      </InstanceTypeFamilies>
      <RequestId>A66D039A-EC35-4130-B0D1-E9873C0742D2</RequestId>
</DescribeInstanceTypeFamiliesResponse>
```


`JSON` format

```
{
 "InstanceTypeFamilies": {
  "InstanceTypeFamily": [
   {
    "InstanceTypeFamilyId": "ecs.g6",
    "Generation": "ecs-5"
   },
   {
    "InstanceTypeFamilyId": "ecs.ebmg6",
    "Generation": "ecs-5"
   },
   {
    "InstanceTypeFamilyId": "ecs.ebmg6e",
    "Generation": "ecs-5"
   },
   {
    "InstanceTypeFamilyId": "ecs.g6e",
    "Generation": "ecs-5"
   },
   {
    "InstanceTypeFamilyId": "ecs.c6",
    "Generation": "ecs-5"
   },
   {
    "InstanceTypeFamilyId": "ecs.r6",
    "Generation": "ecs-5"
   },
   {
    "InstanceTypeFamilyId": "ecs.t6",
    "Generation": "ecs-5"
   },
   {
    "InstanceTypeFamilyId": "ecs.hfc6",
    "Generation": "ecs-5"
   },
   {
    "InstanceTypeFamilyId": "ecs.hfg6",
    "Generation": "ecs-5"
   },
   {
    "InstanceTypeFamilyId": "ecs.hfr6",
    "Generation": "ecs-5"
   },
   {
    "InstanceTypeFamilyId": "ecs.ebmc6",
    "Generation": "ecs-5"
   },
   {
    "InstanceTypeFamilyId": "ecs.ebmr6",
    "Generation": "ecs-5"
   }
  ]
 },
 "RequestId": "A66D039A-EC35-4130-B0D1-E9873C0742D2"
}
```


Error codes

For a list of error codes, visit the API Error Center.

6.23. DescribeInstanceTypes

Queries all instance types provided by Elastic Compute Service (ECS) and information about a specific instance type.

Description

Before you call this operation, take note of the following items:

- We recommend that you set the MaxResults and NextToken parameters for paged queries. The first time you call the DescribeInstanceTypes operation to retrieve a set of results, set MaxResults to specify the maximum number of results to return in a single page for this call. If the number of results exceeds the specified MaxResults value, a NextToken value is included in the response so that the remaining results can be retrieved. In a subsequent call, use the NextToken value returned in the previous response as the value of the NextToken parameter and set MaxResults to retrieve the next set of results.

- The DescribeInstanceTypes operation is used to query only the specifications and performance information of instance types. To query instance types that are available in a specified region, call the DescribeAvailableResource operation.
- To use special instance types such as instance types that are unavailable for purchase, submit a ticket.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceTypes	The operation that you want to perform. Set the value to **DescribeInstanceTypes**.
InstanceTypeFamily	String	No	ecs.g6	The instance family to which the instance type belongs. For information about the valid values, see DescribeInstanceTypeFamilies. For more information about instance families, see Instance families.
MaxResults	Long	No	10	The maximum number of entries to return on each page. Maximum value: 1600. Default value: 1600.
NextToken	String	No	e71d8a535bd9cc11	The query token. Set the value to the NextToken value returned in the previous call to the DescribeInstanceTypes operation. Leave this parameter empty the first time you call this operation.
InstanceTypes.N	String	No	ecs.g6.large	Instance type N. Valid values of N: 1 to 10. If this parameter is empty, information about all instance types is queried.

Response parameters

Parameter	Type	Example	Description
RequestId	String	00827261-20B7-4562-83F2-4DF39876A45A	The ID of the request.
InstanceTypes	Array of InstanceType		Details about the instance types.
InstanceType			
EniTotalQuantity	Integer	0	**Note** This parameter is in invitational preview and unavailable.
LocalStorageCategory	String	local_ssd_pro	The category of local disks. For more information, see Local disks. Valid values: • local_hdd_pro: local Serial Advanced Technology Attachment (SATA) HDDs, which are attached to d1ne or d1 instances • local_ssd_pro: local Non-Volatile Memory Express (NVMe) SSDs, which are attached to i2, i2g, i1, ga1, or gn5 instances
PrimaryEniQueueNumber	Integer	4	The default number of queues supported by the primary elastic network interface (ENI).
MemorySize	Float	16	The size of the memory. Unit: GiB.

Parameter	Type	Example	Description
LocalStorageCapacity	Long	5000	The capacity of each local disk attached per instance. Unit: GiB.
InstanceFamilyLevel	String	EnterpriseLevel	The level of the instance family. Valid values: • EntryLevel • EnterpriseLevel • CreditEntryLevel. For more information, see Overview.
InstancePpsRx	Long	500000	The inbound packet forwarding rate of the internal network. Unit: pps.
EniIpv6AddressQuantity	Integer	1	The maximum number of IPv6 addresses per ENI.
MaximumQueueNumberPerEni	Integer	4	The maximum number of queues per ENI (including primary ENI and secondary ENI).
InstanceTypeId	String	ecs.g6.large	The ID of the instance type.
InstanceBandwidthRx	Integer	1024000	The maximum inbound internal bandwidth. Unit: Kbit/s.
SecondaryEniQueueNumber	Integer	4	The default number of queues supported by the secondary ENI.
GPUSpec	String	NVIDIA V100	The GPU type.
InstanceBandwidthTx	Integer	1024000	The maximum outbound internal bandwidth. Unit: Kbit/s.
QueuePairNumber	Integer	22	The maximum number of queue pairs (QPs) per elastic RDMA interface (ERI).
EriQuantity	Integer	0	The number of ERIs. **Note** This parameter is in invitational preview and is unavailable.
GPUAmount	Integer	0	The number of GPUs.
TotalEniQueueQuantity	Integer	12	The maximum number of queues on ENIs that the instance type supports.
NvmeSupport	String	unsupported	Indicates whether the cloud disk can be attached by using the NVMe protocol. Valid values: • required: The cloud disk can be attached by using the NVMe protocol. • unsupported: The cloud disk cannot be attached by using the NVMe protocol.
DiskQuantity	Integer	17	The maximum number of cloud disks that can be attached per instance.
InitialCredit	Integer	120	The initial vCPU credits of the t5 or t6 burstable instance.
LocalStorageAmount	Integer	1	The number of local disks attached per instance.

Parameter	Type	Example	Description
BaselineCredit	Integer	4	The baseline vCPU computing performance (overall computing performance of all vCPUs) of the t5 or t6 burstable instance.
InstancePpsTx	Long	500000	The outbound packet forwarding rate over the internal network. Unit: pps.
EniPrivateIpAddressQuantity	Integer	10	The maximum number of IPv4 addresses per ENI.
CpuCoreCount	Integer	4	The number of vCPUs.
InstanceTypeFamily	String	ecs.g6	The instance family of the instance.
EniQuantity	Integer	3	The maximum number of ENIs that can be bound to an instance.
EniTrunkSupported	Boolean	true	**Note** This parameter is in invitational preview and is unavailable.
NextToken	String	e71d8a535bd9cc11	The query token returned in this call.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceTypes
&InstanceTypeFamily=ecs.g6
&InstanceTypes.1=ecs.g6.large
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeInstanceTypesResponse>
    <RequestId>00827261-20B7-4562-83F2-4DF39876A45A</RequestId>
    <NextToken/>
    <InstanceTypes>
        <InstanceType>
            <InstancePpsTx>500000</InstancePpsTx>
            <NvmeSupport>unsupported</NvmeSupport>
            <PrimaryEniQueueNumber>4</PrimaryEniQueueNumber>
            <TotalEniQueueQuantity>12</TotalEniQueueQuantity>
            <EniTrunkSupported>true</EniTrunkSupported>
            <InstanceTypeFamily>ecs.g6</InstanceTypeFamily>
            <InstancePpsRx>500000</InstancePpsRx>
            <EriQuantity>0</EriQuantity>
            <InstanceBandwidthRx>1024000</InstanceBandwidthRx>
            <InstanceBandwidthTx>1024000</InstanceBandwidthTx>
            <SecondaryEniQueueNumber>4</SecondaryEniQueueNumber>
            <LocalStorageCategory/>
            <GPUSpec/>
            <InstanceTypeId>ecs.g6.xlarge</InstanceTypeId>
            <MemorySize>16</MemorySize>
            <MaximumQueueNumberPerEni>4</MaximumQueueNumberPerEni>
            <EniIpv6AddressQuantity>1</EniIpv6AddressQuantity>
            <EniTotalQuantity>5</EniTotalQuantity>
            <CpuCoreCount>4</CpuCoreCount>
            <EniQuantity>3</EniQuantity>
            <GPUAmount>0</GPUAmount>
            <DiskQuantity>17</DiskQuantity>
            <QueuePairNumber>22</QueuePairNumber>
            <InstanceFamilyLevel>EnterpriseLevel</InstanceFamilyLevel>
            <EniPrivateIpAddressQuantity>10</EniPrivateIpAddressQuantity>
        </InstanceType>
    </InstanceTypes>
</DescribeInstanceTypesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "00827261-20B7-4562-83F2-4DF39876A45A",
  "NextToken" : "",
  "InstanceTypes" : {
    "InstanceType" : [ {
      "InstancePpsTx" : 500000,
      "NvmeSupport" : "unsupported",
      "PrimaryEniQueueNumber" : 4,
      "TotalEniQueueQuantity" : 12,
      "EniTrunkSupported" : true,
      "InstanceTypeFamily" : "ecs.g6",
      "InstancePpsRx" : 500000,
      "EriQuantity" : 0,
      "InstanceBandwidthRx" : 1024000,
      "InstanceBandwidthTx" : 1024000,
      "SecondaryEniQueueNumber" : 4,
      "LocalStorageCategory" : "",
      "GPUSpec" : "",
      "InstanceTypeId" : "ecs.g6.xlarge",
      "MemorySize" : 16,
      "MaximumQueueNumberPerEni" : 4,
      "EniIpv6AddressQuantity" : 1,
      "EniTotalQuantity" : 5,
      "CpuCoreCount" : 4,
      "EniQuantity" : 3,
      "GPUAmount" : 0,
      "DiskQuantity" : 17,
      "QueuePairNumber" : 22,
      "InstanceFamilyLevel" : "EnterpriseLevel",
      "EniPrivateIpAddressQuantity" : 10
    } ]
  }
}
```

Error codes

For a list of error codes, visit the API Error Center.

6.24. ModifyInstanceAttribute

Modifies some attributes of an Elastic Compute Service (ECS) instance, such as the password, name, description, hostname, security group, and user data. If the instance is a burstable instance, you can also change its performance mode.

Description

When you query the instance information and the responses contain `{"OperationLocks": {"LockReason" : "security"}}`, the instance is locked for security reasons and all operations cannot take effect on the instance.

When you call this operation, take note of the following items:

- Modify the hostname (`HostName`): After the hostname is modified, you must restart the instance by performing the operations described in Restart an instance in the ECS console or by calling the RebootInstance operation for the new hostname to take effect. The new hostname does not take effect if you restart the instance from within the operating system.
- Reset the password (`Password`):
  - The instance must not be in the **Starting** (`Starting`) state.
  - After the password is reset, you must restart the instance by performing the operations described in Restart an instance in the ECS console or by calling the RebootInstance operation for the new password to take effect. The new password does not take effect if you restart the instance from within the operating system.
- Modify user data (`UserData`):
  - The instance must be in the **Stopped** (`Stopped`) state.
  - The instance must meet the limits on user data. For more information, see Prepare user data.
- Change the security group (`SecurityGroupIds.N`):
  - You can switch an instance to a security group of a different type.

    If you want to switch an instance to a security group of a different type, you must understand the differences between the rule configurations of the two security group types to avoid impacts on the instance network.
  - Security groups of instances in the classic network cannot be changed.

    For more information, see the description of the `SecurityGroupIds.N` parameter.
- Modify the number of queues supported by the primary elastic network interface (ENI) (`NetworkInterfaceQueueNumber`):
  - The instance must be in the Stopped (`Stopped`) state.
  - The value of this parameter cannot exceed the maximum number of queues per ENI allowed for the instance type.
  - The total number of queues for all ENIs on the instance cannot exceed the queue quota for the instance type. To obtain the maximum number of queues per ENI and the queue quota for an instance type, you can call the DescribeInstanceTypes operation to query the `MaximumQueueNumberPerEni` and `TotalEniQueueQuantity` parameters.
  - If you set this parameter to -1, the value is reset to the default value for the instance type. To obtain the default number of queues supported by the primary ENI for an instance type, you can call the DescribeInstanceTypes operation to query the `PrimaryEniQueueNumber` parameter.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceAttribute	The operation that you want to perform. Set the value to **ModifyInstanceAttribute**.
InstanceId	String	Yes	i-bp67acfmxazb4ph****	The ID of the instance.

Parameter	Type	Required	Example	Description
Password	String	No	Test123456	The password of the instance. The password must be 8 to 30 characters in length and contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include: `()`~!@#$%^&*-_+=|{}[]:;'<>,.?/` For Windows instances, the password cannot start with a forward slash (/). **Note** For security reasons, we recommend that you use HTTPS to send requests if the `Password` parameter is specified.
HostName	String	No	testHostName	The hostname of the instance. Take note of the following items: • When you modify the hostname of an instance, the instance must not be in the Creating (Pending) or Starting (Starting) state. Otherwise, the new hostname and the configurations in `/etc/hosts` cannot take effect. You can call the DescribeInstances operation to query the state of the instance. • After the hostname is modified, you must call the RebootInstance operation for the new hostname to take effect. The following limits apply to the hostnames of instances that run different operating systems: • For Windows Server, the hostname must be 2 to 15 characters in length and can contain letters, digits, and hyphens (-). It cannot start or end with a hyphen (-), contain consecutive hyphens (-), or contain only digits. • For other operating systems such as Linux, the hostname must be 2 to 64 characters in length. You can use periods (.) to separate a hostname into multiple segments. Each segment can contain letters, digits, and hyphens (-). The hostname cannot contain consecutive periods (.) or hyphens (-). It cannot start or end with a period (.) or a hyphen (-).
InstanceName	String	No	testInstanceName	The name of the instance. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Description	String	No	testInstanceDescription	The description of the instance. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`. This parameter is empty by default.

Parameter	Type	Required	Example	Description
UserData	String	No	ZWNobyBoZWxsbyBlY3Mh	The user data of the instance. User data must be encoded in Base64. The size of the user data must be no greater than 16 KB before it is encoded in Base64. We recommend that you do not pass in confidential information such as passwords and private keys in the plaintext format. If you must pass in confidential information, we recommend that you encrypt and Base64-encode the information before you pass it in. Then you can decode and decrypt the information in the same way within the instance.
CreditSpecification	String	No	Standard	The performance mode of the burstable instance. Valid values: • Standard: standard mode • Unlimited: unlimited mode For more information about the performance modes of burstable instances, see Burstable instances.
DeletionProtection	Boolean	No	false	The release protection attribute of the instance. This parameter specifies whether you can use the ECS console or call the DeleteInstance operation to release the instance. Note This parameter is applicable only to pay-as-you-go instances. It can protect instances only against manual releases, but not against automatic releases.
NetworkInterfaceQueueNumber	Integer	No	8	The number of queues supported by the primary ENI.
SecurityGroupIds.N	String	No	sg-bp15ed6xe1yxeycg7o****	The IDs of replacement security groups. • All security group IDs must be unique. • The instance is moved from the current security groups to the replacement security groups. If you want the instance to remain in the current security groups, you must add the IDs of the current security groups to the list. • You can move the instance to security groups of a different type. However, the list cannot contain the IDs of both basic and advanced security groups. • The specified security group and instance must belong to the same virtual private cloud (VPC). • The valid values of N are based on the maximum number of security groups to which the instance can belong. For more information, see Limits. • New security groups become valid for corresponding instances after a short latency.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceAttribute
&InstanceId=i-bp67acfmxazb4ph****
&Action=ModifyInstanceAttribute
&CreditSpecification=Standard
&DeletionProtection=false
&Description=testInstanceDescription
&HostName=testHostName
&InstanceName=testInstanceName
&Password=Test123456
&SecurityGroupIds.1=sg-bp15ed6xe1yxeycg7o****
&SecurityGroupIds.2=sg-bp15ed6xe1yxeycg7p****
&SecurityGroupIds.3=sg-bp15ed6xe1yxeycg7q****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyInstanceAttributeResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ModifyInstanceAttributeResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceName.Malformed	The specified parameter "InstanceName" is not valid.	The error message returned because the specified InstanceName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidHostPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.
400	InvalidHostName.Malformed	The specified parameter "HostName" is not valid.	The error message returned because the specified HostName parameter is invalid.
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.
400	InvalidUserData.SizeExceeded	The specified parameter "UserData" exceeds the size.	The error message returned because the size of user data specified by the UserData parameter exceeds the upper limit.
400	InvalidUserData.NotSupported	The specified parameter "UserData" only support the vpc and IoOptimized Instance.	The error message returned because the specified UserData parameter is not supported. UserData is supported only by I/O optimized instances of the VPC type.
400	ImageNotSupportCloudInit	The specified image does not support cloud-init.	The error message returned because the specified image does not support cloud-init.

HTTP status code	Error code	Error message	Description
400	ChargeTypeViolation	Pay-As-You-Go instances do not support this operation.	The error message returned because the pay-as-you-go billing method does not support this operation.
400	InvalidParameter.RecycleBin	You do not have permission to set recyclable properties.	The error message returned because you are not authorized to perform this operation.
400	InvalidParameter.CreditSpecification	The specified CreditSpecification is not supported in this region.	The error message returned because the specified credit specification is not supported in this region.
400	InvalidInstanceStatus.CreditSpecRestricted	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	InvalidInstanceStatus.NotRunning	The current status of the resource is invalid, you can only do this operation when instance is running.	The error message returned because the operation is not supported while the instance is in the current state. Try again when the instance is in the Running state.
400	JoinedGroupLimitExceed	%s	The error message returned because the maximum number of security groups to which the specified resource can be assigned has been exceeded. For more information, see the return value of the %s placeholder in the error message.
400	InvalidParameter	The specified parameter is not valid.	The error message returned because a specified parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	OperationDenied	The instance amount in the specified SecurityGroup reach its limit.	The error message returned because the maximum number of instances in the specified security group has been reached.
403	OperationDenied	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InvalidUserData.Forbidden	User not authorized to input the parameter "UserData"please apply for permission "UserData"	The error message returned because you are not authorized to configure the UserData parameter. Apply for the permissions first.
403	InvalidUser.Unauthorized	The user is not authorized	The error message returned because you are not authorized to perform this operation.
403	EnterpriseGroupLimited.MutliGroupType	The specified instance can not join multi SecurityGroup types.	The error message returned because the specified instance cannot belong to both a basic and an advanced security group. You can call the DescribeSecurityGroups operation to query the type of a specific security group.

HTTP status code	Error code	Error message	Description
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InstanceNotInSecurityGroup	The instance not in the group.	The error message returned because the specified instance does not belong to the security group.
403	InvalidOperation.InvalidRegion	%s	The error message returned because the specified RegionId parameter is invalid.
403	OperationDenied	The specified Image is disabled or is deleted.	The error message returned because the specified image is disabled or deleted.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because you cannot modify security groups managed by cloud services.
403	InvalidParameter.InvalidEniQueueNumber	%s	The error message returned because the specified NetworkInterfaceQueueNumber parameter is invalid. For more information, see the return value of the %s placeholder in the error message.
403	InvalidOperation.MaxEniQueueNumberExceeded	%s	The error message returned because the maximum number of queues per ENI has been reached. For more information, see the return value of the %s placeholder in the error message.
403	InvalidOperation.ExceedInstanceTypeQueueNumber	%s	The error message returned because the maximum number of queues for all ENIs on an instance has been reached. For more information, see the return value of the %s placeholder in the error message.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist within this account. Check whether the security group ID is correct.
404	Credit.NotFound	The specified credit information does not exist.	The error message returned because the specified credit information does not exist.
404	InvalidParameter.SecurityGroupIdRepeated	The specified security group ids has repeated.	The error message returned because the specified SecurityGroupIds.N parameter already exists. Check whether the specified SecurityGroupIds.N parameter is valid.
404	InvalidSecurityGroupType.NotSupportClassic	The specified SecurityGroupIds have classic group type.	The error message returned because the specified security group is in the classic network. Check whether the specified SecurityGroupIds.N parameter is valid.
404	InvalidSecurityGroupVpc.NotBelongToOneVpc	The specified SecurityGroupIds are belong to different vpc.	The error message returned because the specified security groups belong to different VPCs. Check whether the specified SecurityGroupIds.N parameter is valid. You can call the DescribeSecurityGroups operation to query the VPCs to which the security groups belong.

For a list of error codes, visit the API Error Center.

6.25. ModifyInstanceVncPasswd

You can call this operation to modify the VNC password of an instance.

Description

- The password must be six characters in length and can contain only uppercase letters, lowercase letters, and digits.
- The new password takes effect based on the following situations:
  - For an I/O optimized instance, the new password takes effect immediately.
  - For a non-I/O optimized instance, you must restart the instance in the console or call the RebootInstance operation for the new password to take effect. For more information, see Restart an instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceVncPasswd	The operation that you want to perform. Set the value to ModifyInstanceVncPasswd.
InstanceId	String	Yes	i-bp67acfmxazb4ph****	The ID of the instance.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
VncPassword	String	Yes	Ecs123	The new VNC password of the instance.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceVncPasswd
&RegionId=cn-hangzhou
&InstanceId=i-bp67acfmxazb4ph****
&VncPassword=Ecs123
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyInstanceVncPasswdResponse>
      <RequestId>FDB6C963-9CE8-4B7F-BCA3-845F6BD29AFC</RequestId>
</ModifyInstanceVncPasswdResponse>
```

`JSON` format

```
{
      "RequestId": "FDB6C963-9CE8-4B7F-BCA3-845F6BD29AFC"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	IncorrectVncPassword.Malformed	The specified parameter VncPassword is not valid.	The error message returned because the specified VncPassword parameter is invalid.
404	NoSuchResource	The specified resource is not found.	The error message returned because the specified resource does not exist.

For a list of error codes, visit the API Error Center.

6.26. ModifyInstanceAutoReleaseTime

You can call this operation to set or cancel the auto-release time for a pay-as-you-go instance. Exercise caution when you set the auto-release time because the instance will be automatically released upon expiration.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceAutoReleaseTime	The operation that you want to perform. Set the value to ModifyInstanceAutoReleaseTime.
InstanceId	String	Yes	i-bp1env7nl3mijm2t****	The ID of the ECS instance to be automatically released.
RegionId	String	No	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
AutoReleaseTime	String	No	2018-01-01T01:02:03Z	The time scheduled for the instance to be automatically released. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. • If the value of the field `ss` is not `00`, the field is automatically set to the start time of the current minute (`mm`). • The release time must be at least 30 minutes later than the current time. • The release time must be at most three years from the current time. If `AutoReleaseTime` is not specified, the automatic release feature is disabled and the ECS instance will not be automatically released.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceAutoReleaseTime
&InstanceId=i-bp1env7nl3mijm2t****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyInstanceAutoReleaseTimeResponse>
      <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyInstanceAutoReleaseTimeResponse>
```

`JSON` format

```
{
    "RequestId": "C0003E8B-B930-4F59-ADC0-0E209A9012A8"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	InstanceId should not be null.	The error message returned because the InstanceId parameter is not specified.
400	InvalidAutoReleaseTime.Malformed	The specified paramter autoReleaseTime is not valid.	The error message returned because the specified AutoReleaseTime parameter is invalid. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	UnsupportedParameter	The parameters is unsupported.	The error message returned because a specified parameter is invalid.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the billing method of the instance does not support this operation.
404	NoSuchResource	The specified resource is not found.	The error message returned because the specified resource does not exist.

For a list of error codes, visit the API Error Center.

6.27. ModifyInstanceAutoRenewAttribute

You can call this operation to configure auto-renewal for one or more subscription instances. To reduce the maintenance workload when instances expire, you can configure auto-renewal for subscription instances.

Description

Before you call this operation, make sure that you have fully understood the billing methods and pricing schedule of ECS.

- The payment for auto-renewal is first made at 08:00:00 (UTC+8) nine days before the instance expires.
- If the payment fails for the first time, this process repeats itself each day until the payment is made or the instance is locked after the nine-day period ends. You must confirm that your payment account has sufficient balance or credit.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates a sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceAutoRenewAttribute	The operation that you want to perform. Set the value to ModifyInstanceAutoRenewAttribute.

Parameter	Type	Required	Example	Description
InstanceId	String	Yes	i-bp67acfmxazb4ph****,i-bp67acfmxazb4pi****	The ID of the instance. A maximum of 100 instance IDs can be specified at a time. Separate multiple instance IDs with commas (,).
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
Duration	Integer	No	1	The auto-renewal period. • When `PeriodUnit` is set to `Year`, valid values of `Duration` are 1, 2, and 3. • When `PeriodUnit` is set to `Month`, valid values of `Duration` are 1, 2, 3, 6, and 12.
AutoRenew	Boolean	No	true	Specifies whether to enable auto-renewal. Default value: false.
RenewalStatus	String	No	AutoRenewal	The auto-renewal status of the instance. Valid values: • AutoRenewal: Auto-renewal is enabled for the instance. • Normal: Auto-renewal is disabled for the instance. • NotRenewal: The instance will not be renewed upon expiration. The system no longer sends an expiration reminder, but sends only a non-renewal reminder three days before the expiration date. You can change the value of this parameter from NotRenewal to `Normal` for an instance, and then manually renew the instance. Alternatively, you can set the RenewalStatus parameter to AutoRenewal. **Note** `RenewalStatus` takes precedence over `AutoRenew`. If you do not specify `RenewalStatus`, the `AutoRenew` parameter is used by default.
PeriodUnit	String	No	Month	The unit of the renewal duration (`Period`). Default value: month. Default value: Month. Valid values: • Month • Year

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceAutoRenewAttribute
&RegionId=cn-hangzhou
&InstanceId=i-bp67acfmxazb4ph****,i-bp67acfmxazb4pi****
&Duration=1
&PeriodUnit=Month
&AutoRenew=true
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyInstanceAutoRenewAttributeResponse>
      <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyInstanceAutoRenewAttributeResponse>
```

`JSON` format

```
{
    "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	MissingParameter.InstanceId	InstanceId should not be null.	The error message returned because the InstanceId parameter is not specified.
403	InvalidParameter.ToManyInstanceIds	InstanceId should be less than 100.	The error message returned because the total number of instances has exceeded 100.
403	InvalidParameter.InvalidInstanceId	%s	The error message returned because the specified InstanceId parameter is invalid.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	ChargeTypeViolation	Pay-As-You-Go instances do not support this operation.	The error message returned because the pay-as-you-go billing method does not support this operation.
403	InvalidParameter.Duration	%s	The error message returned because the specified Duration parameter is invalid.
403	InvalidParameter.RenewalStatus	%s	The error message returned because the specified RenewalStatus parameter is invalid.
403	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidPeriod.StarterPackage	This instance was created by using a Starter Package plan and can only be renewed monthly, not yearly.	The error message returned because the instance was created by using a Starter Package plan and can only be automatically renewed on a monthly basis.

For a list of error codes, visit the API Error Center.

6.28. ModifyInstanceChargeType

Changes the billing method of one or more Elastic Compute Service (ECS) instances. You can change the billing methods of instances between pay-as-you-go and subscription, or change the billing method of all data disks attached to an instance from pay-as-you-go to subscription.

Description

Before you call this operation, make sure that you understand the billing methods and pricing schedule of ECS. For more information, see the Elastic Compute Service product page.

When you call this operation, take note of the following items:

- The instances must be in the **Running** (`Running`) or **Stopped** (`Stopped`) state, and you have no overdue payments for them.
- After you change the billing method, automatic payment is enabled by default. Make sure that you have sufficient balance in your account. Otherwise, your order becomes invalid and is canceled. If your account balance is insufficient, you can set the `AutoPay` parameter to `false` to generate an unpaid order. Then, you can log on to the ECS console to pay for the order.
- **Change the billing method from subscription to pay-as-you-go**:
  - Your ECS usage determines whether the billing method of an instance can be changed from subscription to pay-as-you-go.

- After you change the billing method of an instance from subscription to pay-as-you-go, the new billing method remains in effect for the remaining lifecycle of the instance. The price difference is refunded to the payment account that you used. Vouchers that have been redeemed are not refundable.
- **Refund rule**: You have a quota for the total refund amount each month, and unused balance of this quota is not carried forward into the next month. After you use up the refund quota of the current month, you can change the billing method only when the next month arrives. The refund amount incurred when you change the billing method is calculated based on the following formula: **Number of vCPUs × (Number of remaining days × 24 ± Number of remaining or elapsed hours)**.

- **Change the billing method from pay-as-you-go to subscription**:
  - You can change the billing method of all data disks attached to an instance from pay-as-you-go to subscription.
  - This operation cannot be called for a pay-as-you-go instance that has an automatic release time set.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceChargeType	The operation that you want to perform. Set the value to **ModifyInstanceChargeType**.
InstanceIds	String	Yes	["i-bp67acfmxazb4p****","i-bp67acfmxazb4d****"]	The IDs of instances. The value can be a JSON array that consists of up to 20 instance IDs. Separate multiple instance IDs with commas (,).
RegionId	String	Yes	cn-hangzhou	The ID of the region in which the instance is located. You can call the DescribeRegions operation to query the most recent region list.
Period	Integer	No	1	The renewal period of the subscription instance. If the instance is hosted on a dedicated host, the renewal period of the instance cannot exceed the subscription duration of the dedicated host. Valid values: Valid values when the `PeriodUnit` parameter is set to Month: `1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, 36, 48, and 60.`
PeriodUnit	String	No	Month	The unit of the renewal period (`Period`). Valid values: Month Default value: Month.
IncludeDataDisks	Boolean	No	false	Specifies whether to change the billing method of all data disks attached to the instance from pay-as-you-go to subscription. Default value: false.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are granted required permissions, and whether the required parameters are specified. If the check fails, the corresponding error message is returned. If the check succeeds, the `DryRunOperation` error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned and the request is made. Default value: false.

Parameter	Type	Required	Example	Description
AutoPay	Boolean	No	false	Specifies whether to enable automatic payment. Valid values: • true: enables automatic payment. Make sure that you have a sufficient balance in your account. Otherwise, your order becomes invalid and is canceled. • false: An order is generated but no payment is made. Default value: true. **Note** If your account balance is insufficient, you can set the AutoPay parameter to false to generate an unpaid order. Then, you can log on to the ECS console to pay for the order.
InstanceChargeType	String	No	PrePaid	The new billing method. Valid values: • PrePaid: the subscription billing method • PostPaid: the pay-as-you-go billing method Default value: PrePaid.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
IsDetailFee	Boolean	No	false	Specifies whether to return cost details of the order when the billing method is changed from subscription to pay-as-you-go. Default value: false.

Response parameters

Parameter	Type	Example	Description
OrderId	String	20413515388****	The ID of the order.
RequestId	String	B61C08E5-403A-46A2-96C1-F7B1216DB10C	The ID of the request.
FeeOfInstances	Array of FeeOfInstance		Cost details of the order.
FeeOfInstance			
InstanceId	String	i-bp67acfmxazb4p****	The ID of the instance.
Currency	String	CNY	The unit of currency for the bill. Alibaba Cloud China site (aliyun.com): CNY. Alibaba Cloud International site (alibabacloud.com): USD.
Fee	String	0	The cost value.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceChargeType
&RegionId=cn-hangzhou
&InstanceIds=["i-bp67acfmxazb4p****","i-bp67acfmxazb4d****"]
&Period=1
&PeriodUnit=Month
&AutoPay=false
&IncludeDataDisks=false
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyInstanceChargeTypeResponse>
    <RequestId>B61C08E5-403A-46A2-96C1-F7B1216DB10C</RequestId>
    <OrderId>20413515388****</OrderId>
    <FeeOfInstances>
        <FeeOfInstance>
            <Fee>0</Fee>
            <InstanceId>i-bp67acfmxazb4p****</InstanceId>
            <Currency>CNY</Currency>
        </FeeOfInstance>
        <FeeOfInstance>
            <Fee>0</Fee>
            <InstanceId>i-bp67acfmxazb4d****</InstanceId>
            <Currency>CNY</Currency>
        </FeeOfInstance>
    </FeeOfInstances>
</ModifyInstanceChargeTypeResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "B61C08E5-403A-46A2-96C1-F7B1216DB10C",
  "OrderId" : "20413515388****",
  "FeeOfInstances" : {
    "FeeOfInstance" : [ {
      "Fee" : "0",
      "InstanceId" : "i-bp67acfmxazb4p****",
      "Currency" : "CNY"
    }, {
      "Fee" : "0",
      "InstanceId" : "i-bp67acfmxazb4d****",
      "Currency" : "CNY"
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidParameter.InstanceIds	The specified InstanceIds are invalid.	The error message returned because the specified InstanceIds parameter is invalid.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidStatus.ValueNotSupported	%s	The error message returned because the operation is not supported while the resource is in the current state.
400	InvalidInstanceChargeType.ValueNotSupported	%s	The error message returned because the specified InstanceChargeType parameter is invalid.

HTTP status code	Error code	Error message	Description
400	ExpiredInstance	The specified instance has expired.	The error message returned because the specified instance has expired.
400	InstancesIdQuotaExceed	The maximum number of Instances is exceeded.	The error message returned because the maximum number of instances has been reached.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified billing method for network usage is not supported.
400	ReleaseTimeHaveBeenSet	The specified instance has been set released time.	The error message returned because an automatic release time has been set for the specified instance.
400	Throttling	Request was denied due to request throttling, please try again after 5 minutes.	The error message returned because your request is throttled. Try again 5 minutes later.
400	Throttling	%s	The error message returned because the request is throttled.
400	QuotaExceed.AfterpayInstance	The maximum number of Pay-As-You-Go instances is exceeded: %s	The error message returned because resources are insufficient to create pay-as-you-go instances of the specified instance type. Reduce the number of instances to be created.
400	InvalidParameter.Bandwidth	%s	The error message returned because the specified bandwidth is invalid.
400	QuotaExceed.RufundVcpu	The maximum number of refund vcpu is exceeded: %s	The error message returned because the number of vCPUs that is used to calculate the refund amount exceeds the upper limit. For more information about the limit, see the return value of the %s placeholder in the error message.
400	InvalidPeriod.UnitMismatch	The specified Period must be correlated with the PeriodUnit.	The error message returned because the specified value of the Period parameter falls outside the valid value range determined by the PeriodUnit parameter.
400	InvalidImageType.NotSupported	%s	The error message returned because the specified image type is invalid. Check whether this image type is supported in the region.
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned because the expiration date of the instance is later than that of the dedicated host.
400	InvalidMarketImageChargeType.NotSupport	The specified chargeType of marketImage is unsupported.	The error message returned because the billing method of the Alibaba Cloud Marketplace image is not supported.
400	InvalidSystemDiskCategory.ValueNotSupported	%s	The error message returned because the operation is not supported by the specified system disk category.
400	InvalidInstance.NotFoundSystemDisk	The specified instance has no system disk.	The error message returned because the specified instance has no system disk attached. Make sure that the specified instance has a system disk attached. You can call the DescribeInstances operation to query the details of the specified instance.
400	Invalid.PrivatePoolOptions.MatchCriteria	Target mode does not support this operation.	The error message returned because the operation does not support targeted private pools.
400	InvalidPeriod	The specified period is not valid.	The error message returned because the specified Period parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidInstance.TempBandwidthUpgrade	Cannot switch to Pay-As-You-Go during the period of temporary bandwidth upgrade.	The error message returned because you cannot change the billing method of the instance to pay-as-you-go when the bandwidth is being temporarily upgraded.
403	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or because you are not authorized to manage instances of this instance type.
403	InstanceType.Offline	%s	The error message returned because the operation is not supported while the instance type is retired or while resources of the instance type are insufficient.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	Account.Arrearage	Your account has an outstanding payment.	The error message returned because you have unpaid orders in your account.
403	InvalidParameter.NotMatch	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
403	InvalidAction	%s	The error message returned because the operation is invalid.
403	QuotaExceed.PostPaidDisk	Living postPaid disks quota exceeded.	The error message returned because the maximum number of pay-as-you-go disks has been reached.
403	ImageNotSupportInstanceType	The specified instanceType is not supported by instance with marketplace image.	The error message returned because the specified Alibaba Cloud Marketplace image does not support the instance type.
403	InvalidInstanceType.PhasedOut	This instanceType is no longer offered.	The error message returned because the specified instance type is retired.
403	RealNameAuthenticationError	Your account has not passed the real-name authentication yet.	The error message returned because you have not completed real-name verification. Complete real-name verification and try again.
403	QuotaExceed.ElasticQuota	No additional quota is available for the specified ECS instance type.	The error message returned because the maximum number of instances of the specified instance type in the current region has been reached. Try another region or instance type, or reduce the purchase quantity. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type.	The error message returned because the maximum number of instances of the specified instance type in the current region has been reached. Try another region or instance type, or reduce the purchase quantity. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of vCPUs for all instance types has been reached in the zone. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type, or the number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of instances of the specified instance type in the current region has been reached, or because the maximum number of vCPUs for all instance types has been reached. You can go to the ECS console or Quota Center to request a quota increase.

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified instanceId does not exist.	The error message returned because the specified instance does not exist.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

6.29. ModifyInstanceSpec

You can call this operation to change the instance type and public bandwidth of a pay-as-you-go instance.

Description

For information about SDK for Python used to change resource configurations, see Query available resources for configuration changes.

When you call this operation, take note of the following items:

- You must have no overdue payments in your account.
- You can change the public bandwidth of an instance only when the instance is in the **Running** (`Running`) or **Stopped** (`Stopped`) state.
- Before you change the instance type of a pay-as-you-go instance, you can call the DescribeResourcesModification operation to query the instance types to which you can change.
- You can change the instance type of an instance only when the instance is in the **Stopped** (`Stopped`) state.
- You can change only the instance type or the public bandwidth each time.
- As of November 27, 2020, the maximum bandwidth available for you to create ECS instances or change the configurations of ECS instances is subject to the throttling policy in your account. To increase the maximum bandwidth, submit a ticket. The following throttling policies apply:
  - In a single region, the sum of actual peak bandwidths of all ECS instances that use the pay-by-traffic billing method for network usage cannot exceed 5 Gbit/s.
  - In a single region, the sum of actual peak bandwidths of all ECS instances that use the pay-by-bandwidth billing method for network usage cannot exceed 50 Gbit/s.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceSpec	The operation that you want to perform. Set the value to ModifyInstanceSpec.
InstanceId	String	Yes	i-bp67acfmxazb4p****	The ID of the instance.
InstanceType	String	No	ecs.g6.large	The new instance type. For more information, see Instance families or call the DescribeInstanceTypes operation to query the most recent instance type list.

Parameter	Type	Required	Example	Description
InternetMaxBandwidthOut	Integer	No	10	The maximum outbound public bandwidth. Unit: Mbit/s. Valid values: 0 to 100. **Note** When the **pay-by-traffic** billing method for network usage is used, the maximum inbound and outbound bandwidths indicate the upper limits for bandwidths and are used only for reference. When resources are insufficient, these maximum bandwidths cannot be guaranteed. If you want guaranteed bandwidths for your instances, use the **pay-by-bandwidth** billing method for network usage.
InternetMaxBandwidthIn	Integer	No	10	The maximum inbound public bandwidth. Unit: Mbit/s. Valid values: • When the purchased outbound public bandwidth is less than or equal to 10 Mbit/s, the valid values of InternetMaxBandwidthIn are 1 to 10 and the default value is 10. • When the purchased outbound public bandwidth is greater than 10 Mbit/s, the valid values of InternetMaxBandwidthIn are 1 to the `InternetMaxBandwidthOut` value and the default value is the `InternetMaxBandwidthOut` value. **Note** When the **pay-by-traffic** billing method for network usage is used, the peak inbound and outbound bandwidths indicate the upper limits for bandwidths and are used only for reference. When resources are insufficient, these maximum bandwidths cannot be guaranteed. If you want guaranteed bandwidths for your instances, use the **pay-by-bandwidth** billing method for network usage.
Async	Boolean	No	false	Specifies whether to submit an asynchronous request. Default value: false.

Parameter	Type	Required	Example	Description
AllowMigrateAcrossZone	Boolean	No	false	Specifies whether to allow cross-cluster instance type upgrades. Default value: false. When `AllowMigrateAcrossZone` is set to true and you upgrade the instance configurations based on the returned information, take note of the following items: Instances in the classic network: • For retired instance types, when the configurations of a non-I/O optimized instance is upgraded to those of an I/O optimized instance, the private IP address, disk device names, and software license code of the instance are changed. For information about retired instance types, see Retired instance types. For Linux instances, basic disks (`cloud`) are identified as xvd*, such as **xvda** and **xvdb**. Ultra disks (`cloud_efficiency`) and standard SSDs (`cloud_ssd`) are identified as vd*, such as **vda** and **vdb**. • For instance families available for purchase, when the instance type of an instance is changed, the private IP address of the instance is also changed. For information about instance families available for purchase, see Instance families. Instances in VPCs: For retired instance types, when the configurations of a non-I/O optimized instance is upgraded to those of an I/O optimized instance, the disk device names and software license code of the instance are changed. For information about retired instance types, see Retired instance types. For Linux instances, basic disks (`cloud`) are identified as xvd*, such as **xvda** and **xvdb**. Ultra disks (`cloud_efficiency`) and standard SSDs (`cloud_ssd`) are identified as vd*, such as **vda** and **vdb**.
SystemDisk.Category	String	No	cloud_ssd	The category of the system disk. This parameter is valid only when you upgrade the configurations of an instance from a retired instance type to an available instance type or from a non-I/O optimized instance to an I/O optimized instance. For more information, see Retired instance types and Instance families. Valid values: • cloud_efficiency: ultra disk • cloud_ssd: standard SSD
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceSpec
&InstanceId=i-bp67acfmxazb4p****
&InstanceType=ecs.g6.large
&InternetMaxBandwidthOut=10
&ClientToken=0c593ea1-3bea-11e9-b96b-88e9fe637760
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyInstanceSpecResponse>
     <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyInstanceSpecResponse>
```

`JSON` format

```
{
   "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid.	The error message returned because the specified InternetChargeType parameter is invalid.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or because you are not authorized to manage instances of this instance type.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or because you are not authorized to manage instances of this instance type.
400	InvalidParameter	The specified parameter "InternetMaxBandwidthOut" is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
400	InvalidParameter.Mismatch	Too many parameters in one request.	The error message returned because the request contains invalid parameters.
403	CategoryViolation	The specified instance does not support this operation because of its disk category.	The error message returned because the configurations of instances that are attached with local disks cannot be changed.
403	InvalidStatus.ValueNotSupported	The current status of the resource does not support this operation.	The error message returned because this operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.

HTTP status code	Error code	Error message	Description
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the billing method of the instance does not support this operation.
403	OperationDenied	The specified instance is out of usage.	The error message returned because the resource inventory of the specified instance type is insufficient.
400	BandwidthUpgradeDenied.EipBoundInstance	The specified VPC instance has bound EIP, temporary bandwidth upgrade is denied.	The error message returned because the instance is associated with an elastic IP address (EIP) and cannot have its bandwidth temporarily upgraded.
404	MissingTemporary.StartTime	Temporary.StartTime is not specified.	The error message returned because the Temporary.StartTime parameter is not specified.
404	MissingTemporary.EndTime	Temporary.EndTime is not specified.	The error message returned because the Temporary.EndTime parameter is not specified.
400	InvalidTemporary.StartTime	The specifed Temporary.StartTime is not valid.	The error message because the specified Temporary.StartTime parameter is invalid.
400	InvalidTemporary.EndTime	The specifed Temporary.EndTime is not valid.	The error message returned because the specified Temporary.EndTime parameter is invalid.
403	LastTokenProcessing	The last token request is processing.	The error message returned because the previous token request is being processed. Try again later.
400	Downgrade.NotSupported	Downgrade operation is not supported.	The error message returned because the downgrade operation is not supported.
403	InstanceSpecModification.NotEffective	The specified instance has been reserved for making a spec modification and not taken effective in the current contract period.	The error message returned because the instance is reserved due to instance type changes. Changes made to it cannot take effect during the current contract period.
400	DependencyViolation.InstanceType	The current InstanceType cannot be changed to the specified InstanceType.	The error message returned because the current instance type cannot be changed to the specified instance type.
403	InvalidInstanceType.ValueNotSupported	The specified zone does not offer the specified instancetype.	The error message returned because the specified instance type is unavailable in the specified region.
403	ImageNotSupportInstanceType	The specified image do not support the InstanceType instance.	The error message returned because the specified image does not support instances of the specified instance type.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned because you have overdue payments in your account.
400	InvalidParameter.Bandwidth	The specified parameter Bandwidth is not valid.	The error message returned because the specified bandwidth is invalid.
400	InvalidParameter.Conflict	The specified image does not support the specified instance type.	The error message returned because the specified image does not support the specified instance type.
400	InvalidParameter.AllowMigrateAcrossZone	The specified parameter CanMigrateAcrossZone is not valid.	The error message returned because the specified AllowMigrateAcrossZone parameter is invalid.
400	InvalidParam.SystemDiskCategory	The specified param SystemDisk.Category is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	Throttling	Request was denied due to request throttling, please try again after 5 minutes.	The error message returned because your current request is denied due to throttling. Try again 5 minutes later.

HTTP status code	Error code	Error message	Description
400	InvalidInstanceStatus.NotStopped	The specified Instance status is not stopped.	The error message returned because the specified instance is not in the Stopped state.
403	InstanceType.Offline	The specified InstanceType has been offline	The error message returned because the specified instance type is retired. Select another instance type and try again.
400	InvalidAction	Specified action is not valid.	The error message returned because this operation is invalid.
400	IdempotenceParamNotMatch	There is a idempotence signature mismatch between this and last request.	The error message returned because this request and the previous request contain the same client token but different parameters.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
400	Price.PricePlanResultNotFound	The internetMaxBandwidthIn or internetMaxBandwidthOut provided is invalid.	The error message returned because specified InternetMaxBandwidthIn or InternetMaxBandwidthOut parameter is invalid.
403	InvalidParameter.NotMatch	%s	The error message returned because a specified parameter is invalid. Check whether the parameters conflict.
403	InvalidInstance.EipNotSupport	The specified instance with eip is not supported, please unassociate eip first.	The error message returned because the operation is not supported while an EIP is associated with this instance. Disassociate the EIP first.
400	InvalidAction.NotSupport	The ecs on dedicatedHost not support modify instanceType.	The error message returned because you cannot change the instance types of instances hosted on dedicated hosts.
400	InvalidMarketImageStatus.NotSupported	The status of specified market image does not support this operation.	The error message returned because the operation is not supported while the specified Alibaba Cloud Marketplace image is in the current state.
403	OperationDenied.NoStock	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the operation is valid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	OperationDenied	%s	The error message returned because the operation is denied.
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned because the maximum number of IPv4 addresses has been reached.
403	InvalidOperation.Ipv6CountExceeded	%s	The error message returned because the maximum number of IPv6 addresses has been reached.
403	InvalidOperation.Ipv6NotSupport	%s	The error message returned because IPv6 does not support this operation.
403	InvalidOperation.InstanceWithEipNotSupport	The special instance with eip not support operate, please unassociate eip first.	The error message returned because the operation is not supported while an EIP is associated with this instance. Disassociate the EIP address first.
403	SecurityRisk.3DVerification	We have detected a security risk with your default credit or debit card. Please proceed with verification via the link in your email.	The error message returned because your default credit card or debit card is exposed to security risks. Click the URL in the email for verification.

HTTP status code	Error code	Error message	Description
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified InstanceChargeType parameter does not exist.
403	QuotaExceed.ElasticQuota	No additional quota is available for the specified ECS instance type.	The error message returned because the maximum number of instances of the specified instance type in the current region has been reached. Try another region or instance type, or reduce the purchase quantity. You can also go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type.	The error message returned because the maximum number of instances of the specified instance type in the current region has been reached. Try another region or instance type, or reduce the purchase quantity. You can also go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of vCPUs for all instance types has been reached. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type, or the number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of instances of the specified instance type that can be created in the current region has been reached, or because the maximum number of vCPUs for all instance types has been reached. You can go to the ECS console or Quota Center to request a quota increase.
400	InvalidOperation.VpcHasEnabledAdvancedNetworkFeature	The specified vpc has enabled advanced network feature.	The error message returned because the specified VPC has advanced features enabled. You cannot create instances that are of low specifications in the VPC.

For a list of error codes, visit the API Error Center.

6.30. ModifyPrepayInstanceSpec

Upgrades or downgrades the instance type of a subscription Elastic Compute Service (ECS) instance. The new instance type takes effect for the remaining lifecycle of the instance.

Description

Before you call this operation, make sure that you understand the billing methods, pricing schedule, and refund rules of Elastic Compute Service. For more information, see Refund rules for real-time configuration downgrade.

Before you change the instance type of a subscription instance, you can call the DescribeResourcesModification operation to query the instance types to which you can change. You can use ECS SDK for Python to query the instance types to which you can change. For more information, see Query available resources for configuration changes.

When you call this operation, take note of the following items:

- You cannot change the instance type of an expired instance. You can renew the instance and try again.
- When you downgrade the instance type of an instance, take note of the following items:
  - The instance must be in the **Stopped** (`Stopped`) state.
  - You must specify the operation type by setting `OperatorType` to downgrade.
  - You can downgrade the configurations of an instance a maximum of three times. Therefore, a maximum of three refunds for price difference can be made for an instance. Downgrade operations include instance type downgrades, bandwidth configuration downgrades, and the change of the disk billing method from subscription to pay-as-you-go.
  - The price difference is refunded to the payment account you used. Vouchers that have been redeemed are not refundable.
- This operation is asynchronous. It takes 5 to 10 seconds for the instance type of an instance to change. Then, you must restart the instance by calling the RebootInstance operation or by using the ECS console for the instance type change to take effect. If you restart only the operating system of the instance, the instance type change does not take effect.

- If the instance is in the **Stopped** state, you need only to start the instance. You do not need to restart the instance after it enters the Running state.
- If `RebootWhenFinished` is set to true for the instance, you do not need to manually restart the instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyPrepayInstanceSpec	The operation that you want to perform. Set the value to **ModifyPrepayInstanceSpec**.
InstanceId	String	Yes	i-bp67acfmxazb4ph****	The ID of the instance.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceType	String	Yes	ecs.g5.xlarge	The new instance type. For information about available instance types, see Instance families or call the DescribeInstanceTypes operation.
OperatorType	String	No	upgrade	The operation type. Valid values: • upgrade: upgrades the instance type. Make sure that the balance in your account is sufficient. • downgrade: downgrades the instance type. When the new instance type specified by the `InstanceType` parameter has lower specifications than the current instance type, you must set `OperatorType` to downgrade. Default value: upgrade. **Note** For more information about the precautions on upgrading or downgrading instance types, see the preceding "Description" section in this topic.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that the value is unique among different requests. The ClientToken value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Parameter	Type	Required	Example	Description
AutoPay	Boolean	No	true	Specifies whether to enable automatic payment when you upgrade the instance type. Valid values: • true: enables automatic payment. **Note** Make sure that your payment account has sufficient balance. Otherwise, your order becomes invalid and is canceled. If your account balance is insufficient, you can set the `AutoPay` parameter to `false` to generate an unpaid order. Then, you can log on to the ECS console to pay for the order. • false: An order is generated but no payment is made. Default value: true. When `OperatorType` is set to `downgrade`, `AutoPay` is ignored.
MigrateAcrossZone	Boolean	No	false	Specifies whether to support cross-cluster instance type upgrades. Default value: false. When the `MigrateAcrossZone` parameter is set to `true` and you upgrade the instance based on the returned information, take note of the following items: Instances of the classic network type: • For retired instance types, when a non-I/O optimized instance is upgraded to an I/O optimized instance, the private IP address, disk device names, and software license codes of the instance are changed. For more information, see Retired instance types. For Linux instances, basic disks (cloud) are identified as xvd* such as xvda and xvdb. Ultra disks (cloud_efficiency) and standard SSDs (cloud_ssd) are identified as vd* such as vda and vdb. • For instance families available for purchase, when the instance type of an instance is changed, the private IP address of the instance is also changed. For more information, see Instance families. Instances of the Virtual Private Cloud (VPC) type: For retired instance types, when a non-I/O optimized instance is upgraded to an I/O optimized instance, the disk device names and software license codes of the instance are changed. For Linux instances, basic disks (cloud) are identified as xvd* such as xvda and xvdb. Ultra disks (cloud_efficiency) and standard SSDs (cloud_ssd) are identified as vd* such as vda and vdb.
SystemDisk.Category	String	No	cloud_efficiency	The new category of the system disk. This parameter is valid only when you upgrade an instance from a retired instance type to an available instance type or upgrade a non-I/O optimized instance to an I/O optimized instance. For more information, see Retired instance types and Instance families. Valid values: • cloud_efficiency: ultra disk • cloud_ssd: standard SSD
RebootTime	String	No	2018-01-01T12:05Z	The restart time of the instance. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
EndTime	String	No	2018-01-01T12:05Z	The end time of the temporary change. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.

Parameter	Type	Required	Example	Description
RebootWhenFinished	Boolean	No	false	Specifies whether to restart the instance immediately after the instance type is changed. Valid values: • true • false Default value: false. **Note** If the instance is in the **Stopping** state, the instance state remains unchanged and no operations are performed regardless of whether the `RebootWhenFinished` parameter is set to true.

Response parameters

Parameter	Type	Example	Description
OrderId	String	1234567890	The ID of the order.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyPrepayInstanceSpec
&RegionId=cn-hangzhou
&InstanceId=i-bp67acfmxazb4ph****
&InstanceType=ecs.g5.xlarge
&AutoPay=true
&OperatorType=upgrade
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyPrepayInstanceSpecResponse>
    <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
    <OrderId>1234567890</OrderId>
</ModifyPrepayInstanceSpecResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "04F0F334-1335-436C-A1D7-6C044FE73368",
  "OrderId" : "1234567890"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or because you are not authorized to manage instances of this instance type.
400	InvalidBillingMethod.ValueNotSupported	The operation is not permitted due to an invalid billing method of the instance.	The error message returned because the operation is not supported due to the invalid billing method of the instance.
400	InvalidInstance.PurchaseNotFound	The specified instance has no purchase history.	The error message returned because the order record for the instance does not exist.
400	InvalidInstanceType.NotSupported	The specified InstanceType is not Supported.	The error message returned because the specified InstanceType parameter is invalid.
400	OrderCreationFailed	Order creation failed, please check your params and try it again later.	The error message returned because the order fails to be created. Check your parameters and try again.
400	Throttling	You have made too many requests within a short time; your request is denied due to request throttling.	The error message returned because your request is denied due to throttling. Try again later.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned because you have overdue payments in your account.
400	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance does not exist.
400	InvalidRebootTime.MalFormed	The specified rebootTime is not valid.	The error message returned because the specified RebootTime parameter is invalid.
400	InvalidRebootTime.ValueNotSupported	The specified RebootTime is not valid.	The error message returned because the specified RebootTime parameter is invalid.
400	IdempotenceParamNotMatch	Request uses a client token in a previous request but is not identical to that request.	The error message returned because the ClientToken value in this request is identical to that in the previous request but some other parameters in this request are different from those in the previous request.
400	IdempotenceParamNotMatch	%s	The error message returned because the idempotent parameters do not match.
400	InvalidInstanceChargeType.ValueNotSupported	%s	The error message returned because the specified InstanceChargeType parameter is not supported.
400	InvalidStatus.NotStopped	Instance status must be stopped.	The error message returned because the instance is not in the Stopped state. The operation can be performed only when the instance is in the Stopped state.
400	InvalidAction	%s	The error message returned because the operation is invalid.
400	InstanceDowngrade.QuotaExceed	Quota of instance downgrade is exceed.	The error message returned because the maximum number of configuration downgrades allowed for the instance has been reached.
400	InvalidInstanceType.ValueNotSupported	%s	The error message returned because the operation is not supported by the specified instance type.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	OperationDenied	The current user does not support this operation.	The error message returned because your account does not support the operation.
400	LastOrderProcessing	The previous order is still processing, please try again later.	The error message returned because the order is being processed. Try again later.

HTTP status code	Error code	Error message	Description
400	InvalidOperation.VpcHasEnabledAdvancedNetworkFeature	The specified vpc has enabled advanced network feature.	The error message returned because advanced features are enabled for the specified VPC. You cannot create low-specification instances in the VPC.
400	InvalidAction.WithActiveElasticUpgrade	The instance has active Elastic Upgrade.	The error message returned because the operation is not supported while the configurations of the instance are being temporarily upgraded. The configurations of the instance go through a temporary upgrade if the EndTime parameter is specified to call the ModifyPrepayInstanceSpec operation.
403	OperationDenied.NoStock	The specified instance is out of usage.	The error message returned because the resources of the specified instance type are insufficient.
403	InvalidUser.PassRoleForbidden	The RAM user does not have privilege to pass a role.	The error message returned because RAM users are not authorized to assign RAM roles.
403	ImageNotSupportInstanceType	The specified image does not support the specified InstanceType.	The error message returned because the specified image does not support the specified instance type.
403	InstanceType.Offline	%s	The error message returned because the operation is not supported while the instance type is retired or while resources of the instance type are insufficient.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InvalidParameter.InstanceId	%s	The error message returned because the specified InstanceId parameter is invalid.
403	OperationDenied	%s	The error message returned because the operation is denied.
403	ImageNotSupportInstanceType	The specified instanceType is not supported by instance with marketplace image.	The error message returned because the specified Alibaba Cloud Marketplace image does not support the instance type.
403	InvalidInstanceStatus	The current status of the instance does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
403	InvalidInstance.PreInstanceExpired	Instance business status is not Expired	The error message returned because the instance has expired.
403	InvalidInstance.EipNotSupport	The special instance with eip not support operate, please unassociate eip first.	The error message returned because the operation is not supported while an elastic IP address (EIP) is associated with this instance. Disassociate the EIP first.
403	OperationDenied.LocalDiskUnsupported	The configuration change is not allowed when the specified instance has local disks mounted.	The error message returned because the instance types of instances that have local disks attached cannot be changed.
403	OperationDenied.NoStock	The resource is out of stock in the specified zone. Please try other types, or choose other regions and zones.	The error message returned because the specified resource is unavailable in the specified zone. Try another resource type or select another region or zone.
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned because the maximum number of IPv4 addresses has been reached.
403	InvalidOperation.Ipv6CountExceeded	%s	The error message returned because the maximum number of IPv6 addresses has been reached.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.Ipv6NotSupport	%s	The error message returned because IPv6 addresses do not support this operation.
403	InvalidInstance.NotFoundSystemDisk	The specified instance has no system disk.	The error message returned because the specified instance does not have a system disk attached. Make sure that the specified instance has a system disk attached. You can call the DescribeInstances operation to query the details of the specified instance.
403	InvalidInstanceType.NotSupportDiskCategory	The instanceType of the specified instance does not support this disk category.	The error message returned because the instance type specified by the InstanceType parameter does not support the disk category of the instance. Try another instance type. For information about the disk categories supported by instance types, see the instance family documentation.
403	QuotaExceed.ElasticQuota	No additional quota is available for the specified ECS instance type.	The error message returned because the maximum number of instances of the specified instance type in the region has been reached. Try another region or instance type, or reduce the purchase quantity. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type.	The error message returned because the maximum number of instances of the specified instance type in the region has been reached. Try another region or instance type, or reduce the purchase quantity. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of vCPUs for all instance types in the zone has been reached. You can go to the ECS console or Quota Center to request a quota increase.
403	QuotaExceed.ElasticQuota	The number of the specified ECS instances has exceeded the quota of the specified instance type, or the number of vCPUs assigned to the ECS instances has exceeded the quota in the zone.	The error message returned because the maximum number of instances of the specified instance type in the region has been reached or because the maximum number of vCPUs for all instance types has been reached. You can go to the ECS console or Quota Center to request a quota increase.
403	InvalidOperation.MaxEniQueueNumberExceeded	%s	The error message returned because the maximum number of queues per elastic network interface (ENI) has been reached. For more information, see the return value of the %s placeholder in the error message.
403	InvalidOperation.ExceedInstanceTypeQueueNumber	%s	The error message returned because the maximum number of queues for all ENIs on an instance has been reached. For more information, see the return value of the %s placeholder in the error message.
403	InvalidParameter.InvalidEniQueueNumber	%s	The error message returned because the specified number of queues per ENI is invalid. For more information, see the return value of the %s placeholder in the error message.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	BillingMethodNotFound	The account has not chosen any billing method.	The error message returned because no billing method is selected for the Alibaba Cloud account.

HTTP status code	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

6.31. ModifyInstanceMetadataOptions

You can call this operation to modify the metadata of an instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceMetadataOptions	The operation that you want to perform. Set the value to ModifyInstanceMetadataOptions.
HttpEndpoint	String	Yes	enabled	Specifies whether to enable the metadata HTTP endpoint on the instance. Valid values: • enabled • disabled Default value: enabled. Note For more information about instance metadata, see Metadata.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	No	i-bp67acfmxaz****	The ID of the instance.
HttpTokens	String	No	optional	Specifies whether to forcibly use the security-enhanced mode (IMDSv2) to access instance metadata. Valid values: • optional: The security-enhancement mode (IMDSv2) is not forcibly used. • required: The security-enhancement mode (IMDSv2) is forcibly used. After you set this parameter to required, you cannot access the instance metadata in normal mode. Default value: optional. Note For more information about modes of accessing instance metadata, see Access mode of instance metadata.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Parameter	Type	Example	Description

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=ModifyInstanceMetadataOptions
&RegionId=cn-hangzhou
&InstanceId=i-bp67acfmxaz****
&HttpEndpoint=enabled
&HttpTokens=required
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyInstanceMetadataOptionsResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ModifyInstanceMetadataOptionsResponse>
```

`JSON` format

```
{
    "RequestId":"473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidHttpEndpoint.NotSupported	The specified HttpEndpoint not supported, you can use enabled(default) or disabled.	The error message returned because the specified HttpEndpoint parameter is invalid. Set the parameter to enabled (default value) or disabled.
400	InvalidHttpTokens.NotSupported	The specified HttpTokens not supported, you can use optional(default) or required.	The error message returned because the specified HttpTokens parameter is invalid. Set the parameter to optional (default value) or required.
400	InvalidHttpPutResponseHopLimit.NotSupported	The specified HttpPutResponseHopLimit not supported, more than 1 and less than 64 is reasonable.	The error message returned because the specified HttpPutResponseHopLimit parameter is invalid. The value must be in the range of 1 to 64.

For a list of error codes, visit the API Error Center.

7.Dedicated hosts

7.1. AllocateDedicatedHosts

Creates one or more pay-as-you-go or subscription dedicated hosts. A dedicated host is a physical server dedicated to a single tenant. You can create Elastic Compute Service (ECS) instances on a dedicated host and view the properties of the dedicated host.

Description

Before you create a dedicated host, you can call the DescribeAvailableResource operation to query the available resources in a specific region or zone.

We recommend that you understand the billing methods of resources before you create a dedicated host. You are charged for resources used by the created dedicated host. For more information, see Billing overview.

- You can create up to 100 pay-as-you-go or subscription dedicated hosts at a time.
- After a dedicated host is created, you can use its ID that is returned by the system as the value of a request parameter to call the DescribeDedicatedHosts operation to query the status of the dedicated host.
- After you submit a request to create a dedicated host, an error is returned if a specific parameter is invalid or the requested resources are insufficient. For more information about error reasons, see the "Error codes" section in this topic.
- After a dedicated host is created, you can call the ModifyInstanceDeployment operation to migrate ECS instances from a shared host to the dedicated host. You can also migrate ECS instances from another dedicated host to the created dedicated host.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AllocateDedicatedHosts	The operation that you want to perform. Set the value to AllocateDedicatedHosts.
DedicatedHostType	String	Yes	ddh.c5	The type of the dedicated host. You can call the DescribeDedicatedHostTypes operation to query the most recent list of dedicated host types.
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.
Tag.N.Key	String	No	Environment	The key of tag N to be added to the dedicated host. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain `http://` or `https://`.
Tag.N.Value	String	No	Production	The value of tag N to be added to the dedicated host. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with acs: or contain `http://` or `https://`.
ResourceGroupId	String	No	rg-bp67acfmxazb4ph***	The ID of the resource group to which to assign the dedicated host.
ZoneId	String	No	cn-hangzhou-f	The zone ID of the dedicated host. This parameter is empty by default. If you do not specify a zone, the system selects a zone.

Parameter	Type	Required	Example	Description
DedicatedHostName	String	No	myDDH	The name of the dedicated host. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
DedicatedHostClusterId	String	No	dc-bp12wlf6am0vz9v2****	The ID of the dedicated host cluster to which to assign the dedicated host.
ActionOnMaintenance	String	No	Migrate	The policy used to migrate the instances deployed on the dedicated host when the dedicated host fails or needs to be repaired online. Valid values: • Migrate: The instances are migrated to another physical server and restarted. If the dedicated host is attached with cloud disks, the default value is Migrate. • Stop: The instances are stopped. If the dedicated host cannot be repaired, the instances are migrated to another physical server and restarted. If the dedicated host is attached with local disks, the default value is Stop.
NetworkAttributes.SlbUdpTimeout	Integer	No	60	The timeout period for a UDP session between a Server Load Balancer (SLB) instance and the dedicated host. Unit: seconds. Valid values: 15 to 310.
NetworkAttributes.UdpTimeout	Integer	No	60	The timeout period for a UDP session between a user and an Alibaba Cloud service on the dedicated host. Unit: seconds. Valid values: 15 to 310.
Description	String	No	This-is-my-DDH	The description of the dedicated host. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.
AutoPlacement	String	No	off	Specifies whether to add the dedicated host to the resource pool for automatic deployment. If you create an ECS instance on a dedicated host without specifying the **DedicatedHostId** parameter, Alibaba Cloud selects a dedicated host from the resource pool to host the instance. For more information, see Automatic deployment. Valid values: • on: The dedicated host is added to the resource pool for automatic deployment. • off: The dedicated host is not added to the resource pool for automatic deployment. Default value: on. **Note** If you do not want to add the dedicated host to the resource pool for automatic deployment, set the value to off.

Parameter	Type	Required	Example	Description
CpuOverCommitRatio	Float	No	1	The CPU overcommit ratio. You can configure CPU overcommit ratios only for the following dedicated host types: g6s, c6s, and r6s. Valid values: 1 to 5. The CPU overcommit ratio affects the number of available vCPUs on a dedicated host. You can use the following formula to calculate the number of available vCPUs on a dedicated host: Number of available vCPUs = Number of physical CPU cores × 2 × CPU overcommit ratio. For example, the number of physical CPU cores on each g6s dedicated host is 52. If you set the CPU overcommit ratio of a g6s dedicated host to 4, the number of available vCPUs on the dedicated host is 416. For scenarios that have minimal requirements on CPU stability or where CPU load is not heavy, such as development and test environments, you can increase the number of available vCPUs on a dedicated host by increasing the CPU overcommit ratio. This way, you can deploy more ECS instances of the same specifications on the dedicated host and reduce the unit deployment cost.
MinQuantity	Integer	No	2	The minimum number of dedicated hosts to create. Valid values: 1 to 100. **Note** If the number of available dedicated hosts is less than the minimum number of dedicated hosts to create, the dedicated hosts fail to be created.
ChargeType	String	No	PrePaid	The billing method of the dedicated host. Default value: PostPaid. Valid values: • PrePaid: subscription. If you set this parameter to PrePaid, make sure that you have sufficient account balance or credit. Otherwise, InvalidPayMethod is returned. • PostPaid: pay-as-you-go.
Quantity	Integer	No	2	The number of dedicated hosts that you want to create. Valid values: 1 to 100. Default value: 1.
Period	Integer	No	6	The subscription period of the dedicated host. The `Period` parameter takes effect and is required only when the `ChargeType` parameter is set to `PrePaid`. Valid values: • If the PeriodUnit parameter is set to Month, valid values of Period are 1, 2, 3, 4, 5, 6, 7, 8, and 9. • If the PeriodUnit parameter is set to Year, valid values of Period are 1, 2, 3, 4, and 5.
PeriodUnit	String	No	Month	The unit of the subscription period of the dedicated host. Valid values: • Month • Year Default value: Month.

Parameter	Type	Required	Example	Description
AutoRenew	Boolean	No	false	Specifies whether to automatically renew the subscription dedicated host. **Note** The **AutoRenew** parameter takes effect only when the **ChargeType** parameter is set to PrePaid. Default value: false.
AutoRenewPeriod	Integer	No	1	The auto-renewal period of the dedicated host. Unit: months. Valid values: 1, 2, 3, 6, and 12. **Note** The **AutoRenewPeriod** parameter takes effect and is required only when the **AutoRenew** parameter is set to true.
AutoReleaseTime	String	No	2019-08-21T12:30:24Z	The automatic release time of the dedicated host. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. **Note** • It must be at least half an hour later than the current time. • It must be at most three years later than the current time. • If the value of seconds (ss) is not 00, it is automatically set to 00.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example	Description
DedicatedHostIdSets	List	"DedicatedHostIdSets": {"DedicatedHostId":["dh-bp67acfmxazb4p****", "dh-bp67acfmxazb4d****"]}	The IDs of the dedicated hosts.
RequestId	String	E2A664A6-2933-4C64-88AE-5033D003EADF	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AllocateDedicatedHosts
&RegionId=cn-hangzhou
&DedicatedHostType=ddh.sn1ne
&Quantity=2
&ChargeType=PostPaid
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AllocateDedicatedHostsResponse>
    <RequestId>E2A664A6-2933-4C64-88AE-5033D003EADF</RequestId>
    <DedicatedHostIdSets>
        <DedicatedHostId>dh-bp67acfmxazb4p****</DedicatedHostId>
        <DedicatedHostId>dh-bp67acfmxazb4d****</DedicatedHostId>
    </DedicatedHostIdSets>
</AllocateDedicatedHostsResponse>
```

`JSON` format

```
{
    "RequestId":"E2A664A6-2933-4C64-88AE-5033D003EADF",
    "DedicatedHostIdSets":{
        "DedicatedHostId":[
            "dh-bp67acfmxazb4p****",
            "dh-bp67acfmxazb4d****"
        ]
    }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidParameter.Conflict	The specified region and cluster do not match.	The error message returned because the specified region and the specified cluster do not correspond to each other.
400	InvalidAutoRenewPeriod.ValueNotSupported	The specified autoRenewPeriod is not valid.	The error message returned because the specified AutoRenewPeriod parameter is invalid.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidDedicatedHostType.ValueNotSupported	%s	The error message returned because the specified DedicatedHostType parameter is invalid.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to perform the operation in the specified region.
400	Zone.NotOnSale	%s	The error message returned because the requested resources are unavailable in the specified zone.
400	OperationDenied	The specified DedicatedHostType or Zone is not available or not authorized.	The error message returned because the specified dedicated host type or zone is unavailable or because you are not authorized to manage the resources.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	QuotaExceed.AfterpayDedicatedHost	The maximum number of Pay-As-You-Go DedicatedHosts is exceeded: %s	The error message returned because the pay-as-you-go resources of the specified dedicated host type are insufficient. Reduce the number of dedicated hosts to be created.

HTTP status code	Error code	Error message	Description
400	InvalidChargeType.ValueNotSupported	ChargeType is not valid	The error message returned because the specified ChargeType parameter is invalid.
400	InvalidParameter.SlbUdpTimeout	The specified value is invalid.	The error message returned because the specified NetworkAttributes.SlbUdpTimeout parameter is invalid.
400	InvalidParameter.UdpTimeout	The specified value is invalid.	The error message returned because the specified NetworkAttributes.UdpTimeout parameter is invalid.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
403	OperationDenied	The creation of Host to the specified Zone is not allowed.	The error message returned because you are not authorized to create a dedicated host in the specified zone.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because resources are insufficient in the specified zone. Try other types of resources, or select other regions and zones.
403	OperationDenied	Sales of this resource are temporarily suspended in the specified region; please try again later.	The error message returned because the requested resource is unavailable in the specified region. Try again later.
403	NodeControllerUnavailable	The Node Controller is temporarily unavailable.	The error message returned because the node controller is unavailable.
403	OperationDenied	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the specified operation is valid.
403	InvalidParameter.ResourceOwnerAccount	ResourceOwnerAccount is Invalid.	The error message returned because the specified ResourceOwnerAccount parameter is invalid.
403	InvalidUserData.Forbidden	User not authorized to input the parameter "UserData", please apply for permission "UserData"	The error message returned because you are not authorized to manage user data. Apply for the permissions first.
403	Zone.NotOpen	The specified zone is not granted to you to buy resources yet.	The error message returned because you are not authorized to purchase resources in the specified zone.
403	Zone.NotOnSale	The specified zone is not available for purchase.	The error message returned because the requested resources are unavailable in the specified zone. Try other instance types, or select other regions or zones.
403	InvalidDedicatedHostType.ValueNotSupported	The specified DedicatedHostType does not exist or beyond the permitted range.	The error message returned because the specified DedicatedHostType parameter does not exist.
403	InvalidDedicatedHostType.ZoneNotSupported	The specified zone does not support this dedicatedHostType.	The error message returned because the specified dedicated host type is not supported in the specified zone.
403	InvalidParameter.NotMatch	%s	The error message returned because a specified parameter is invalid. Check whether the parameters conflict.
403	Account.Arrearage	Your account has been in arrears.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
404	OperationDenied	Another Host has been creating	The error message returned because another host is being created.

HTTP status code	Error code	Error message	Description
404	PaymentMethodNotFound	No payment method has been registered on the account.	The error message returned because you have not configured a payment method for your account.
404	InvalidDedicatedHostName.Malformed	The specified parameter DedicatedHostName is not valid.	The error message returned because the specified DedicatedHostName parameter is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	%s	The error message returned because an internal error has occurred. Try again later.

For a list of error codes, visit the API Error Center.

7.2. CreateDedicatedHostCluster

You can call this operation to create a dedicated host cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateDedicatedHostCluster	The operation that you want to perform. Set the value to CreateDedicatedHostCluster.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which to create the dedicated host cluster. You can call the DescribeRegions operation to query the most recent region list.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are authorized, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the `DryRunOperation` error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned and the request is made. Default value: false
Tag.N.Key	String	No	TestKey	The key of tag N of the dedicated host cluster. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 64 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.
Tag.N.Value	String	No	TestValue	The value of tag N of the dedicated host cluster. Valid values of N: 1 to 20. The tag value cannot be an empty string. It can be up to 64 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.

Parameter	Type	Required	Example	Description
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the dedicated host cluster.
ZoneId	String	No	cn-hangzhou-f	The ID of the zone in which to create the dedicated host cluster. You can call the DescribeZones operation to query the most recent zone list.
DedicatedHostClusterName	String	No	myDDHCluster	The name of the dedicated host cluster. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter. It cannot contain `http://` or `https://`. This parameter is empty by default.
Description	String	No	This-is-my-DDHCluster	The description of the dedicated host cluster. The description must be 2 to 256 characters in length. It cannot start with `http://` or `https://`. This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
DedicatedHostClusterId	String	dc-bp12wlf6bw0vz9v2****	The ID of the dedicated host cluster.
RequestId	String	E2A664A6-2933-4C64-88AE-5033D003EADF	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateDedicatedHostCluster
&RegionId=cn-hangzhou
&ZoneId=cn-hangzhou-f
&DedicatedHostClusterName=myDDHCluster
&Description=This-is-my-DDHCluster
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateDedicatedHostClusterResponse>
      <RequestId>214A2187-B06F-4E49-A081-4D053466A8C7</RequestId>
      <DedicatedHostClusterId>dc-bp12wlf6bw0vz9v2****</DedicatedHostClusterId>
</CreateDedicatedHostClusterResponse>
```

`JSON` format

```
{
    "RequestId": "214A2187-B06F-4E49-A081-4D053466A8C7",
    "DedicatedHostClusterId": "dc-bp12wlf6bw0vz9v2****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.

HTTP status code	Error code	Error message	Description
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.

For a list of error codes, visit the API Error Center.

7.3. DescribeDedicatedHostClusters

Queries the details of one or more dedicated host clusters.

Description

You can specify multiple request parameters to be queried. Specified parameters have logical AND relations. Only the specified parameters are included in the filter conditions. However, if `DedicatedHostClusterIds` is set to an empty JSON array (`[]`), it is regarded as a valid filter condition and an empty result is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDedicatedHostClusters	The operation that you want to perform. Set the value to DescribeDedicatedHostClusters.
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host cluster. You can call the DescribeRegions operation to query the most recent region list.
Tag.N.Key	String	No	TestKey	The key of tag N of the dedicated host cluster. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 64 characters in length and cannot start with `acs:` or `aliyun` . It cannot contain `http://` or `https://` . If a single tag is specified to query resources, up to 1,000 resources that have this tag added can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources that have all these tags added can be displayed in the response. To query more than 1,000 resources that have specified tags added, call the ListTagResources operation.
Tag.N.Value	String	No	TestValue	The value of tag N of the dedicated host cluster. Valid values of N: 1 to 20. The tag value cannot be an empty string. It can be up to 64 characters in length and cannot start with `acs:` or `aliyun` . It cannot contain `http://` or `https://` .
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the dedicated host cluster belongs. If this parameter is specified to query resources, up to 1,000 resources that belong to the specified resource group can be displayed in the response.
ZoneId	String	No	cn-hangzhou-f	The zone ID of the dedicated host cluster. You can call the DescribeZones operation to query the most recent zone list.

Parameter	Type	Required	Example	Description
DedicatedHostClusterIds	String	No	["dc-bp12wlf6am0vz9v2****", "dc-bp12wlf6am0vz9v3****"]	The IDs of dedicated host clusters. The value can be a JSON array that consists of up to 100 dedicated host cluster IDs in the format of `["dc-xxxxxxxxx", "dc-yyyyyyyyy", ... "dc-zzzzzzzzz"]`. Separate the IDs with commas (,).
DedicatedHostClusterName	String	No	myDDHCluster	The name of the dedicated host cluster.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	5	The number of entries to return on each page. Maximum value: 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
DedicatedHostClusters	Array of DedicatedHostCluster		Details about the dedicated host clusters.
DedicatedHostCluster			
DedicatedHostClusterCapacity	Struct		The capacity of the dedicated host cluster.
AvailableInstanceTypes	Array of AvailableInstanceType		The available capacity of the Elastic Compute Service (ECS) instance types in the dedicated host cluster.
AvailableInstanceType			
AvailableInstanceCapacity	Integer	0	The available capacity of the ECS instance type.
InstanceType	String	ecs.c6.26xlarge	The ECS instance type.
AvailableMemory	Integer	4	The size of available memory. Unit: GiB.
AvailableVcpus	Integer	2	The number of available vCPUs.
LocalStorageCapacities	Array of LocalStorageCapacity		The local storage capacity.
LocalStorageCapacity			
AvailableDisk	Integer	20	The available capacity of the local disk. Unit: GiB.

Parameter	Type	Example	Description
DataDiskCategory	String	cloud	The category of the data disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • ephemeral_ssd: local SSD • cloud_essd: enhanced SSD (ESSD)
TotalDisk	Integer	40	The total capacity of the local disk. Unit: GiB.
TotalMemory	Integer	8	The total memory size. Unit: GiB.
TotalVcpus	Integer	4	The total number of vCPUs.
DedicatedHostClusterId	String	dc-bp12wlf6am0vz9v2****	The ID of the dedicated host cluster.
DedicatedHostClusterName	String	myDDHCluster	The name of the dedicated host cluster.
DedicatedHostIds	List	["dh-bp181e5064b5sotr****","dh-bp18064b5sotrr9c****"]	The IDs of dedicated hosts in the dedicated host cluster.
Description	String	This-is-my-DDHCluster	The description of the dedicated host cluster.
RegionId	String	cn-hangzhou	The region ID of the dedicated host cluster.
ResourceGroupId	String	rg-bp67acfmxazb4p****	The ID of the resource group to which the dedicated host cluster belongs.
Tags	Array of Tag		The tags of the dedicated host cluster.
Tag			
TagKey	String	TestKey	The tag key of the dedicated host cluster.
TagValue	String	TestValue	The tag value of the dedicated host cluster.
ZoneId	String	cn-hangzhou-f	The zone ID of the dedicated host cluster.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	5	The number of entries returned per page.
RequestId	String	214A2187-B06F-4E49-A081-4D053466A8C7	The ID of the request.
TotalCount	Integer	1	The total number of dedicated host clusters.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDedicatedHostClusters
&RegionId=cn-hangzhou
&ZoneId=cn-hangzhou-f
&DedicatedHostClusterName=myDDHCluster
&PageNumber=1
&PageSize=5
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeDedicatedHostClustersResponse>
      <DedicatedHostClusters>
            <DedicatedHostCluster>
                  <Description>This-is-my-DDHCluster</Description>
                  <ZoneId>cn-hangzhou-f</ZoneId>
                  <DedicatedHostClusterName>myDDHCluster</DedicatedHostClusterName>
                  <ResourceGroupId>rg-bp67acfmxazb4p****</ResourceGroupId>
                  <DedicatedHostClusterCapacity>
                        <TotalMemory>0</TotalMemory>
                        <AvailableMemory>0</AvailableMemory>
                        <AvailableVcpus>0</AvailableVcpus>
                        <TotalVcpus>0</TotalVcpus>
                        <LocalStorageCapacities>
                  </LocalStorageCapacities>
                  </DedicatedHostClusterCapacity>
                  <RegionId>cn-hangzhou</RegionId>
                  <DedicatedHostIds>
            </DedicatedHostIds>
                  <DedicatedHostClusterId>dc-bp12wlf6am0vz9v2****</DedicatedHostClusterId>
                  <Tags>
                        <Tag>
                              <TagKey>TestKey</TagKey>
                              <TagValue>TestValue</TagValue>
                        </Tag>
                  </Tags>
            </DedicatedHostCluster>
      </DedicatedHostClusters>
      <TotalCount>1</TotalCount>
      <RequestId>214A2187-B06F-4E49-A081-4D053466A8C7</RequestId>
      <PageSize>5</PageSize>
      <PageNumber>1</PageNumber>
</DescribeDedicatedHostClustersResponse>
```

`JSON` format

```
{
  "DedicatedHostClusters": {
    "DedicatedHostCluster": [
      {
        "Description": "This-is-my-DDHCluster",
        "ZoneId": "cn-hangzhou-f",
        "DedicatedHostClusterName": "myDDHCluster",
        "ResourceGroupId": "rg-bp67acfmxazb4p****",
        "DedicatedHostClusterCapacity": {
          "TotalMemory": 0,
          "AvailableMemory": 0,
          "AvailableVcpus": 0,
          "TotalVcpus": 0,
          "LocalStorageCapacities": {
            "LocalStorageCapacity": []
          }
        },
        "RegionId": "cn-hangzhou",
        "DedicatedHostIds": {
          "DedicatedHostId": []
        },
        "DedicatedHostClusterId": "dc-bp12w1f6am0vz9v2****",
        "Tags": {
          "Tag": [
            {
              "TagKey": "TestKey",
              "TagValue": "TestValue"
            }
          ]
        }
      }
    ]
  },
  "TotalCount": 1,
  "RequestId": "214A2187-B06F-4E49-A081-4D053466A8C7",
  "PageSize": 5,
  "PageNumber": 1
}
```


Error codes

HTTP status code	Error code	Error message	Description
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.
400	InvalidRegion.NotFound	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.
400	InvalidZone.NotFound	The specified parameter ZoneId is not valid.	The error message returned because the specified ZoneId parameter is invalid.

For a list of error codes, visit the API Error Center.

7.4. ModifyDedicatedHostClusterAttribute

You can call this operation to modify some attributes of a dedicated host cluster, such as its name and description.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDedicatedHostClusterAttribute	The operation that you want to perform. Set the value to ModifyDedicatedHostClusterAttribute.

Parameter	Type	Required	Example	Description
DedicatedHostClusterId	String	Yes	dc-bp12wlf6am0vz9v2****	The ID of the dedicated host cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host cluster. You can call the DescribeRegions operation to query the most recent region list.
DedicatedHostClusterName	String	No	newClusterName	The name of the dedicated host cluster. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter. It cannot contain `http://` or `https://`.
Description	String	No	newClusterDescription	The description of the dedicated host cluster. The description must be 2 to 256 characters in length. It cannot start with `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
RequestId	String	11B55F58-D3A4-4A9B-9596-342420D02FF8	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyDedicatedHostClusterAttribute
&RegionId=cn-hangzhou
&DedicatedHostClusterId=dc-bp12wlf6am0vz9v2****
&DedicatedHostClusterName=newClusterName
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyDedicatedHostClusterAttributeResponse>
      <RequestId>11B55F58-D3A4-4A9B-9596-342420D02FF8</RequestId>
</ModifyDedicatedHostClusterAttributeResponse>
```

`JSON` format

```
{
    "RequestId": "11B55F58-D3A4-4A9B-9596-342420D02FF8"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
403	InvalidUser.Unauthorized	The user is not authorized	The error message returned because you are not authorized to perform this operation.

For a list of error codes, visit the API Error Center.

7.5. DeleteDedicatedHostCluster

You can call this operation to delete a dedicated host cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteDedicatedHostCluster	The operation that you want to perform. Set the value to DeleteDedicatedHostCluster.
DedicatedHostClusterId	String	Yes	dc-bp12wlf6am0vz9v2****	The ID of the dedicated host cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host cluster. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	11B55F58-D3A4-4A9B-9596-342420D02FF8	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteDedicatedHostCluster
&RegionId=cn-hangzhou
&DedicatedHostClusterId=dc-bp12wlf6am0vz9v2****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteDedicatedHostClusterResponse>
      <RequestId>11B55F58-D3A4-4A9B-9596-342420D02FF8</RequestId>
</DeleteDedicatedHostClusterResponse>
```

`JSON` format

```
{
 "RequestId": "11B55F58-D3A4-4A9B-9596-342420D02FF8"
}
```

Error codes

For a list of error codes, visit the API Error Center.

7.6. DescribeDedicatedHostTypes

Queries the details of dedicated host types supported in a region, or the Elastic Compute Service (ECS) instance families supported by a specific dedicated host type.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDedicatedHostTypes	The operation that you want to perform. Set the value to DescribeDedicatedHostTypes.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
DedicatedHostType	String	No	ddh.sn1ne	The dedicated host type. For more information, see Dedicated host types.
SupportedInstanceTypeFamily	String	No	ecs.sn1ne	The ECS instance family supported by the dedicated host type.

Response parameters

Parameter	Type	Example	Description
DedicatedHostTypes	Array of DedicatedHostType		Details about the dedicated host types.
DedicatedHostType			
Cores	Integer	2	The number of cores in a single physical CPU.
CpuOverCommitRatioRange	String	1-5	The supported CPU overcommit ratio range.
DedicatedHostType	String	ddh.sn1ne	The dedicated host type. You can submit a ticket to request more dedicated host types.
GPUSpec	String	gpu	The GPU model.
LocalStorageAmount	Integer	0	The number of local disks on a dedicated host.
LocalStorageCapacity	Long	0	The capacity of a local disk. Unit: GiB.
LocalStorageCategory	String	local	The category of the local disks.
MemorySize	Float	112.0	The memory size. Unit: GiB.
PhysicalGpus	Integer	2	The number of physical GPUs.
Sockets	Integer	2	The number of physical CPUs.
SupportCpuOverCommitRatio	Boolean	true	Indicates whether the CPU overcommit ratio settings are supported.
SupportedInstanceTypeFamilies	List	ecs.sn1ne	The ECS instance families supported by the dedicated host type.
SupportedInstanceTypesList	List	ecs.sn1ne.large	The ECS instance types supported by the dedicated host type.
TotalVcpus	Integer	56	The total number of vCPUs.
TotalVgpus	Integer	10	The total number of vGPUs.
RequestId	String	5FE5FF06-3A33-4658-8495-6445FC54E327	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDedicatedHostTypes
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeDedicatedHostTypesResponse>
      <RequestId>E7676157-C48A-445A-BFCB-6669EDE8DA3D</RequestId>
      <DedicatedHostTypes>
            <DedicatedHostType>
                  <PhysicalGpus>0</PhysicalGpus>
                  <MemorySize>180</MemorySize>
                  <LocalStorageCapacity>0</LocalStorageCapacity>
                  <DedicatedHostType>ddh.c6s</DedicatedHostType>
                  <LocalStorageAmount>0</LocalStorageAmount>
                  <Cores>52</Cores>
                  <LocalStorageCategory></LocalStorageCategory>
                  <Sockets>2</Sockets>
                  <GPUSpec></GPUSpec>
                  <SupportedInstanceTypeFamilies>
                        <SupportedInstanceTypeFamily>ecs.ddh6s.custom</SupportedInstanceTypeFamily>
                  </SupportedInstanceTypeFamilies>
                  <TotalVgpus>0</TotalVgpus>
                  <CpuOverCommitRatioRange>1-5</CpuOverCommitRatioRange>
                  <SupportedInstanceTypesList>
            </SupportedInstanceTypesList>
                  <SupportCpuOverCommitRatio>true</SupportCpuOverCommitRatio>
                  <TotalVcpus>520</TotalVcpus>
            </DedicatedHostType>
      </DedicatedHostTypes>
</DescribeDedicatedHostTypesResponse>
```

`JSON` format

```
{
 "RequestId": "E7676157-C48A-445A-BFCB-6669EDE8DA3D",
 "DedicatedHostTypes": {
  "DedicatedHostType": [
   {
    "PhysicalGpus": 0,
    "MemorySize": 180,
    "LocalStorageCapacity": 0,
    "DedicatedHostType": "ddh.c6s",
    "LocalStorageAmount": 0,
    "Cores": 52,
    "LocalStorageCategory": "",
    "Sockets": 2,
    "GPUSpec": "",
    "SupportedInstanceTypeFamilies": {
     "SupportedInstanceTypeFamily": [
      "ecs.ddh6s.custom"
     ]
    },
    "TotalVgpus": 0,
    "CpuOverCommitRatioRange": "1-5",
    "SupportedInstanceTypesList": {
     "SupportedInstanceTypesList": []
    },
    "SupportCpuOverCommitRatio": true,
    "TotalVcpus": 520
   }
  ]
 }
}
```

Error codes

For a list of error codes, visit the API Error Center.

7.7. DescribeDedicatedHosts

Queries the details of one or more dedicated hosts, including the physical performance specifications, machine codes, and service states of the dedicated hosts, and Elastic Compute Service (ECS) instances that are created on the dedicated hosts.

Description

You can use one of the following methods to query the details of one or more dedicated hosts:

- Specify the `DedicatedHostIds` parameter to query the details of specified dedicated hosts.
- Specify the `DedicatedHostClusterId` parameter to query the details of the dedicated hosts in a dedicated host cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDedicatedHosts	The operation that you want to perform. Set the value to **DescribeDedicatedHosts**.
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-hangzhou-g	The zone ID of the dedicated host. You can call the DescribeZones operation to query the most recent zone list.
DedicatedHostIds	String	No	["dh-bp165p6xk2tlw61e****", "dh-bp1f9vxmno7emy96****"]	The IDs of dedicated hosts. You can specify up to 100 dedicated host IDs in a single request. Separate the IDs with commas (,).
DedicatedHostName	String	No	MyDDHTestName	The name of the dedicated host.
Status	String	No	Available	The service state of the dedicated host. Valid values: • Available: The dedicated host is running normally. • UnderAssessment: The dedicated host is at risk, which may cause issues to ECS instances on the dedicated host. • PermanentFailure: A permanent failure exists and the dedicated host is unavailable. Default value: Available.
DedicatedHostType	String	No	ddh.g5	The type of the dedicated host.
LockReason	String	No	financial	The reason why the dedicated host is locked. Valid values: • financial: The dedicated host is locked due to overdue payments. • security: The dedicated host locked for security reasons.
PageNumber	Integer	No	1	The number of the page to return. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.

Parameter	Type	Required	Example	Description
ResourceGroupId	String	No	rg-aek3b6jzp66****	The ID of the resource group to which the dedicated host belongs.
DedicatedHostClusterId	String	No	dc-bp12wlf6am0vz9v2****	The ID of the dedicated host cluster.
Tag.N.Key	String	No	TestKey	The key of tag N of the dedicated host. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.
Tag.N.Value	String	No	TestValue	The value of tag N of the dedicated host. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	7654525A-9964-4ABB-8BCD-98F8835E809A	The ID of the request.
PageNumber	Integer	5	The page number of the returned page.
TotalCount	Integer	3	The total number of dedicated hosts.
DedicatedHosts	Array of DedicatedHost		Details about the dedicated hosts.
DedicatedHost			
CreationTime	String	2018-01-01T12:00Z	The time when the dedicated host was created. The time follows the ISO 8601 standard in the `yyyy-MM-ddTHH:mmZ` format. The time is displayed in UTC.
SchedulerOptions.ManagedPrivateSpaceId	String	mps-iq81z6pkbqjx61php46e	The ID of the managed private space to which the dedicated host belongs.
Status	String	Available	The service state of the dedicated host. Valid values: • Available: The dedicated host is running normally. • UnderAssessment: The dedicated host is at risk, which may cause issues to ECS instances on the dedicated host. • PermanentFailure: A permanent failure exists and the dedicated host is unavailable.
Cores	Integer	3	The number of physical cores in a single CPU.
AutoPlacement	String	on	Indicates whether the dedicated host was added to the resource pool for automatic deployment. Valid values: • on: The dedicated host was added to the resource pool for automatic deployment. • off: The dedicated host was not added to the resource pool for automatic deployment. For more information about automatic deployment, see Automatic deployment.

Parameter	Type	Example	Description
GPUSpec	String	gpu	The GPU model.
AutoReleaseTime	String	2017-01-01T12:00Z	The automatic release time of the dedicated host. The time follows the ISO 8601 standard in the `yyyy-MM-ddTHH:mmZ` format. The time is displayed in UTC.
ChargeType	String	Prepaid	The billing method of the dedicated host.
CpuOverCommitRatio	Float	1	The CPU overcommit ratio.
ActionOnMaintenance	String	Migrate	The policy used to migrate the instances deployed on the dedicated host when the dedicated host fails. Valid values: • Migrate: The instances are migrated to another physical server. Instances that are not in the Stopped state when the dedicated host fails are restarted. • Stop: The instances are stopped. If the dedicated host cannot be repaired, the instances are migrated to another physical server and restarted. If the dedicated host has cloud disks attached, the default value is Migrate. If the dedicated host has local disks attached, the default value is Stop.
SaleCycle	String	Month	The unit of the subscription period. Valid values: • Month • Year
PhysicalGpus	Integer	10	The number of physical GPUs.
RegionId	String	cn-hangzhou	The region ID of the dedicated host.
DedicatedHostName	String	MyDDHTestName	The name of the dedicated host.
Description	String	this-is-my-DDH	The description of the dedicated host.
DedicatedHostClusterId	String	dc-bp12wlf6am0vz9v2****	The ID of the dedicated host cluster to which the dedicated host belongs.
ExpiredTime	String	2019-01-01T12:00Z	The expiration time of the subscription dedicated host. The time follows the ISO 8601 standard in the `yyyy-MM-ddTHH:mmZ` format. The time is displayed in UTC.
DedicatedHostType	String	ddh.g5	The type of the dedicated host.
ResourceGroupId	String	rg-aek3b6jzp66****	The ID of the resource group to which the dedicated host belongs.
ZoneId	String	cn-hangzhou-g	The zone ID of the dedicated host.
DedicatedHostId	String	dh-bp165p6xk2tlw61e****	The ID of the dedicated host.
Sockets	Integer	5	The number of physical CPUs.
MachineId	String	12aaa123456ff19dec12345d3026e****	The machine code of the dedicated host.

Parameter	Type	Example	Description
Instances	Array of Instance		Details about the ECS instances that were created on the dedicated host.
Instance			
InstanceType	String	ecs.g5.large	The instance type of the ECS instance created on the dedicated host.
InstanceId	String	i-bp14ot0ykf8w13a1****	The ID of the ECS instance created on the dedicated host.
OperationLocks	Array of OperationLock		The reasons why the resources of the dedicated host were locked.
OperationLock			
LockReason	String	financial	The reason why the dedicated host was locked. Valid values: • financial: The dedicated host was locked due to overdue payments. • security: The dedicated host was locked for security reasons.
Tags	Array of Tag		The tags of the dedicated host.
Tag			
TagValue	String	TestValue	The tag value of the dedicated host.
TagKey	String	TestKey	The tag key of the dedicated host.
SupportedInstanceTypeFamilies	Array of String	ecs.g5	The ECS instance families supported by the dedicated host.
SupportedCustomInstanceTypeFamilies	Array of String	ecs.ddh6s.custom	The custom ECS instance families supported by the dedicated host.
SupportedInstanceTypesList	Array of String	ecs.g5.large	The ECS instance types supported by the dedicated host.
Capacity	Object		The performance specifications of the dedicated host.
AvailableMemory	Float	25	The amount of available memory space. Unit: GiB.
LocalStorageCategory	String	i2	The category of the local disks.
TotalMemory	Float	1024	The total capacity of the memory. Unit: GiB.
TotalLocalStorage	Integer	512	The total capacity of the local disks. Unit: GiB.
TotalVcpus	Integer	56	The total number of vCPUs.
TotalVgpus	Integer	10	The total number of vGPUs.
AvailableLocalStorage	Integer	65	The amount of available space on the local disks. Unit: GiB.
AvailableVcpus	Integer	5	The number of available vCPUs.

Parameter	Type	Example	Description
AvailableVgpus	Integer	2	The number of available vGPUs.
NetworkAttributes	Object		The network attributes of the dedicated host.
UdpTimeout	Integer	60	The timeout period of the UDP session that was established between a user and an Alibaba Cloud service on the dedicated host.
SlbUdpTimeout	Integer	60	The timeout period of the UDP session that was established between Server Load Balancer (SLB) and the dedicated host.
HostDetailInfo	Object		This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
SerialNumber	String	null	This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=DescribeDedicatedHosts
&RegionId=cn-hangzhou
&ZoneId=cn-hangzhou-g
&DedicatedHostIds=["dh-bp165p6xk2tlw61e****", "dh-bp1f9vxmno7emy96****"]
&DedicatedHostName=MyDDHTestName
&Status=Available
&DedicatedHostType=ddh.g5
&LockReason=financial
&PageNumber=1
&PageSize=10
&ResourceGroupId=rg-aek3b6jzp66****
&Tag=[{"Key":"TestKey","Value":"TestValue"}]
&DedicatedHostClusterId=dc-bp12wlf6am0vz9v2****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeDedicatedHostsResponse>
    <PageSize>1</PageSize>
    <RequestId>7654525A-9964-4ABB-8BCD-98F8835E809A</RequestId>
    <PageNumber>5</PageNumber>
    <TotalCount>3</TotalCount>
    <DedicatedHosts>
        <CreationTime>2018-01-01T12:00Z</CreationTime>
        <SchedulerOptions.ManagedPrivateSpaceId>mps-iq81z6pkbqjx61php46e</SchedulerOptions.ManagedPrivateSpaceId>
        <Status>Available</Status>
        <Cores>3</Cores>
        <AutoPlacement>on</AutoPlacement>
        <GPUSpec>gpu</GPUSpec>
        <AutoReleaseTime>2017-01-01T12:00Z</AutoReleaseTime>
        <ChargeType>Prepaid</ChargeType>
        <CpuOverCommitRatio>1</CpuOverCommitRatio>
        <ActionOnMaintenance>Migrate</ActionOnMaintenance>
        <SaleCycle>Month</SaleCycle>
        <PhysicalGpus>10</PhysicalGpus>
        <RegionId>cn-hangzhou</RegionId>
        <DedicatedHostName>MyDDHTestName</DedicatedHostName>
        <Description>this-is-my-DDH</Description>
        <DedicatedHostClusterId>dc-bp12wlf6am0vz9v2****</DedicatedHostClusterId>
        <ExpiredTime>2019-01-01T12:00Z</ExpiredTime>
        <DedicatedHostType>ddh.g5</DedicatedHostType>
        <ResourceGroupId>rg-aek3b6jzp66****</ResourceGroupId>
        <ZoneId>cn-hangzhou-g</ZoneId>
        <DedicatedHostId>dh-bp165p6xk2tlw61e****</DedicatedHostId>
        <Sockets>5</Sockets>
        <MachineId>12aaa123456ff19dec12345d3026e****</MachineId>
        <Instances>
            <InstanceType>ecs.g5.large</InstanceType>
            <InstanceId>i-bp14ot0ykf8w13a1****</InstanceId>
        </Instances>
        <OperationLocks>
            <LockReason>financial</LockReason>
        </OperationLocks>
        <Tags>
            <TagValue>TestValue</TagValue>
            <TagKey>TestKey</TagKey>
        </Tags>
        <SupportedInstanceTypeFamilies>ecs.g5</SupportedInstanceTypeFamilies>
        <SupportedCustomInstanceTypeFamilies>ecs.ddh6s.custom</SupportedCustomInstanceTypeFamilies>
        <SupportedInstanceTypesList>ecs.g5.large</SupportedInstanceTypesList>
        <Capacity>
            <AvailableMemory>25</AvailableMemory>
            <LocalStorageCategory>i2</LocalStorageCategory>
            <TotalMemory>1024</TotalMemory>
            <TotalLocalStorage>512</TotalLocalStorage>
            <TotalVcpus>56</TotalVcpus>
            <TotalVgpus>10</TotalVgpus>
            <AvailableLocalStorage>65</AvailableLocalStorage>
            <AvailableVcpus>5</AvailableVcpus>
            <AvailableVgpus>2</AvailableVgpus>
        </Capacity>
        <NetworkAttributes>
            <UdpTimeout>60</UdpTimeout>
            <SlbUdpTimeout>60</SlbUdpTimeout>
        </NetworkAttributes>
        <HostDetailInfo>
            <SerialNumber>null</SerialNumber>
        </HostDetailInfo>
    </DedicatedHosts>
</DescribeDedicatedHostsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "PageSize" : 1,
  "RequestId" : "7654525A-9964-4ABB-8BCD-98F8835E809A",
  "PageNumber" : 5,
  "TotalCount" : 3,
  "DedicatedHosts" : [ {
    "CreationTime" : "2018-01-01T12:00Z",
    "SchedulerOptions.ManagedPrivateSpaceId" : "mps-iq81z6pkbqjx61php46e",
    "Status" : "Available",
    "Cores" : 3,
    "AutoPlacement" : "on",
    "GPUSpec" : "gpu",
    "AutoReleaseTime" : "2017-01-01T12:00Z",
    "ChargeType" : "Prepaid",
    "CpuOverCommitRatio" : 1,
    "ActionOnMaintenance" : "Migrate",
    "SaleCycle" : "Month",
    "PhysicalGpus" : 10,
    "RegionId" : "cn-hangzhou",
    "DedicatedHostName" : "MyDDHTestName",
    "Description" : "this-is-my-DDH",
    "DedicatedHostClusterId" : "dc-bp12wlf6am0vz9v2****",
    "ExpiredTime" : "2019-01-01T12:00Z",
    "DedicatedHostType" : "ddh.g5",
    "ResourceGroupId" : "rg-aek3b6jzp66****",
    "ZoneId" : "cn-hangzhou-g",
    "DedicatedHostId" : "dh-bp165p6xk2tlw61e****",
    "Sockets" : 5,
    "MachineId" : "12aaa123456ff19dec12345d3026e****",
    "Instances" : [ {
      "InstanceType" : "ecs.g5.large",
      "InstanceId" : "i-bp14ot0ykf8w13a1****"
    } ],
    "OperationLocks" : [ {
      "LockReason" : "financial"
    } ],
    "Tags" : [ {
      "TagValue" : "TestValue",
      "TagKey" : "TestKey"
    } ],
    "SupportedInstanceTypeFamilies" : [ "ecs.g5" ],
    "SupportedCustomInstanceTypeFamilies" : [ "ecs.ddh6s.custom" ],
    "SupportedInstanceTypesList" : [ "ecs.g5.large" ],
    "Capacity" : {
      "AvailableMemory" : 25,
      "LocalStorageCategory" : "i2",
      "TotalMemory" : 1024,
      "TotalLocalStorage" : 512,
      "TotalVcpus" : 56,
      "TotalVgpus" : 10,
      "AvailableLocalStorage" : 65,
      "AvailableVcpus" : 5,
      "AvailableVgpus" : 2
    },
    "NetworkAttributes" : {
      "UdpTimeout" : 60,
      "SlbUdpTimeout" : 60
    },
    "HostDetailInfo" : {
      "SerialNumber" : "null"
    }
  } ]
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	InvalidStatus.ValueNotSupported	The pecified dedicated host status is not supported.	The error message returned because the operation is not supported while the dedicated host is in the current state.
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.
400	InvalidParameter.DedicatedHostIds	The specified parameter dedicatedHostIds is not valid.	The error message returned because the specified DedicatedHostIds parameter is invalid.
400	InvalidRegion.NotFound	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.
400	InvalidZone.NotFound	The specified parameter ZoneId is not valid.	The error message returned because the specified ZoneId parameter is invalid.
403	InvalidDedicatedHostIds.Malformed	The amount of specified dedicatedHostIds exceeds the limit.	The error message returned because more than 100 dedicated host IDs are specified in the DedicatedHostIds value.
404	InvalidLockReason.NotFound	The specified LockReason is not found	The error message returned because the specified LockReason parameter does not exist.

For a list of error codes, visit the API Error Center.

7.8. DescribeDedicatedHostAutoRenew

Queries the auto-renewal states of one or more subscription dedicated hosts.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDedicatedHostAutoRenew	The operation that you want to perform. Set the value to **DescribeDedicatedHostAutoRenew**.
DedicatedHostIds	String	Yes	dh-bp165p6xk2tlw61e****,dh-bp1f9vxmno****	The IDs of the dedicated hosts. You can specify up to 100 subscription dedicated host IDs. Separate multiple IDs with commas (,).
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host.

Response parameters

Parameter	Type	Example	Description
RequestId	String	04F0F334-1335-436C-A1D7-6C044FE73368	The ID of the request.
DedicatedHostRenewAttributes	Array of DedicatedHostRenewAttribute		Details about the auto-renewal attributes of the dedicated hosts.
DedicatedHostRenewAttribute			
PeriodUnit	String	Month	The unit of the auto-renewal period. Valid values: • Week • Month

Parameter	Type	Example	Description
Duration	Integer	0	The auto-renewal period.
DedicatedHostId	String	dh-bp165p6xk2tlw61e****	The ID of the dedicated host.
RenewalStatus	String	Normal	Indicates whether the subscription dedicated host is automatically renewed. Valid values: • AutoRenewal: The dedicated host is automatically renewed. • Normal: The dedicated host is not automatically renewed, and you will receive notifications for renewal. • NotRenewal: The dedicated host is not renewed, and no expiration notification is sent. Notifications for renewal are automatically sent three days before the dedicated host expires. You can change the value of this parameter from NotRenewal to Normal for the dedicated host and manually renew it by calling the RenewDedicatedHosts operation. Alternatively, you can set this parameter to AutoRenewal to configure the dedicated host to be automatically renewed.
AutoRenewEnabled	Boolean	false	Indicates whether the subscription dedicated host is automatically renewed. Valid values: • true: The dedicated host is automatically renewed. • false: The dedicated host is not automatically renewed.
AutoRenewWithEcs	String	StopRenewWithEcs	Indicates whether the subscription dedicated host is automatically renewed along with the subscription Elastic Compute Service (ECS) instances hosted on it if the new expiration time of the renewed instances is later than the expiration time of the dedicated host. Valid values: • AutoRenewWithEcs: The subscription dedicated host is automatically renewed along with the subscription ECS instances hosted on it. • StopRenewWithEcs: The subscription dedicated host is not automatically renewed along with the subscription ECS instances hosted on it.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDedicatedHostAutoRenew
&RegionId=cn-hangzhou
&DedicatedHostIds=dh-bp165p6xk2tlw61e****,dh-bp1f9vxmno****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeDedicatedHostAutoRenewResponse>
    <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
    <DedicatedHostRenewAttributes>
        <DedicatedHostRenewAttribute>
            <AutoRenewEnabled>false</AutoRenewEnabled>
            <DedicatedHostId>dh-bp165p6xk2tlw61e****</DedicatedHostId>
            <RenewalStatus>Normal</RenewalStatus>
            <AutoRenewWithEcs>StopRenewWithEcs</AutoRenewWithEcs>
            <Duration>0</Duration>
            <PeriodUnit>Month</PeriodUnit>
        </DedicatedHostRenewAttribute>
        <DedicatedHostRenewAttribute>
            <AutoRenewEnabled>true</AutoRenewEnabled>
            <DedicatedHostId>dh-bp1f9vxmno****</DedicatedHostId>
            <RenewalStatus>AutoRenewal</RenewalStatus>
            <AutoRenewWithEcs>StopRenewWithEcs</AutoRenewWithEcs>
            <Duration>1</Duration>
            <PeriodUnit>Month</PeriodUnit>
        </DedicatedHostRenewAttribute>
    </DedicatedHostRenewAttributes>
</DescribeDedicatedHostAutoRenewResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "04F0F334-1335-436C-A1D7-6C044FE73368",
  "DedicatedHostRenewAttributes" : {
    "DedicatedHostRenewAttribute" : [ {
      "AutoRenewEnabled" : false,
      "DedicatedHostId" : "dh-bp165p6xk2tlw61e****",
      "RenewalStatus" : "Normal",
      "AutoRenewWithEcs" : "StopRenewWithEcs",
      "Duration" : 0,
      "PeriodUnit" : "Month"
    }, {
      "AutoRenewEnabled" : true,
      "DedicatedHostId" : "dh-bp1f9vxmno****",
      "RenewalStatus" : "AutoRenewal",
      "AutoRenewWithEcs" : "StopRenewWithEcs",
      "Duration" : 1,
      "PeriodUnit" : "Month"
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	MissingParameter.DedicatedHostId	DedicatedHostId should not be null.	The error message returned because the DedicatedHostIds parameter is not specified.
403	InvalidParameter.ToManyDedicatedHostIds	DedicatedHostId should be less than 100.	The error message returned because more than 100 dedicated host IDs are specified in the DedicatedHostIds parameter.
403	InvalidParameter.InvalidDedicatedHostId	%s	The error message returned because the specified DedicatedHostIds parameter is invalid.
403	IncorrectDedicatedHostStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the dedicated host is in the current state.
403	ChargeTypeViolation	Pay-As-You-Go dedicated host do not support this operation.	The error message returned because pay-as-you-go dedicated hosts do not support this operation.

For a list of error codes, visit the API Error Center.

7.9. ModifyDedicatedHostAttribute

You can call this operation to modify some properties of a dedicated host, such as the name, description, and instance migration policy that is applied when the dedicated host fails.

Description

- All the ECS instances that are hosted on a dedicated host must be in the Stopped (`Stopped`) state before you can modify the CPU overcommit ratio of the dedicated host.
- Modifications to the CPU overcommit ratio of a dedicated host does not affect the running status of the dedicated host. After the CPU overcommit ratio is modified, the number of allocated vCPUs on the dedicated host cannot not exceed the new total number of vCPUs. Otherwise, ECS instances that use the excess vCPUs cannot be started.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDedicatedHostAttribute	The operation that you want to perform. Set the value to ModifyDedicatedHostAttribute.
DedicatedHostId	String	Yes	dh-bp165p6xk2tlw61e****	The ID of the dedicated host.
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.
DedicatedHostName	String	No	testDedicatedHostName	The name of the dedicated host. The name must be 2 to 128 characters in length and cannot start with http:// or https. It can contain letters, numbers, colons (:), underscores (_), and hyphens (-).
Description	String	No	testDescription	The description of the dedicated host. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
ActionOnMaintenance	String	No	Migrate	The policy used to migrate the instances deployed on the dedicated host when the dedicated host fails or needs to be repaired online. Valid values: • Migrate: Instances are migrated to another physical server and restarted. • Stop: Instances on the dedicated host are stopped. If the dedicated host cannot be repaired, the instances are migrated to another physical server and restarted. If the dedicated host is attached with cloud disks, the default value is Migrate. If the dedicated host is attached with local disks, the default value is Stop.
NetworkAttributes.SlbUdpTimeout	Integer	No	60	The timeout period for a UDP session between Server Load Balancer (SLB) and the dedicated host. Unit: seconds. Valid values: 15 to 310.
NetworkAttributes.UdpTimeout	Integer	No	60	The timeout period for a UDP session between a user and an Alibaba Cloud service on the dedicated host. Unit: seconds. Valid values: 15 to 310.

Parameter	Type	Required	Example	Description
AutoPlacement	String	No	on	Specifies whether to add the dedicated host to the resource pool for automatic deployment. If you do not specify the **DedicatedHostId** parameter when you create an instance on a dedicated host, Alibaba Cloud automatically selects a dedicated host from the resource pool to host the instance. Valid values: • on: adds the dedicated host to the resource pool for automatic deployment. • off: does not add the dedicated host to the resource pool for automatic deployment. For information about automatic deployment, see Features.
DedicatedHostClusterId	String	No	dc-bp165p6xk2tlw61e****	The ID of the dedicated host cluster to which the dedicated host belongs.
CpuOverCommitRatio	Float	No	1	The CPU overcommit ratio. You can configure CPU overcommit ratios only for the following dedicated host types: g6s, c6s, and r6s. Valid values: 1 to 5. The CPU overcommit ratio affects the number of available vCPUs on a dedicated host. You can use the following formula to calculate the number of available vCPUs on a dedicated host: Number of available vCPUs = Number of physical CPU cores × 2 × CPU overcommit ratio. For example, the number of physical CPU cores on each g6s dedicated host is 52. If you change the CPU overcommit ratio of a g6s dedicated host to 4, the number of available vCPUs on the dedicated host is 416. For scenarios that have minimal requirements for CPU stability or where CPU load is not heavy, such as development and test environments, you can increase the number of available vCPUs on a dedicated host by increasing the CPU overcommit ratio. This way, you can deploy more ECS instances of the same specifications on the dedicated host and reduce the unit deployment cost.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2A4EA075-CB5B-41B7-B0EB-70D339F64DE7	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/? Action=ModifyDedicatedHostAttribute
&DedicatedHostId=dh-bp165p6xk2tlw61e****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyDedicatedHostAttributeResponse>
    <RequestId>2A4EA075-CB5B-41B7-B0EB-70D339F64DE7</RequestId>
</ModifyDedicatedHostAttributeResponse>
```

`JSON` format

```
{
    "RequestId":"2A4EA075-CB5B-41B7-B0EB-70D339F64DE7"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.
400	InvalidDedicatedHostName.Malformed	The specified parameter DedicatedHostName is not valid.	The error message returned because the specified DedicatedHostName parameter is invalid.
400	InvalidDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
403	InvalidUser.Unauthorized	The user is not authorized	The error message returned because you are not authorized to perform this operation.
400	InvalidParameter.SlbUdpTimeout	The specified value is invalid.	The error message returned because the specified NetworkAttributes.SlbUdpTimeout parameter is invalid.
400	InvalidParameter.UdpTimeout	The specified value is invalid.	The error message returned because the specified NetworkAttributes.UdpTimeout parameter is invalid.

For a list of error codes, visit the API Error Center.

7.10. ModifyDedicatedHostAutoRenewAttribute

Enables or disables auto-renewal for one or more subscription dedicated hosts.

Description

- If you enable auto-renewal for your subscription dedicated host, the dedicated host is automatically renewed nine days before expiration. The renewal fees are automatically paid at 08:00:00 (UTC+8). If the fees are not paid, they are paid at the same point in time the next day. Automatic payment stops after the fees are paid or after the dedicated host expires and is locked. Make sure that you have sufficient balance within your account.
- Subscription dedicated hosts can be automatically renewed along with the subscription Elastic Compute Service (ECS) instances hosted on the dedicated hosts. For more information, see the description of the AutoRenewWithEcs parameter.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDedicatedHostAutoRenewAttribute	The operation that you want to perform. Set the value to **ModifyDedicatedHostAutoRenewAttribute**.
DedicatedHostIds	String	Yes	dh-bp165p6xk2tlw61e****	The IDs of the dedicated hosts. You can specify up to 100 subscription dedicated host IDs. Separate multiple IDs with commas (,).
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host.
Duration	Integer	No	1	The renewal duration of the dedicated host. Valid values: • When the PeriodUnit parameter is set to Week, the valid values of the Duration parameter are 1, 2, and 3. • When the PeriodUnit parameter is set to Month, the valid values of the Duration parameter are 1, 2, 3, 6, and 12.

Parameter	Type	Required	Example	Description
PeriodUnit	String	No	Month	The unit of the renewal duration. Valid values: • Week • Month Default value: Month.
AutoRenew	Boolean	No	false	Specifies whether to automatically renew the subscription dedicated host. Valid values: • true: automatically renews the subscription dedicated host. • false: does not automatically renew the subscription dedicated host. Default value: false.
RenewalStatus	String	No	Normal	Specifies whether to automatically renew the subscription dedicated host. The `RenewalStatus` parameter takes precedence over the `AutoRenew` parameter. Valid values: • AutoRenewal: automatically renews the subscription dedicated host. • Normal: does not automatically renew the subscription dedicated host, but notifications for renewal are sent. • NotRenewal: does not automatically renew the subscription dedicated host, and no expiration notification is sent. Notifications for renewal are automatically sent three days before the expiration time of the subscription dedicated host. You can change the value of this parameter from NotRenewal to Normal for the dedicated host and manually renew it by calling the RenewDedicatedHosts operation. Alternatively, you can renew it by setting this parameter to AutoRenewal.

Parameter	Type	Required	Example	Description
AutoRenewWithEcs	String	No	StopRenewWithEcs	Specifies whether to automatically renew the subscription dedicated host along with the subscription ECS instances hosted on it. If auto-renewal is enabled for the subscription ECS instances hosted on your subscription dedicated host, you can specify this parameter to automatically renew the dedicated host along with the subscription ECS instances. When the subscription ECS instances hosted on your dedicated host are automatically renewed, the dedicated host is also automatically renewed if the expiration time of the dedicated host is earlier than the expiration time of the renewed instances. When the dedicated host is configured to be automatically renewed along with the subscription ECS instances hosted on it, the dedicated host determines the expiration time of the renewed instances, and selects a minimum value from the valid values of the Duration parameter so that the dedicated host is renewed by a duration that expires later than the expiration time of the renewed instances. For more information about supported renewal durations, see the descriptions of the `PeriodUnit` and `Duration` parameters. For example, assume that you have a subscription dedicated host that expires on January 15 of the current year. Subscription ECS instances hosted on the dedicated host have the auto-renewal feature enabled, and are automatically renewed to November 15 of the same year. The expiration time of the dedicated host is earlier than the expiration time of the ECS instances by 10 months. In this case, the dedicated host selects a renewal duration of 12 months, which is the minimum value of the `Duration` parameter (`PeriodUnit=Month`) that allows the dedicated host to expire later than the ECS instances. Valid values: • AutoRenewWithEcs: automatically renews the subscription dedicated host along with the subscription ECS instances hosted on it. • StopRenewWithEcs: does not automatically renew the subscription dedicated host along with the subscription ECS instances hosted on it. • NoOperation: does not change the current settings for the dedicated host. **Note** If you set this parameter to AutoRenewWithEcs, make sure that `AutoRenew` is set to true to enable auto-renewal for the dedicated host. Otherwise, only the parameter value is changed. The dedicated host is not automatically renewed along with the subscription ECS instances hosted on it. Default value: NoOperation.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2A4EA075-CB5B-41B7-B0EB-70D339F64DE7	The ID of the request.

Samples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyDedicatedHostAutoRenewAttribute
&DedicatedHostIds=dh-bp165p6xk2tlw61e****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyDedicatedHostAutoRenewAttributeResponse>
  <RequestId>2A4EA075-CB5B-41B7-B0EB-70D339F64DE7</RequestId>
</ModifyDedicatedHostAutoRenewAttributeResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "2A4EA075-CB5B-41B7-B0EB-70D339F64DE7"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	MissingParameter.DedicatedHostId	DedicatedHostId should not be null.	The error message returned because the DedicatedHostIds parameter is not specified.
403	InvalidParameter.ToManyDedicatedHostIds	DedicatedHostId should be less than 100.	The error message returned because more than 100 dedicated host IDs are specified in the DedicatedHostIds parameter.
403	InvalidParameter.InvalidDedicatedHostId	%s	The error message returned because the specified DedicatedHostIds parameter is invalid.
403	IncorrectHostStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the dedicated host is in the current state.
403	ChargeTypeViolation	Pay-As-You-Go dedicated host do not support this operation.	The error message returned because pay-as-you-go dedicated hosts do not support this operation.
403	InvalidParameter.Duration	%s	The error message returned because the specified Duration parameter is invalid.
403	InvalidParameter.RenewalStatus	%s	The error message returned because the specified RenewalStatus parameter is invalid.
403	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.

For a list of error codes, visit the API Error Center.

7.11. ModifyDedicatedHostAutoReleaseTime

You can call this operation to set the automatic release time for a pay-as-you-go dedicated host or cancel the automatic release of a pay-as-you-go dedicated host.

Description

When the specified time for automatic release is reached, the pay-as-you-go dedicated host is automatically released. Make sure that you no longer use the host and have backed up all necessary application data.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDedicatedHostAutoReleaseTime	The operation that you want to perform. Set the value to ModifyDedicatedHostAutoReleaseTime.
DedicatedHostId	String	Yes	dh-bp165p6xk2tlw61e****	The ID of the dedicated host that you want to automatically release.
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.
AutoReleaseTime	String	No	2019-06-04T13:35:00Z	The automatic release time of the dedicated host. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC+0. • The scheduled release time must be at least 30 minutes from the current time. • The scheduled release time must be at most 3 years from the current time. • If the value of the seconds (ss) is not 00, it is automatically set to 00. • If you do not specify the `AutoReleaseTime` parameter, the automatic release is disabled. The dedicated host will not be released when the scheduled time is reached.

Response parameters

Parameter	Type	Example	Description
RequestId	String	04F0F334-1335-436C-A1D7-6C044FE73368	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/? Action=ModifyDedicatedHostAutoReleaseTime
&DedicatedHostId=dh-bp165p6xk2tlw61e****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyDedicatedHostAutoReleaseTimeResponse>
        <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyDedicatedHostAutoReleaseTimeResponse>
```

`JSON` format

```
{
    "RequestId":"04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	MissingParameter	DedicatedHostId should not be null.	The error message returned because the DedicatedHostId parameter is not specified.
400	InvalidAutoReleaseTime.Malformed	The specified paramter autoReleaseTime is not valid.	The error message returned because the specified AutoReleaseTime parameter is invalid. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	UnsupportedParameter	The parameters is unsupported.	The error message returned because a specified parameter is invalid.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the dedicated host.	The error message returned because the billing method of the dedicated host does not support the operation.
404	NoSuchResource	The specified resource is not found.	The error message returned because the specified resource does not exist.

For a list of error codes, visit the API Error Center.

7.12. ModifyDedicatedHostsChargeType

Changes the billing method of dedicated hosts.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDedicatedHostsChargeType	The operation that you want to perform. Set the value to **ModifyDedicatedHostsChargeType**.
DedicatedHostIds	String	Yes	["dh-bp181e5064b5sotr****","dh-bp18064b5sotrr9c****"]	The IDs of dedicated hosts. The value can be a JSON array that consists of up to 20 dedicated host IDs. Separate the dedicated host IDs with commas (,).
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.
Period	Integer	No	1	The renewal duration of the subscription dedicated host. Valid values: • When `PeriodUnit` is set to Week, valid values of `Period` are 1, 2, 3, and 4. • When `PeriodUnit` is set to Month, valid values of `Period` are 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, 36, 48, and 60.
PeriodUnit	String	No	Month	The unit of the renewal duration (`Period`). Valid values: • Week • Month Default value: Month.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are granted required permissions, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the `DryRunOperation` error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned, and the request is made. Default value: false.
AutoPay	Boolean	No	false	Specifies whether to enable automatic payment. Valid values: • true: enables automatic payment. Make sure that your account balance is sufficient. Otherwise, your order becomes invalid and must be canceled. • false: An order is generated but no payment is made. Default value: true. **Note** If your account balance is insufficient, you can set the `AutoPay` parameter to `false` to generate an unpaid order. Then, you can pay for the order.
DedicatedHostChargeType	String	No	PrePaid	The new billing method for the dedicated host. Valid values: • PrePaid: changes the billing method from pay-as-you-go to subscription. • PostPaid: changes the billing method from subscription to pay-as-you-go. Default value: PrePaid.
ClientToken	String	No	e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The `ClientToken` value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
DetailFee	Boolean	No	false	Specifies whether to return the billing details of the order when the billing method is changed from subscription to pay-as-you-go. Default value: false.

Response parameters

Parameter	Type	Example	Description
OrderId	String	20413515388****	The ID of the order.
RequestId	String	B61C08E5-403A-46A2-96C1-F7B1216DB10C	The ID of the request.
FeeOfInstances	Array of FeeOfInstance		Details about the charges for the order.

Parameter	Type	Example	Description
FeeOfInstance			
InstanceId	String	dh-bp181e5064b5sotrr****	The ID of the dedicated host.
Currency	String	CNY	The unit of currency for the bill. Alibaba Cloud China site (aliyun.com): CNY. Alibaba Cloud International site (alibabacloud.com): USD.
Fee	String	0	The cost value.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyDedicatedHostsChargeType
&RegionId=cn-hangzhou
&InstanceIds=["dh-bp181e5064b5sotr****","dh-bpe5064b5sotrr9c****"]
&Period=1
&PeriodUnit=Month
&AutoPay=false
&IncludeAllDisks=true
&ClientToken=e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyDedicatedHostsChargeTypeResponse>
    <RequestId>B61C08E5-403A-46A2-96C1-F7B1216DB10C</RequestId>
    <OrderId>20413515388****</OrderId>
    <FeeOfInstances>
        <FeeOfInstance>
            <Fee>0</Fee>
            <InstanceId>dh-bp181e5064b5sotr****</InstanceId>
            <Currency>CNY</Currency>
        </FeeOfInstance>
        <FeeOfInstance>
            <Fee>0</Fee>
            <InstanceId>dh-bp181e5064b5sotr****</InstanceId>
            <Currency>CNY</Currency>
        </FeeOfInstance>
    </FeeOfInstances>
</ModifyDedicatedHostsChargeTypeResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "B61C08E5-403A-46A2-96C1-F7B1216DB10C",
  "OrderId" : "20413515388****",
  "FeeOfInstances" : {
    "FeeOfInstance" : [ {
      "Fee" : "0",
      "InstanceId" : "dh-bp181e5064b5sotr****",
      "Currency" : "CNY"
    }, {
      "Fee" : "0",
      "InstanceId" : "dh-bp181e5064b5sotr****",
      "Currency" : "CNY"
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidParameter.InstanceIds	The specified InstanceIds are invalid.	The error message returned because the specified InstanceIds parameter is invalid.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidStatus.ValueNotSupported	%s	The error message returned because the operation is not supported while the resource is in the current state.
400	InvalidInstanceChargeType.ValueNotSupported	%s	The error message returned because the specified DedicatedHostChargeType parameter is invalid.
400	ExpiredInstance	The specified instance has expired.	The error message returned because the specified instance has expired.
400	InstancesIdQuotaExceed	The maximum number of Instances is exceeded.	The error message returned because the maximum number of instances has been reached.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
400	ReleaseTimeHaveBeenSet	The specified instance has been set released time.	The error message returned because an automatic release time has been set for the specified instance.
400	Throttling	Request was denied due to request throttling, please try again after 5 minutes.	The error message returned because your request is throttled. Try again 5 minutes later.
400	Throttling	%s	The error message returned because the request is denied due to throttling.
400	QuotaExceed.AfterpayInstance	The maximum number of Pay-As-You-Go instances is exceeded: %s	The error message returned because resources are insufficient to create pay-as-you-go instances of the specified instance type. Reduce the number of instances to be created.
400	QuotaExceed.RufundVcpu	The maximum number of refund vcpu is exceeded: %s	The error message returned because the number of vCPUs that is used to calculate the refund amount exceeds the upper limit. For more information about the limit, see the return value of the %s placeholder in the error message.
400	InvalidPeriod.UnitMismatch	The specified Period must be correlated with the PeriodUnit.	The error message returned because the specified value of the Period parameter falls outside the valid value range determined by the PeriodUnit parameter.
400	InvalidImageType.NotSupported	%s	The error message returned because the specified image type is invalid. Check whether this image type is supported in the region.
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned because the expiration date of the instance is later than that of the dedicated host.
400	InvalidSystemDiskCategory.ValueNotSupported	%s	The error message returned because the operation is not applicable to the specified system disk category.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

HTTP status code	Error code	Error message	Description
403	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or because you are not authorized to manage instances of the specified instance type.
403	InstanceType.Offline	%s	The error message returned because the operation is not supported while the instance type is retired or while resources of the instance type are insufficient.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	Account.Arrearage	Your account has an outstanding payment.	The error message returned because you have overdue payments in your account.
403	InvalidParameter.NotMatch	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
403	InvalidAction	%s	The error message returned because the operation is invalid.
403	QuotaExceed.PostPaidDisk	Living postPaid disks quota exceeded.	The error message returned because the maximum number of pay-as-you-go disks has been reached.
403	ImageNotSupportInstanceType	The specified instanceType is not supported by instance with marketplace image.	The error message returned because the specified Alibaba Cloud Marketplace image does not support the instance type.
403	InvalidInstanceType.PhasedOut	This instanceType is no longer offered.	The error message returned because the specified instance type is retired.
403	RealNameAuthenticationError	Your account has not passed the real-name authentication yet.	The error message returned because you have not completed real-name verification. Complete real-name verification and try again.
404	InvalidInstanceId.NotFound	The specified instanceId does not exist.	The error message returned because the specified instance does not exist.

For a list of error codes, visit the API Error Center.

7.13. ModifyInstanceDeployment

Changes the deployment set of an Elastic Compute Service (ECS) instance or migrates an ECS instance to a dedicated host. You can change the instance type of an instance when you migrate the instance.

Description

When you call this operation for an instance, take note of the following items:

- The instance must be in the **Stopped** (Stopped) state. The instance is automatically restarted after it is migrated.
- The network type of the instance must be Virtual Private Cloud (VPC).
- The instance and the destination dedicated host to which to migrate the instance must belong to the same account and reside in the same region and zone.
- A pay-as-you-go instance can be migrated to a subscription dedicated host. A subscription instance can be migrated only between subscription dedicated hosts. The expiration date of the subscription instance cannot be later than that of the destination dedicated host.
- You can migrate only pay-as-you-go instances from a shared host to a dedicated host. You cannot migrate subscription or preemptible instances from a shared host to a dedicated host.
- You can redeploy an instance to a specific dedicated host cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceDeployment	The operation that you want to perform. Set the value to **ModifyInstanceDeployment**.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	Yes	i-bp67acfmxazb4ph***	The ID of the instance.
DedicatedHostId	String	No	dh-bp67acfmxazb4ph****	The ID of the destination dedicated host. You can call the DescribeDedicatedHosts operation to query the most recent list of dedicated hosts. When you migrate an instance from a shared host to a dedicated host or between dedicated hosts, take note of the following items: • To migrate the instance to a specific dedicated host, you must specify this parameter. • To migrate the instance to a system-selected dedicated host, you must leave this parameter empty and set `Tenancy` to host. For information about the automatic deployment feature, see Features of dedicated hosts.
DeploymentSetId	String	No	ds-bp67acfmxazb4ph****	The ID of the destination deployment set. This parameter is required when you add an ECS instance to a deployment set or change the deployment set of an instance. **Note** You cannot change the deployment set when you modify dedicated host-related parameters, including `Tenancy`, `Affinity`, and `DedicatedHostId`.
DeploymentSetGroupNo	Integer	No	3	The number of the deployment set group in which to deploy the instance in the destination deployment set. This parameter is valid only when the destination deployment set uses the high availability group strategy (AvailabilityGroup). Valid values: 1 to 7. **Note** If you call this operation with this parameter left empty to deploy a specified instance to a deployment set that uses the high availability group strategy (`AvailablilityGroup`), the system evenly distributes ECS instances among the deployment set groups in the deployment set. If you call this operation to change the deployment set of an instance and specify the current deployment set of the instance as the destination deployment set, the system evenly distributes ECS instances again among the deployment set groups in the deployment set.

Parameter	Type	Required	Example	Description
Force	Boolean	No	false	Specifies whether to forcibly change the host of the instance when the deployment set of the instance is changed. Valid values: • true: forcibly changes the host of the instance when the deployment set of the instance is changed. Hosts can be forcibly changed only for instances in the Running (Running) or Stopped (Stopped) state. The instances in the Stopped (Stopped) state do not include pay-as-you-go instances that are stopped in economical mode. **Note** If the specified instance has local disks attached, the local disks are forcibly changed when the host of the instance is forcibly changed. This may cause data loss in the local disks. Proceed with caution. • false: does not forcibly change the host of the instance when the deployment set of the instance is changed. You can add the instance to a deployment set only when the instance remains on the current host. When the Force parameter is set to false, the deployment set may fail to be changed. Default value: false.
Affinity	String	No	host	Specifies whether to associate the instance with a dedicated host. Valid values: • host: associates the instance with a dedicated host. When you start a stopped instance in economical mode, the instance remains on its original dedicated host. • default: does not associate the instance with a dedicated host. When you start a stopped instance in economical mode, the instance can be automatically deployed to another dedicated host in the automatic deployment resource pool if resources of the original dedicated host are insufficient. When an instance is migrated from a shared host to a dedicated host, this parameter is set to default by default.
Tenancy	String	No	host	Specifies whether to deploy the instance on a dedicated host. Set the value to host to deploy the instance on a dedicated host.
MigrationType	String	No	live	Specifies whether to stop the instance before it is migrated to the destination dedicated host. Valid values: • reboot: stops the instance before it is migrated. • live: migrates the instance without stopping it. If you set the MigrationType parameter to live, you must specify the DedicatedHostId parameter. In this case, you cannot change the instance type of the instance when the instance is migrated. Default value: reboot.

Parameter	Type	Required	Example	Description
InstanceType	String	No	ecs.c6.large	The instance type to which the instance is changed. You can call the DescribeInstanceTypes operation to query the most recent list of instance types. You can change the instance type of an instance when you migrate the instance to a dedicated host. The new instance type must match the type of the specified dedicated host. For more information, see Dedicated host types. • If you specify this parameter, you must also specify the `DedicatedHostId` parameter. • You cannot change the instance type of an instance if you use the automatic deployment feature to migrate the instance.
DedicatedHostClusterId	String	No	dc-bp67acfmxazb4ph****	The ID of the dedicated host cluster.

Response parameters

Parameter	Type	Example	Description
RequestId	String	04F0F334-1335-436C-A1D7-6C044FE73368	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceDeployment
&InstanceId=i-bp67acfmxazb4ph****
&RegionId=cn-hangzhou
&DedicatedHostId=dh-bp67acfmxazb4ph****
&Tenancy=host
&MigrationType=live
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyInstanceDeploymentResponse>
 <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyInstanceDeploymentResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	OperationDenied.UnstoppedInstance	Operation denied due to unstopped instance.	The error message returned because the operation is invalid. Check whether the instance is in the Stopped state.

HTTP status code	Error code	Error message	Description
400	InvalidDedicatedHostStatus.NotSupport	Operation denied due to dedicated host status.	The error message returned because the operation is not supported while the dedicated host is in the current state.
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned because the expiration date of the instance is later than that of the dedicated host.
400	InvalidParam.Tenancy	The specified Tenancy is invalid.	The error message returned because the specified Tenancy parameter is invalid.
400	ChargeTypeViolation.PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed.	The error message returned because subscription instances cannot be deployed on pay-as-you-go dedicated hosts.
400	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or because you are not authorized to manage instances of the specified instance type.
403	IncorrectInstanceStatus	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	OperationDenied.NoStock	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the operation is valid.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter is invalid.
404	InvalidInstanceNetworkType.NotSupport	The specified Instance network type not support.	The error message returned because the network type of the instance does not support this operation.
404	InvalidInstanceType.NotSupport	The Dedicated host not support the specified instance type.	The error message returned because the current dedicated host does not support the specified instance type.

For a list of error codes, visit the API Error Center.

7.14. RenewDedicatedHosts

You can call this operation to renew one or more subscription dedicated hosts.

Description

By default, deductible vouchers are used first when you renew subscription dedicated hosts. You must make sure that your account supports the credit payment method.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RenewDedicatedHosts	The operation that you want to perform. Set the value to RenewDedicatedHosts.

Parameter	Type	Required	Example	Description
DedicatedHostIds	String	Yes	dh-bp199lyny9b3****	The IDs of dedicated hosts. You can specify the IDs of up to 100 subscription dedicated hosts. Specify the dedicated host IDs in a JSON array. Example: `["dh-xxxxxxxxx", "dh-yyyyyyyyy", … "dh-zzzzzzzzz"]`. Separate the IDs with commas (,).
Period	Integer	Yes	1	The renewal period of the subscription dedicated host. For information about valid values, see the description of the `PeriodUnit` parameter.
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.
PeriodUnit	String	No	Month	The unit of the billing cycle. Default value: Month. Valid values: • Week: When the PeriodUnit parameter is set to Week, valid values of the `Period` parameter are 1, 2, 3, and 4. • Month: When the PeriodUnit parameter is set to Month, valid values of the `Period` parameter are 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, 36, 48, and 60.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that the value is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2A4EA075-CB5B-41B7-B0EB-70D339F64DE7	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/? Action=RenewDedicatedHosts
&DedicatedHostIds=dh-bp199lyny9b3****
&Period=1
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RenewDedicatedHostsResponse>
    <RequestId>2A4EA075-CB5B-41B7-B0EB-70D339F64DE7</RequestId>
</RenewDedicatedHostsResponse>
```

`JSON` format

```
{
    "RequestId":"2A4EA075-CB5B-41B7-B0EB-70D339F64DE7"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	IdempotenceParamNotMatch	Request uses a client token in a previous request but is not identical to that request.	The error message returned because the specified client token in this request is not identical to the one used in the previous request.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
403	ChargeTypeViolation	Pay-As-You-Go dedicated host do not support this operation.	The error message returned because pay-as-you-go dedicated hosts do not support the current operation.
403	IncorrectHostStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	InvalidPeriod	The specified period is not valid.	The error message returned because the specified Period parameter is invalid.
403	LastTokenProcessing	The last token request is processing.	The error message returned because the previous token request is being processed. Try again later.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.
400	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified dedicated host does not exist.
400	InvalidStatus.Upgrading	The dedicated host is upgrading, please try it later.	The error message returned because the specified dedicated host is being upgraded. Try again later.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	LastOrderProcessing	The previous order is still processing, please try again later.	The error message returned because the previous order is being processed. Try again later.

For a list of error codes, visit the API Error Center.

7.15. ReleaseDedicatedHost

You can call this operation to release a pay-as-you-go dedicated host.

Description

Before you release a pay-as-you-go dedicated host, make sure that no ECS instances are deployed on the dedicated host.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ReleaseDedicatedHost	The operation that you want to perform. Set the value to ReleaseDedicatedHost.
DedicatedHostId	String	Yes	dh-bp199lyny9b3****	The ID of the dedicated host.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	A1B15AC8-E6F6-49A4-8985-8C07104B9199	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=ReleaseDedicatedHost
&DedicatedHostId=dh-bp199lyny9b3****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ReleaseDedicatedHostResponse>
    <RequestId>A1B15AC8-E6F6-49A4-8985-8C07104B9199</RequestId>
</ReleaseDedicatedHostResponse>
```

`JSON` format

```
{
    "RequestId":"A1B15AC8-E6F6-49A4-8985-8C07104B9199"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	InstanceExist	Instance exists on the dedicated host.	The error message returned because ECS instances exist on the dedicated host. You must remove the instances before you can release the dedicated host.
400	ChargeTypeViolation	The operation is not permitted due to charge type of the dedicated host.	The error message returned because the billing method of the dedicated host does not support the operation.
400	IncorrectHostStatus.Initializing	The specified dedicatedHost status is not support this operation	The error message returned because the operation is not supported while the dedicated host is in the current state.
404	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

For a list of error codes, visit the API Error Center.

7.16. RedeployDedicatedHost

You can call this operation to migrate instances from a failed dedicated host

Description

If a dedicated host is in the UnderAssessment state, we recommend that you call this operation to migrate instances on the dedicated host to prevent permanent failures. You can call the DescribeDedicatedHosts operation to query the status of a dedicated host.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RedeployDedicatedHost	The operation that you want to perform. Set the value to RedeployDedicatedHost.
DedicatedHostId	String	Yes	dh-bp165p6xk2tlw61e****	The ID of the dedicated host.
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	FCED4B7A-53D5-4C04-ABE3-26D4F3890D57	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RedeployDedicatedHost
&RegionId=cn-hangzhou
&DedicatedHostId=dh-bp165p6xk2tlw61e****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RedeployDedicatedHostResponse>
      <RequestId>FCED4B7A-53D5-4C04-ABE3-26D4F3890D57</RequestId>
</RedeployDedicatedHostResponse>
```

`JSON` format

```
{
    "RequestId":"FCED4B7A-53D5-4C04-ABE3-26D4F3890D57"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.

For a list of error codes, visit the API Error Center.

8.Launch templates

8.1. CreateLaunchTemplate

Creates a launch template. A launch template eliminates the need to configure a large number of parameters every time you create an Elastic Compute Service (ECS) instance.

Description

Launch templates contain preset configurations used to create instances, such as the region, image ID, instance type, security group ID, and public bandwidth settings. If a specific parameter is not included in a launch template, you must manually specify the parameter when you use the launch template to create an instance.

After you create a launch template (`CreateLaunchTemplate`), its version number is set to 1 by default. You can create multiple versions (`CreateLaunchTemplateVersion`) for the launch template. Version numbers start from 1 and increment by one. If you do not specify a template version number when you use a launch template to create instances (RunInstances), the default version is used.

When you call this operation, take note of the following items:

- You can create up to 30 launch templates in each region. Each launch template can have up to 30 versions.
- Most parameters in launch templates are optional. When you create a launch template, ECS does not verify the existence or validity of specified parameter values. The validity of the parameter values are verified only when you use the launch template to create instances.
- If you set a specific parameter in a launch template, you cannot filter out this parameter when you use the launch template to create instances (RunInstances). For example, if you set the `HostName` parameter to LocalHost in a launch template and do not specify the `HostName` parameter when you call the `RunInstances` operation to create instances from the launch template, the instance hostname is still `LocalHost` . If you want to overwrite the `LocalHost` value of HostName provided by the launch template, you can set `HostName` to MyHost or another value when you call the `RunInstances` operation.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateLaunchTemplate	The operation that you want to perform. Set the value to **CreateLaunchTemplate**.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which to create the launch template. You can call the DescribeRegions operation to query the most recent region list.
LaunchTemplateName	String	Yes	testLaunchTemplateName	The name of the launch template. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://` . It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
VersionDescription	String	No	testVersionDescription	The description of the launch template version. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://` .
ImageId	String	No	win2008r2_64_ent_sp1_en-us_40G_alibase_20170915.vhd	The ID of the image used to create the instance. You can call the DescribeImages operation to query available images.

Parameter	Type	Required	Example	Description
ImageOwnerAlias	String	No	system	The source of the image. Valid values: • system: public images provided by Alibaba Cloud. • self: custom images that you create. • others: shared images from other Alibaba Cloud accounts. • marketplace: Alibaba Cloud Marketplace images. If Alibaba Cloud Marketplace images are found, you can use these images without prior subscription. You must pay attention to the billing details of Alibaba Cloud Marketplace images.
PasswordInherit	Boolean	No	false	Specifies whether to use the password preset in the image. **Note** When you use this parameter, leave Password empty and make sure that the selected image has a password preset.
InstanceType	String	No	ecs.g5.large	The instance type of the instance. For more information, see Instance families. Alternatively, you can call the DescribeInstanceTypes operation to query the most recent instance type list.
SecurityGroupId	String	No	sg-bp15ed6xe1yxeycg****	The ID of the security group to which to assign the instance. Instances in the same security group can communicate with each other. One security group can contain a maximum of 1,000 instances. **Note** You cannot specify both the `SecurityGroupId` and `SecurityGroupIds.N` parameters.
VpcId	String	No	vpc-bp12433upq1y5scen****	The ID of the virtual private cloud (VPC).
VSwitchId	String	No	vsw-bp1s5fnvk4gn2tws0****	The ID of the vSwitch to which to connect the instance. This parameter is required if you specify the VpcId parameter.
InstanceName	String	No	testInstanceName	The name of the instance. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Description	String	No	testECSDescription	The description of the instance. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.

Parameter	Type	Required	Example	Description
InternetMaxBandwidthIn	Integer	No	10	The maximum inbound public bandwidth. Unit: Mbit/s. Valid values: • When the purchased outbound public bandwidth is less than or equal to 10 Mbit/s, the valid values of this parameter are 1 to 10 and the default value is 10. • When the purchased outbound public bandwidth is greater than 10 Mbit/s, the valid values of this parameter are 1 to the `InternetMaxBandwidthOut` value and the default value is the `InternetMaxBandwidthOut` value.
InternetMaxBandwidthOut	Integer	No	10	The maximum outbound public bandwidth. Unit: Mbit/s. Valid values: 0 to 100.
HostName	String	No	testHostName	The hostname of the instance. • The hostname cannot start or end with a period (.) or hyphen (-). It cannot contain consecutive periods (.) or hyphens (-). • For Windows instances, the hostname must be 2 to 15 characters in length and cannot contain periods (.) or contain only digits. It can contain letters, digits, and hyphens (-). • For instances that run other operating systems such as Linux, the hostname must be 2 to 64 characters in length. You can use periods (.) to separate the hostname into multiple segments. Each segment can contain letters, digits, and hyphens (-).
ZoneId	String	No	cn-hangzhou-g	The ID of the zone in which to create the instance.
SystemDisk.Category	String	No	cloud_ssd	The category of the system disk. Valid values: • cloud: basic disk. • cloud_efficiency: ultra disk. • cloud_ssd: standard SSD. • cloud_essd: enhanced SSD (ESSD). You can use the `SystemDisk.PerformanceLevel` parameter to set the performance level of the ESSD used as the system disk. For non-I/O optimized instances of retired instance types, the default value is cloud. For other instances, the default value is cloud_efficiency.
SystemDisk.Size	Integer	No	40	The size of the system disk. Unit: GiB. Valid values: 20 to 500. The value of this parameter must be at least 20 and greater than or equal to the image size.
SystemDisk.DiskName	String	No	testSystemDiskName	The name of the system disk. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
SystemDisk.Description	String	No	testSystemDiskDescription	The description of the system disk. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.

Parameter	Type	Required	Example	Description
SystemDisk.PerformanceLevel	String	No	PL0	The performance level of the ESSD that is used as the system disk. Default value: PL0. Valid values: • PL0: A single ESSD can deliver up to 10,000 random read/write IOPS. • PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. • PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. • PL3: A single ESSD can deliver up to 1,000,000 random read/write IOPS. For more information about ESSD performance levels, see ESSDs.
SystemDisk.DeleteWithInstance	Boolean	No	true	Specifies whether to release the system disk when the instance is released. Valid values: • true: releases the system disk when the instance is released. • false: does not release the system disk when the instance is released. Default value: true.
IoOptimized	String	No	optimized	Specifies whether the instance is I/O optimized. Valid values: • none: The instance is not I/O optimized. • optimized: The instance is I/O optimized.
InstanceChargeType	String	No	PrePaid	The billing method of the instance. Valid values: • PrePaid: subscription. If you set this parameter to PrePaid, make sure that your account supports payment by credit. Otherwise, an `InvalidPayMethod` error is returned. • PostPaid: pay-as-you-go.
Period	Integer	No	1	The subscription period of the instance. Unit: months. This parameter is valid and required only when `InstanceChargeType` is set to `PrePaid`. Valid values: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, 36, 48, and 60.
InternetChargeType	String	No	PayByTraffic	The billing method for network usage. Valid values: • PayByBandwidth: pay-by-bandwidth • PayByTraffic: pay-by-traffic **Note** When the **pay-by-traffic** billing method for network usage is used, the maximum inbound and outbound bandwidth values are used as upper limits of bandwidths instead of guaranteed performance specifications. In scenarios where demand outstrips resource supplies, these maximum bandwidths may be limited. If you want guaranteed bandwidths for your instances, use the **pay-by-bandwidth** billing method for network usage.
EnableVmOsConfig	Boolean	No	false	Specifies whether to enable the operating system configuration of the instance. **Note** This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.

Parameter	Type	Required	Example	Description
NetworkType	String	No	vpc	The network type of the instance. Valid values: • classic • vpc
UserData	String	No	ZWNobyBoZWxsbyBlY3Mh	The user data of the instance. The user data must be encoded in Base64. The maximum size of raw data is 16 KB.
KeyPairName	String	No	testKeyPairName	The name of the key pair. • For Windows instances, this parameter is ignored. The `Password` parameter takes effect even if the KeyPairName parameter is specified. • For Linux instances, the password-based logon method is disabled by default.
RamRoleName	String	No	testRamRoleName	The name of the instance RAM role. You can call the ListRoles operation provided by Resource Access Management (RAM) to query the instance RAM roles that you created.
AutoReleaseTime	String	No	2018-01-01T12:05:00Z	The automatic release time of the instance. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. • If the value of seconds (`ss`) is not `00` , the time is automatically rounded to the nearest minute based on the value of minutes (`mm`). • The release time must be at least 30 minutes later than the current time. • The release time must be at most three years from the current time.
SpotStrategy	String	No	NoSpot	The bidding policy for the pay-as-you-go instance. This parameter is valid only when the `InstanceChargeType` parameter is set to `PostPaid` . Valid values: • NoSpot: The instance is a regular pay-as-you-go instance. • SpotWithPriceLimit: The instance is a preemptible instance with a user-defined maximum hourly price. • SpotAsPriceGo: The instance is a preemptible instance for which the market price at the time of purchase is automatically used as the bid price.
SpotPriceLimit	Float	No	0.97	The maximum hourly price of the instance. The value is accurate to three decimal places. This parameter is valid only when the `SpotStrategy` parameter is set to `SpotWithPriceLimit` .
SpotDuration	Integer	No	1	The protection period of the preemptible instance. Unit: hours. Valid values: 0, 1, 2, 3, 4, 5, and 6. • Protection periods of 2, 3, 4, 5, and 6 hours are in invitational preview. If you want to set this parameter to one of these values, submit a ticket. • If this parameter is set to 0, no protection period is configured for the preemptible instance. Default value: 1.

Parameter	Type	Required	Example	Description
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the instance, Elastic Block Storage (EBS) device, and elastic network interface (ENI).
TemplateResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the launch template.
SecurityEnhancementStrategy	String	No	Deactive	Specifies whether to enable security hardening for the operating system. Valid values: • Active: enables security hardening. This value is applicable only to public images. • Deactive: does not enable security hardening. This value is applicable to all image types.
PrivateIpAddress	String	No	10.1.**.**	The private IP address to assign to the instance. To assign a private IP address to an instance of the VPC type, make sure that the IP address is an idle IP address within the CIDR block of the vSwitch specified by the `VSwitchId` parameter.
DeploymentSetId	String	No	ds-bp1brhwhoqinyjd6****	The ID of the deployment set to which to deploy the instance.
Ipv6AddressCount	Integer	No	1	The number of IPv6 addresses to be randomly generated for the primary ENI. Valid values: 1 to 10.
TemplateTag.N.Key	String	No	TestKey	The key of tag N to add to the launch template. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.
TemplateTag.N.Value	String	No	TestValue	The value of tag N to add to the launch template. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.
DataDisk.N.PerformanceLevel	String	No	PL1	The performance level of the ESSD used as data disk N. The value of N must be the same as that in `DataDisk.N.Category` when DataDisk.N.Category is set to cloud_essd. Default value: PL1. Valid values: • PL0: A single ESSD can deliver up to 10,000 random read/write IOPS. • PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. • PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. • PL3: A single ESSD can deliver up to 1,000,000 random read/write IOPS. For more information about ESSD performance levels, see ESSDs.
DataDisk.N.Description	String	No	testDataDiskDescription	The description of data disk N. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.

Parameter	Type	Required	Example	Description
DataDisk.N.SnapshotId	String	No	s-bp17441ohwka0yuh****	The ID of the snapshot used to create data disk N. Valid values of N: 1 to 16. When the `DataDisk.N.SnapshotId` parameter is specified, the `DataDisk.N.Size` parameter is ignored. The data disk is created based on the size of the specified snapshot. Use snapshots created after July 15, 2013. Otherwise, an error is returned and your request is rejected.
DataDisk.N.Size	Integer	No	2000	The size of data disk N. Valid values of N: 1 to 16. Unit: GiB. Valid values: • Valid values when DataDisk.N.Category is set to cloud: 5 to 2000 • Valid values when DataDisk.N.Category is set to cloud_efficiency: 20 to 32768 • Valid values when DataDisk.N.Category is set to cloud_ssd: 20 to 32768 • Valid values when DataDisk.N.Category is set to cloud_essd: 20 to 32768 The value of this parameter must be greater than or equal to the size of the snapshot specified by the `SnapshotId` parameter.
DataDisk.N.DiskName	String	No	testDataDiskName	The name of data disk N. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
DataDisk.N.Category	String	No	cloud_ssd	The category of data disk N. Valid values: • cloud: basic disk. • cloud_efficiency: ultra disk. • cloud_ssd: standard SSD. • cloud_essd: ESSD. For I/O optimized instances, the default value is cloud_efficiency. For non-I/O optimized instances, the default value is cloud.
DataDisk.N.DeleteWithInstance	Boolean	No	true	Specifies whether to release data disk N when the instance is released. Valid values: • true: releases data disk N when the instance is released. • false: does not release data disk N when the instance is released. Default value: true.
DataDisk.N.Encrypted	String	No	false	Specifies whether to encrypt data disk N.

Parameter	Type	Required	Example	Description
NetworkInterface.N.VSwitchId	String	No	vsw-bp1s5fnvk4gn2tws0****	The ID of the vSwitch with which to associate ENI N. Take note of the following items: • Valid values of N: 1 and 2. If the value of N is 1, you can configure a primary or secondary ENI. If the value of N is 2, you can configure a primary ENI and a secondary ENI. • If `NetworkInterface.N.InstanceType` is set to `Primary`, you must set this parameter. In this case, this parameter is equivalent to `VSwitchId` and you cannot specify `VSwitchId`. • If `NetworkInterface.N.InstanceType` is set to `Secondary` or left empty, this parameter is optional. The default value is the ID of the vSwitch to which to connect the ECS instance.
NetworkInterface.N.NetworkInterfaceName	String	No	testEniName	The name of ENI N. Take note of the following items: • Valid values of N: 1 and 2. If the value of N is 1, you can configure a primary or secondary ENI. If the value of N is 2, you can configure a primary ENI and a secondary ENI. • If `NetworkInterface.N.InstanceType` is set to `Primary`, you do not need to set this parameter.
NetworkInterface.N.Description	String	No	testEniDescription	The description of secondary ENI N. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`. The value of N in `NetworkInterface.N` cannot be greater than 1.
NetworkInterface.N.SecurityGroupId	String	No	sg-bp15ed6xe1yxeycg****	The ID of the security group to which to assign ENI N. Take note of the following items: • Valid values of N: 1 and 2. If the value of N is 1, you can configure a primary or secondary ENI. If the value of N is 2, you can configure a primary ENI and a secondary ENI. • If `NetworkInterface.N.InstanceType` is set to `Primary`, you must set this parameter. In this case, this parameter is equivalent to `SecurityGroupId` and you cannot specify `SecurityGroupId`, `SecurityGroupIds.N`, or `NetworkInterface.N.SecurityGroupIds.N`. • If `NetworkInterface.N.InstanceType` is set to `Secondary` or left empty, this parameter is optional. The default value is the ID of the security group to which to assign the ECS instance.

Parameter	Type	Required	Example	Description

NetworkInterface.N.PrimaryIpAddress	String	No	192.168.**.**	The primary IP address to assign to ENI N.
				Take note of the following items:
				• Valid values of N: 1 and 2.
				  ○ If the value of N is 1, you can configure a primary or secondary ENI. If this parameter is specified, `Amount` is set to a numeric value greater than 1, and NetworkInterface.N.InstanceType is set to Primary, the specified number of instances are created and consecutive primary IP addresses starting from the specified one are assigned to the instances. In this case, you cannot bind secondary ENIs to these instances.
				  ○ If the value of N is 2, you can configure a primary ENI and a secondary ENI. If this parameter is specified, `Amount` is set to a numeric value greater than 1, and NetworkInterface.N.InstanceType is set to Primary, you cannot set `NetworkInterface.2.InstanceType` to Secondary to bind a secondary ENI.
				• If `NetworkInterface.N.InstanceType` is set to `Primary`, this parameter is equivalent to `PrivateIpAddress` and you cannot specify `PrivateIpAddress`.
				• If `NetworkInterface.N.InstanceType` is set to `Secondary` or left empty, the specified primary IP address is assigned to the secondary ENI. The default value is an IP address that is randomly selected from within the CIDR block of the vSwitch with which to associate the secondary ENI.
				Note You can bind only a single secondary ENI when you create an instance. After the instance is created, you can call the CreateNetworkInterface and AttachNetworkInterface operations to bind more secondary ENIs.

NetworkInterface.N.SecurityGroupIds.N	String	No	sg-bp67acfmxazb4p****	The ID of security group N to which to assign ENI N. • Valid values of the first N: 1 and 2. If the value of N is 1, you can configure a primary or secondary ENI. If the value of N is 2, you can configure a primary ENI and a secondary ENI. • The second N indicates that one or more security group IDs can be specified. The valid values of N vary based on the maximum number of security groups to which an instance can belong. For more information, see the "Security group limits" section in Limits. Take note of the following items: • If `NetworkInterface.N.InstanceType` is set to `Primary`, you must set this parameter or `NetworkInterface.N.SecurityGroupId`. In this case, this parameter is equivalent to `SecurityGroupIds.N` and you cannot specify `SecurityGroupId`, `SecurityGroupIds.N`, or `NetworkInterface.N.SecurityGroupId`. • If `NetworkInterface.N.InstanceType` is set to `Secondary` or left empty, this parameter is optional. The default value is the ID of the security group to which to assign the ECS instance.

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	TestKey	The key of tag N to add to the instance, EBS device, or ENI. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 64 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.
Tag.N.Value	String	No	TestValue	The value of tag N to add to the instance, EBS device, or ENI. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
SecurityGroupIds.N	String	No	sg-bp15ed6xe1yxeycg7****	The ID of security group N to which to assign the instance. The valid values of N are based on the maximum number of security groups to which the instance can belong. For more information, see the "Security group limits" section in Limits. **Note** You cannot specify both `SecurityGroupId` and `SecurityGroupIds.N`.

Response parameters

Parameter	Type	Example	Description
LaunchTemplateId	String	lt-m5eiaupmvm2op9d****	The ID of the launch template.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateLaunchTemplate
&LaunchTemplateName=testLaunchTemplateName
&RegionId=cn-hangzhou
&TemplateTag.1.Key=TestKey
&TemplateTag.1.Value=TestValue
&VersionDescription=testVersionDescription
&ImageId=win2008r2_64_ent_sp1_en-us_40G_alibase_20170915.vhd
&InstanceType=ecs.g5.large
&SecurityGroupId=sg-bp15ed6xe1yxeycg****
&VpcId=vpc-bp12433upq1y5scen****
&VSwitchId=vsw-bp1s5fnvk4gn2tws03****
&InstanceName=testInstanceName
&Description=testECSDescription
&InternetMaxBandwidthIn=10
&InternetMaxBandwidthOut=10
&HostName=testHostName
&ZoneId=cn-hangzhou-g
&SystemDisk.Category=cloud_ssd
&SystemDisk.Size=40
&SystemDisk.DiskName=testSystemDiskName
&SystemDisk.Description=TestDisk
&DataDisk.1.Size=2000
&DataDisk.1.SnapshotId=s-bp17441ohwka0yuh****
&DataDisk.1.Category=cloud_ssd
&DataDisk.1.Encrypted=false
&DataDisk.1.DiskName=testDataDiskName
&DataDisk.1.Description=testDataDiskDescription
&DataDisk.1.DeleteWithInstance=true
&IoOptimized=optimized
&NetworkInterface.1.PrimaryIpAddress=192.168.**.**
&NetworkInterface.1.VSwitchId=vsw-bp1s5fnvk4gn2tws0****
&NetworkInterface.1.SecurityGroupId=sg-bp15ed6xe1yxeycg****
&NetworkInterface.1.NetworkInterfaceName=testEniName
&NetworkInterface.1.Description=testEniDescription
&PrivateIpAddress=10.1.**.**
&InstanceChargeType=PrePaid
&Period=1
&InternetChargeType=PayByTraffic
&NetworkType=vpc
&UserData=ZWNobyBoZWxsbyBlY3Mh
&RamRoleName=testRamRoleName
&AutoReleaseTime=2018-01-01T12:05:00Z
&SpotStrategy=NoSpot
&SpotPriceLimit=0.97
&SecurityEnhancementStrategy=Deactive
&Tag.1.Key=TestKey
&Tag.1.Value=TestValue
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateLaunchTemplateResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <LaunchTemplateId>lt-m5eiaupmvm2op9d****</LaunchTemplateId>
</CreateLaunchTemplateResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "LaunchTemplateId" : "lt-m5eiaupmvm2op9d****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotExist	%s	The error message returned because the specified RegionId parameter does not exist.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidLaunchTemplateName.Malformed	The specified parameter LaunchTemplateName is not valid.	The error message returned because the specified LaunchTemplateName parameter is invalid.
400	InvalidDescription.Malformed	The specified parameter "VersionDescription" is not valid.	The error message returned because the specified VersionDescription parameter is invalid.
400	InvalidUserData.SizeExceeded	%s	The error message returned because the size of the specified user data exceeds the upper limit.
400	InvalidUserData.Base64FormatInvalid	%s	The error message returned because the specified UserData parameter is invalid.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	InvalidHostName.Malformed	The specified parameter "HostName" is not valid.	The error message returned because the specified HostName parameter is invalid.
403	LaunchTemplateLimitExceed	%s	The error message returned because the maximum number of launch templates has been reached.
403	LaunchTemplateName.Duplicated	%s	The error message returned because the specified launch template name already exists.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit. %s is a variable. An error message is dynamically returned based on call conditions.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

8.2. CreateLaunchTemplateVersion

Creates a version for a launch template.

Description

To modify the parameters of a launch template version, you can create another version for the launch template. You can create a maximum of 30 versions for each launch template.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateLaunchTemplateVersion	The operation that you want to perform. Set the value to **CreateLaunchTemplateVersion**.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance template. You can call the DescribeRegions operation to query the most recent region list.
LaunchTemplateId	String	No	lt-m5eiaupmvm2op9d****	The ID of the launch template. For more information, see DescribeLaunchTemplates. You must specify `LaunchTemplateId` or `LaunchTemplateName` to determine a launch template.
LaunchTemplateName	String	No	testLaunchTemplateName	The name of the launch template. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
VersionDescription	String	No	testVersionDescription	The description of the launch template version. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.
ImageId	String	No	win2008r2_64_ent_sp1_en-us_40G_alibase_20170915.vhd	The ID of the image used to create the Elastic Compute Service (ECS) instance. You can call the DescribeImages operation to query available images.
ImageOwnerAlias	String	No	system	The source of the image. **Note** This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
InstanceType	String	No	ecs.g5.large	The instance type of the instance. For more information, see Instance families or call the DescribeInstanceTypes operation to query the most recent instance type list.
SecurityGroupId	String	No	sg-bp15ed6xe1yxeycg****	The ID of the security group to which to assign the instance. Instances within the same security group can access each other. **Note** You cannot specify both the `SecurityGroupId` and `SecurityGroupIds.N` parameters.
VpcId	String	No	vpc-bp12433upq1y5scen****	The ID of the virtual private cloud (VPC).
VSwitchId	String	No	vsw-bp1s5fnvk4gn2tws0****	The ID of the vSwitch to which to connect the instance. This parameter is required if you specify the VpcId parameter.
InstanceName	String	No	testInstanceName	The name of the instance. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).

Parameter	Type	Required	Example	Description
Description	String	No	testDescription	The description of the read-only instance. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.
InternetMaxBandwidthIn	Integer	No	50	The maximum inbound public bandwidth. Unit: Mbit/s. Valid values: • If the purchased outbound public bandwidth is less than or equal to 10 Mbit/s, the valid values of this parameter are 1 to 10 and the default value is 10. • If the purchased outbound public bandwidth is greater than 10 Mbit/s, the valid values of this parameter are 1 to the `InternetMaxBandwidthOut` value and the default value is the `InternetMaxBandwidthOut` value.
InternetMaxBandwidthOut	Integer	No	5	The maximum outbound public bandwidth. Unit: Mbit/s. Valid values: 0 to 100.
HostName	String	No	testHostName	The hostname of the ECS instance. • The hostname cannot start or end with a period (.) or hyphen (-). It cannot contain consecutive periods (.) or hyphens (-). • For Windows instances, the hostname must be 2 to 15 characters in length and cannot contain periods (.) or contain only digits. It can contain letters, digits, and hyphens (-). • For instances that run other operating systems such as Linux, the hostname must be 2 to 64 characters in length. You can use periods (.) to separate the hostname into multiple segments. Each segment can contain letters, digits, and hyphens (-).
ZoneId	String	No	cn-hangzhou-g	The ID of the zone in which to create the instance.
SystemDisk.Category	String	No	cloud_ssd	The category of the system disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • cloud_essd: enhanced SSD (ESSD). You can use the `SystemDisk.PerformanceLevel` parameter to set the performance level of the ESSD used as the system disk. For non-I/O optimized instances of retired instance types, the default value is cloud. For other instances, the default value is cloud_efficiency.
SystemDisk.Size	Integer	No	40	The size of the system disk. Unit: GiB. Valid values: 20 to 500. The value of this parameter must be at least 20 and greater than or equal to the image size.
SystemDisk.DiskName	String	No	cloud_ssdSystem	The name of the system disk. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
SystemDisk.Description	String	No	testSystemDiskDescription	The description of the system disk. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.

Parameter	Type	Required	Example	Description
SystemDisk.PerformanceLevel	String	No	PL0	The performance level of the ESSD used as the system disk. Valid values: • PL0: A single ESSD can deliver up to 10,000 random read/write IOPS. • PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. • PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. • PL3: A single ESSD can deliver up to 1,000,000 random read/write IOPS. For more information about ESSD performance levels, see ESSDs.
SystemDisk.DeleteWithInstance	Boolean	No	true	Specifies whether to release the system disk when the instance is released. Valid values: • true: releases the system disk when the instance is released. • false: does not release the system disk when the instance is released. Default value: true.
IoOptimized	String	No	optimized	Specifies whether the instance is I/O optimized. Valid values: • none: The instance is not I/O optimized. • optimized: The instance is I/O optimized.
InstanceChargeType	String	No	PrePaid	The billing method of the instance. Valid values: • PrePaid: subscription. If you set this parameter to PrePaid, make sure that you have sufficient credit in your account. Otherwise, an `InvalidPayMethod` error is returned. • PostPaid: pay-as-you-go.
Period	Integer	No	1	The subscription period of the instance. Unit: months. This parameter is valid and required only when `InstanceChargeType` is set to `PrePaid`. Valid values: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, 36, 48, and 60. • •
InternetChargeType	String	No	PayByTraffic	The billing method for network usage. Valid values: • PayByBandwidth: pay-by-bandwidth • PayByTraffic: pay-by-traffic **Note** When the **pay-by-traffic** billing method for network usage is used, the maximum inbound and outbound bandwidth values are used as upper limits of bandwidths instead of guaranteed performance specifications. In scenarios where demand outstrips resource supplies, these maximum bandwidths may be limited. If you want guaranteed bandwidths for your instance, use the **pay-by-bandwidth** billing method for network usage.
EnableVmOsConfig	Boolean	No	false	Specifies whether to enable the operating system configuration of the instance.

Parameter	Type	Required	Example	Description
NetworkType	String	No	vpc	The network type of the instance. Valid values: • classic • vpc
UserData	String	No	ZWNobyBoZWxsbyBl****	The user data of the instance. The user data must be encoded in Base64. The maximum size of raw data is 16 KB.
KeyPairName	String	No	testKeyPairName	The name of the key pair. • For Windows instances, this parameter is ignored The `Password` parameter takes effect even if the KeyPairName parameter is specified. • For Linux instances, the password-based logon method is disabled by default.
RamRoleName	String	No	testRamRoleName	The name of the instance RAM role. You can call the ListRoles operation provided by Resource Access Management (RAM) to query the instance RAM roles that you created.
AutoReleaseTime	String	No	2018-01-01T12:05:00Z	The automatic release time of the instance. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. • If the value of `ss` is not `00`, the time is automatically rounded to the nearest minute based on the value of `mm`. • The release time must be at least 30 minutes later than the current time. • The release time must be at most three years from the current time.
SpotStrategy	String	No	NoSpot	The bidding policy for the pay-as-you-go instance. This parameter is valid only when the `InstanceChargeType` parameter is set to `PostPaid`. Valid values: • NoSpot: The instance is a regular pay-as-you-go instance. • SpotWithPriceLimit: The instance is a preemptible instance with a user-defined maximum hourly price. • SpotAsPriceGo: The instance is a preemptible instance for which the market price at the time of purchase is automatically used as the bid price.
SpotPriceLimit	Float	No	0.97	The maximum hourly price of the instance. A maximum of three decimal places are allowed.
SpotDuration	Integer	No	1	The protection period of the preemptible instance. Unit: hours. Valid values: 0 to 6. • Protection periods of 2, 3, 4, 5, and 6 hours are in invitational preview. If you want to set this parameter to one of these values, submit a ticket. • If this parameter is set to 0, no protection period is configured for the preemptible instance. Default value: 1.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group.

Parameter	Type	Required	Example	Description
SecurityEnhancementStrategy	String	No	Active	Specifies whether to enable security hardening for the operating system. Valid values: • Active: enables security hardening. This value is applicable only to public images. • Deactive: disables security hardening. This value is applicable to all image types.
PrivateIpAddress	String	No	10.1.**.**	The private IP address of the instance. To assign a private IP address to an instance of the VPC type, make sure that the IP address is an idle IP address within the CIDR block of the vSwitch specified by the `VSwitchId` parameter.
Ipv6AddressCount	Integer	No	1	The number of IPv6 addresses to be randomly generated for the primary elastic network interface (ENI). Valid values: 1 to 10.
DeploymentSetId	String	No	ds-bp1brhwhoqinyjd6****	The ID of the deployment set.
DataDisk.N.PerformanceLevel	String	No	PL1	The performance level of ESSD N used as the data disk. The value of N must be the same as that in `DataDisk.N.Category` when DataDisk.N.Category is set to cloud_essd. Valid values: • PL0: A single ESSD can deliver up to 10,000 random read/write IOPS. • PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. • PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. • PL3: A single ESSD can deliver up to 1,000,000 random read/write IOPS. For more information about ESSD performance levels, see ESSDs.
DataDisk.N.Description	String	No	testDataDiskDescription	The description of data disk N. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.
DataDisk.N.SnapshotId	String	No	s-bp17441ohwka0yuh****	The ID of the snapshot used to create data disk N. Valid values of N: 1 to 16. When the `DataDisk.N.SnapshotId` parameter is specified, the `DataDisk.N.Size` parameter is ignored. The data disk is created with the size of the specified snapshot. Use snapshots created after July 15, 2013. Otherwise, an error is returned and your request is rejected.
DataDisk.N.Size	Integer	No	2000	The size of data disk N. Valid values of N: 1 to 16. Unit: GiB. Valid values: • Valid values when DataDisk.N.Category is set to cloud: 5 to 2000. • Valid values when DataDisk.N.Category is set to cloud_efficiency: 20 to 32768. • Valid values when DataDisk.N.Category is set to cloud_ssd: 20 to 32768. • Valid values when DataDisk.N.Category is set to cloud_essd: 20 to 32768. The value of this parameter must be greater than or equal to the size of the snapshot specified by the `SnapshotId` parameter.

Parameter	Type	Required	Example	Description
DataDisk.N.DiskName	String	No	testDataDiskName	The name of data disk N. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
DataDisk.N.Category	String	No	cloud_ssd	The category of data disk N. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • cloud_essd: ESSD For I/O optimized instances, the default value is cloud_efficiency. For non-I/O optimized instances, the default value is cloud.
DataDisk.N.DeleteWithInstance	Boolean	No	true	Specifies whether to release data disk N when the instance is released. Valid values: • true: releases data disk N when the instance is released. • false: does not release data disk N when the instance is released. Default value: true.
DataDisk.N.Encrypted	String	No	false	Specifies whether to encrypt data disk N.
NetworkInterface.N.VSwitchId	String	No	vsw-bp1s5fnvk4gn2tws0****	The ID of the vSwitch to which to connect secondary ENI N. The instance and the ENI must be located within the same zone of the same VPC, but they can be connected to different vSwitches. The value of N in `NetworkInterface.N` cannot be greater than 1.
NetworkInterface.N.NetworkInterfaceName	String	No	testNetworkInterfaceName	The name of secondary ENI N. The value of N in `NetworkInterface.N` cannot be greater than 1.
NetworkInterface.N.Description	String	No	testNetworkInterfaceDescription	The description of secondary ENI N. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`. The value of N in `NetworkInterface.N` cannot be greater than 1.
NetworkInterface.N.SecurityGroupId	String	No	sg-bp15ed6xe1yxeycg****	The ID of the security group to which to assign secondary ENI N. The security groups of secondary ENI N and of the instance must belong to the same VPC. The value of N in `NetworkInterface.N` cannot be greater than 1. **Note** You cannot specify both the `NetworkInterface.N.SecurityGroupId` and `NetworkInterface.N.SecurityGroupIds.N` parameters.
NetworkInterface.N.PrimaryIpAddress	String	No	192.168.**.**	The primary private IP address of secondary ENI N. The value of N in `NetworkInterface.N` cannot be greater than 1.

Parameter	Type	Required	Example	Description
NetworkInterface.N.SecurityGroupIds.N	String	No	sg-bp67acfmxazb4p****	The ID of security group N to which to assign secondary ENI N. The security group and secondary ENI N must belong to the same VPC. The valid values of N in `SecurityGroupIds.N` depend on the maximum number of security groups to which a secondary ENI can belong. For more information, see the "Security group limits" section in Limits. The value of N in `NetworkInterface.N` cannot be greater than 1. **Note** You cannot specify both the `NetworkInterface.N.SecurityGroupId` and `NetworkInterface.N.SecurityGroupIds.N` parameters.
Tag.N.Key	String	No	TestKey	The key of tag N of the instance, Elastic Block Storage (EBS) device, or primary ENI. Valid values of N: 1 to 5. The tag key cannot be an empty string. It can be up to 64 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.
Tag.N.Value	String	No	TestValue	The value of tag N of the instance, EBS device, or primary ENI. Valid values of N: 1 to 5. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.
SecurityGroupIds.N	String	No	sg-bp15ed6xe1yxeycg7****	The ID of security group N to which to assign the instance. The valid values of N depend on the maximum number of security groups to which an instance can belong. For more information, see the "Security group limits" section in Limits. **Note** You cannot specify both the `SecurityGroupId` and `SecurityGroupIds.N` parameters.

Response parameters

Parameter	Type	Example	Description
LaunchTemplateVersionNumber	Long	2	The version number of the launch template.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateLaunchTemplateVersion
&RegionId=cn-hangzhou
&LaunchTemplateId=lt-m5eiaupmvm2op9d****
&LaunchTemplateName=testLaunchTemplateName
&VersionDescription=testVersionDescription
&ImageId=win2008r2_64_ent_sp1_en-us_40G_alibase_20170915.vhd
&InstanceType=ecs.g5.large
&SecurityGroupId=sg-bp15ed6xe1yxeycg****
&VpcId=vpc-bp12433upq1y5scen****
&VSwitchId=vsw-bp1s5fnvk4gn2tws0****
&InstanceName=testInstanceName
&Description=testDescription
&InternetMaxBandwidthIn=50
&InternetMaxBandwidthOut=5
&HostName=testHostName
&ZoneId=cn-hangzhou-g
&SystemDisk.Category=cloud_ssd
&SystemDisk.Size=40
&SystemDisk.DiskName=testSystemDiskName
&SystemDisk.Description=testSystemDiskDescription
&DataDisk.1.Size=2000
&DataDisk.1.SnapshotId=s-bp17441ohwka0yuh****
&DataDisk.1.Category=cloud_ssd
&DataDisk.1.Encrypted=false
&DataDisk.1.DiskName=cloud_ssdData
&DataDisk.1.Description=testDataDiskDescription
&DataDisk.1.DeleteWithInstance=true
&IoOptimized=optimized
&NetworkInterface.1.PrimaryIpAddress=192.168.**.**
&NetworkInterface.1.VSwitchId=vsw-bp1s5fnvk4gn2tws0****
&NetworkInterface.1.SecurityGroupId=sg-bp15ed6xe1yxeycg****
&NetworkInterface.1.NetworkInterfaceName=testNetworkInterfaceName
&NetworkInterface.1.Description=testNetworkInterfaceDescription
&PrivateIpAddress=10.1.**.**
&InstanceChargeType=PrePaid
&Period=1
&InternetChargeType=PayByTraffic
&NetworkType=vpc
&UserData=ZWNobyBoZWxsbyBl****
&RamRoleName=testRamRoleName
&AutoReleaseTime=2020-02-02T12:05:00Z
&SpotStrategy=NoSpot
&SpotPriceLimit=0.97
&SecurityEnhancementStrategy=Active
&Tag.1.Key=TestKey
&Tag.1.Value=TestValue
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateLaunchTemplateVersionResponse>
    <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
    <LaunchTemplateVersionNumber>2</LaunchTemplateVersionNumber>
</CreateLaunchTemplateVersionResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "04F0F334-1335-436C-A1D7-6C044FExxxxx",
  "LaunchTemplateVersionNumber" : 2
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotExist	%s	The error message returned because the specified RegionId parameter does not exist.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidUserData.SizeExceeded	%s	The error message returned because the size of the specified user data exceeds the upper limit.
400	InvalidUserData.Base64Format Invalid	%s	The error message returned because the specified UserData parameter is invalid.
400	InvalidHostName.Malformed	The specified parameter "HostName" is not valid.	The error message returned because the specified HostName parameter is invalid.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
403	LaunchTemplateVersionLimitExceed	%s	The error message returned because the maximum number of launch template versions has been reached.
404	InvalidLaunchTemplate.NotFound	%s	The error message returned because the specified launch template does not exist. Check whether the parameter value is correct.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

8.3. DescribeLaunchTemplates

You can call this operation to query one or more available launch templates.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeLaunchTemplates	The operation that you want to perform. Set the value to DescribeLaunchTemplates.
RegionId	String	Yes	cn-hangzhou	The region ID of the launch template. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
TemplateTag.N.Key	String	No	TestKey	The key of tag N of the launch template. Valid values of N: 1 to 20. If a single tag is specified to query resources, up to 1,000 resources that are bound with this tag can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources that are bound with all these tags can be displayed in the response. To query more than 1,000 resources that are bound with specified tags, call the ListTagResources operation.
TemplateTag.N.Value	String	No	TestValue	The value of tag N of the launch template. Valid values of N: 1 to 20.
LaunchTemplateId.N	RepeatList	No	lt-m5e3ofjr1zn1aw7q****	The IDs of one or more launch templates. You can specify a maximum of 100 launch template IDs. You must specify the LaunchTemplateId parameter or the LaunchTemplateName parameter to determine a launch template.
LaunchTemplateName.N	RepeatList	No	wd-152630748****	The names of one or more launch templates. You can specify a maximum of 100 launch template names.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default: 1
PageSize	Integer	No	10	The number of entries to return on each page. Default value: 10
TemplateResourceGroupId	String	No	rg-acfmxazb4p****	The ID of the resource group to which the launch template belongs. If this parameter is specified to query resources, up to 1,000 resources that belong to the specified resource group can be displayed in the response.

Response parameters

Parameter	Type	Example	Description
LaunchTemplateSets	Array of LaunchTemplateSet		Details about the launch templates.
LaunchTemplateSet			
CreateTime	String	2018-05-14T14:18:00Z	The time when the launch template was created.
CreatedBy	String	1234567890	The creator of the launch template.
DefaultVersionNumber	Long	1	The default version number of the launch template.
LatestVersionNumber	Long	1	The latest version number of the launch template.
LaunchTemplateId	String	lt-m5e3ofjr1zn1aw7q****	The ID of the launch template.
LaunchTemplateName	String	wd-152630748****	The name of the launch template.
ModifiedTime	String	2018-05-14T14:18:00Z	The time when the launch template was modified.

Parameter	Type	Example	Description
ResourceGroupId	String	rg-acfmxazb4p****	The ID of the resource group to which the launch template belongs.
Tags	Array of Tag		The tags of the launch template.
Tag			
TagKey	String	TestKey	The tag key of the launch template.
TagValue	String	TestValue	The tag value of the launch template.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	04F0F334-1335-436C-A1D7-6C044FE12CBA	The ID of the request.
TotalCount	Integer	1	The total number of launch templates.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeLaunchTemplates
&RegionId=cn-hangzhou
&TemplateTag.1.Key=TestKey
&TemplateTag.1.Value=TestValue
&LaunchTemplateId.1=lt-m5e3ofjr1zn1aw7q****
&LaunchTemplateName.1=wd-152630748****
&PageNumber=1
&PageSize=10
&TemplateResourceGroupId=rg-acfmxazb4p****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeLaunchTemplatesResponse>
      <RequestId>04F0F334-1335-436C-A1D7-6C044FE12CBA</RequestId>
      <TotalCount>1</TotalCount>
      <PageNumber>1</PageNumber>
      <PageSize>10</PageSize>
      <LaunchTemplateSets>
            <LaunchTemplateSet>
                  <CreateTime>2018-05-14T14:18:00Z</CreateTime>
                  <ModifiedTime>2018-05-14T14:18:00Z</ModifiedTime>
                  <LaunchTemplateid>lt-m5e3ofjr1zn1aw7****</LaunchTemplateid>
                  <LaunchTemplateName>wd-152630748****</LaunchTemplateName>
                  <DefaultVersionNumber>1</DefaultVersionNumber>
                  <LatestVersionNumber>1</LatestVersionNumber>
                  <CreatedBy>194211134971****</CreatedBy>
            </LaunchTemplateSet>
      </LaunchTemplateSets>
</DescribeLaunchTemplatesResponse>
```

`JSON` format

```
{
    "RequestId": "04F0F334-1335-436C-A1D7-6C044FE12CBA",
    "TotalCount": 1,
    "PageNumber": 1,
    "PageSize": 10,
    "LaunchTemplateSets": {
        "LaunchTemplateSet": [
            {
                "LaunchTemplateName": "wd-152630748****",
                "CreatedBy": "194211134971****",
                "ModifiedTime": "2018-05-14T14:18:00Z",
                "LatestVersionNumber": 1,
                "CreateTime": "2018-05-14T14:18:00Z",
                "LaunchTemplateId": "lt-m5e3ofjr1zn1aw7q****",
                "DefaultVersionNumber": 1
            }
        ]
    }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotExist	%s	The error message returned because the specified RegionId parameter does not exist.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
403	InnerServiceFailed	%s	The error message returned because an internal service failed to be called.

For a list of error codes, visit the API Error Center.

8.4. DescribeLaunchTemplateVersions

Queries the versions of a launch template.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeLaunchTemplateVersions	The operation that you want to perform. Set the value to **DescribeLaunchTemplateVersions**.
RegionId	String	Yes	cn-hangzhou	The region ID of the launch template. You can call the DescribeRegions operation to query the most recent region list.
LaunchTemplateId	String	No	lt-bp168lnahrdwl39p****	The ID of the launch template. You must specify LaunchTemplateId or LaunchTemplateName to determine a launch template.
LaunchTemplateName	String	No	testLaunchTemplateName	The name of the launch template.
MinVersion	Long	No	1	The minimum version number in the version range to query.

Parameter	Type	Required	Example	Description
MaxVersion	Long	No	10	The maximum version number in the version range to query.
DefaultVersion	Boolean	No	true	Specifies whether to query the default version.
DetailFlag	Boolean	No	true	Specifies whether to query the configurations of the launch template. Valid values: • true: queries the basic information and other details of the launch template. The details include the image ID and system disk size. • false: queries only the basic information of the launch template. The basic information includes the template ID, template name, and default version. Default value: true.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Default value: 10.
LaunchTemplateVersion.N	Long	No	1	Version N of the launch template.

Response parameters

Parameter	Type	Example	Description
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	3989ED0C-20A1-4351-A127-2067FF8390AX	The ID of the request.
PageNumber	Integer	1	The page number of the returned page.
TotalCount	Integer	1	The total number of launch templates.
LaunchTemplateVersionSets	Array of LaunchTemplateVersionSet		Details about the launch template versions.
LaunchTemplateVersionSet			
LaunchTemplateName	String	testLaunchTemplateName	The name of the launch template.
DefaultVersion	Boolean	true	Indicates whether the launch template version is the default version.
VersionNumber	Long	1	The number of the launch template version.
ModifiedTime	String	2022-01-17T08:40:00Z	The time when the launch template was modified.
LaunchTemplateId	String	lt-bp67acfmxazb4p****	The ID of the template.

Parameter	Type	Example	Description
CreateTime	String	2022-01-17T08:22:43Z	The time when the launch template was created.
CreatedBy	String	123456789****	The creator of the launch template.
VersionDescription	String	testVersionDescription	The description of the launch template version.
LaunchTemplateData	Object		The configurations of the launch template.
DeploymentSetId	String	ds-bp1brhwhoqinyjd6****	The ID of the deployment set.
VpcId	String	v-bp67acfmxazb4p****	The ID of the virtual private cloud (VPC).
SystemDisk.PerformanceLevel	String	PL0	The performance level of the enhanced SSD (ESSD) that is used as the system disk. Default value: PL0. Valid values: • PL0: A single ESSD can deliver up to 10,000 random read/write IOPS. • PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. • PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. • PL3: A single ESSD can deliver up to 1,000,000 random read/write IOPS. For more information about ESSD performance levels, see ESSDs.
KeyPairName	String	testKeyPairName	The name of the key pair.
SecurityGroupId	String	sg-bp67acfmxazb4p****	The ID of the security group to which to assign the instance. **Note** The `SecurityGroupId` and `SecurityGroupIds` parameters are mutually exclusive in the response.
NetworkType	String	vpc	The network type. Valid values: • classic: classic network • vpc: VPC
SpotStrategy	String	NoSpot	The bidding policy for the pay-as-you-go instance. Valid values: • NoSpot: The instance is a regular pay-as-you-go instance. • SpotWithPriceLimit: The instance is a preemptible instance with a user-defined maximum hourly price. • SpotAsPriceGo: The instance is a preemptible instance for which the market price at the time of purchase is automatically used as the bid price.
EnableVmOsConfig	Boolean	false	Indicates whether to enable the operating system configuration of the instance.
Description	String	testInstanceDescription	The description of the instance.

Parameter	Type	Example	Description
SpotDuration	Integer	1	The protection period of the preemptible instance. Unit: hours. Valid values: 0, 1, 2, 3, 4, 5, and 6. Take note of the following items: • Protection periods of 2, 3, 4, 5, and 6 hours are in invitational preview. If you want to set this parameter to one of these values, submit a ticket. • A value of 0 indicates that no protection period is configured for the preemptible instance.
InstanceName	String	testInstanceName	The name of the instance.
SecurityEnhancementStrategy	String	active	Indicates whether to enable security hardening.
UserData	String	SGVsbG9FQ1M=	The user data of the instance, which is Base64-encoded.
SystemDisk.DiskName	String	testSystemDiskName	The name of the system disk.
SystemDisk.Size	Integer	40	The size of the system disk. Unit: GiB.
SpotPriceLimit	Float	0.98	The maximum hourly price of the preemptible instance.
PasswordInherit	Boolean	true	Indicates whether the username and password pair preset in the image is used.
PrivateIpAddress	String	10.1.**.**	The private IP address of the instance.
ImageId	String	m-bp67acfmxazb4p****	The ID of the image.
SystemDisk.DeleteWithInstance	Boolean	true	Indicates whether to release the system disk when the instance is released. Valid values: • true: releases the system disk when the instance is released. • false: does not release the system disk when the instance is released.
SystemDisk.Category	String	cloud_ssd	The category of the system disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • cloud_essd: ESSD You can use the SystemDisk.PerformanceLevel parameter to set the performance level of the ESSD used as the system disk. For non-I/O optimized instances of retired instance types, the default value is cloud. For other instances, the default value is cloud_efficiency.
AutoReleaseTime	String	2018-05-14T14:18:00Z	The automatic release time of the instance.
SystemDisk.Description	String	testSystemDiskDescription	The description of the system disk.
ImageOwnerAlias	String	system	The source of the image. Valid values: • system: public images provided by Alibaba Cloud. • self: custom images that you create. • others: shared images from other Alibaba Cloud accounts. • marketplace: Alibaba Cloud Marketplace images.

Parameter	Type	Example	Description
HostName	String	testHostName	The hostname of the instance.
SystemDisk.Iops	Integer	101800	The number of IOPS on the system disk.
InternetMaxBandwidthOut	Integer	100	The maximum outbound public bandwidth.
InternetMaxBandwidthIn	Integer	5	The maximum inbound public bandwidth.
InstanceType	String	ecs.g5.large	The instance type.
Period	Integer	1	The subscription duration.
InstanceChargeType	String	Postpaid	The billing method of the instance. Valid values: • PrePaid: subscription • PostPaid: pay-as-you-go
IoOptimized	String	none	Specifies whether the instance is I/O optimized.
RamRoleName	String	testRamRoleName	The name of the instance RAM role.
VSwitchId	String	vsw-bp67acfmxazb4p****	The ID of the vSwitch to which to connect the instance.
ResourceGroupId	String	rg-bp67acfmxazb4p****	The ID of the resource group to which the launch template belongs.
InternetChargeType	String	PayByTraffic	The billing method for network usage.
ZoneId	String	cn-hangzhou-g	The ID of the zone.
Ipv6AddressCount	Integer	1	The number of IPv6 addresses to assign to the instance.
DataDisks	Array of DataDisk		Details about the data disks.
DataDisk			
PerformanceLevel	String	PL1	The performance level of ESSD used as the data disk. This parameter is returned only when `Category` is set to cloud_essd. Valid values: • PL0: A single ESSD can deliver up to 10,000 random read/write IOPS. • PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. • PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. • PL3: A single ESSD can deliver up to 1,000,000 random read/write IOPS.
Description	String	testDiskDescription	The description of the data disk.
SnapshotId	String	s-bp67acfmxazb4p****	The ID of the snapshot used to create the data disk.

Parameter	Type	Example	Description
Device	String	/dev/xvda	The device name of the data disk. **Note** This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
Size	Integer	2000	The size of the data disk.
DiskName	String	testDiskName	The name of the data disk.
Category	String	cloud_ssd	The category of the data disk.
DeleteWithInstance	Boolean	true	Indicates whether to release the data disk when the instance is released.
Encrypted	String	false	Specifies whether to encrypt the data disk.
NetworkInterfaces	Array of NetworkInterface		Details about the secondary elastic network interfaces (ENIs).
NetworkInterface			
NetworkInterfaceName	String	testNetworkInterfaceName	The name of the secondary ENI.
VSwitchId	String	vsw-bp67acfmxazb4p****	The ID of the vSwitch to which to connect the ENI.
Description	String	testNetworkInterfacesDescription	The description of the secondary ENI.
PrimaryIpAddress	String	203.0.*.*	The primary private IP address of the secondary ENI.
SecurityGroupId	String	sg-bp67acfmxazb4p****	The ID of the security group to which to assign the secondary ENI. The security group and the ENI must belong to the same VPC. **Note** The SecurityGroupId and SecurityGroupIds parameters are mutually exclusive in the response.
SecurityGroupIds	Array of String	["sg-bp15ed6xe1yxeycg7****"]	The IDs of the security groups to which to assign the secondary ENI. **Note** The SecurityGroupId and SecurityGroupIds parameters are mutually exclusive in the response.
Tags	Array of InstanceTag		The tags of the instance.
InstanceTag			
Key	String	TestKey	The tag key of the instance.
Value	String	TestValue	The tag value of the instance.

Parameter	Type	Example	Description
SecurityGroupIds	Array of String	["sg-bp15ed6xe1yxeycg7****"]	The IDs of the security groups to which to assign the instance. **Note** The `SecurityGroupId` and `SecurityGroupIds` parameters are mutually exclusive in the response.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=DescribeLaunchTemplateVersions
&RegionId=cn-hangzhou
&LaunchTemplateId=lt-bp168lnahrdwl39p****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeLaunchTemplateVersionsResponse>
    <PageSize>10</PageSize>
    <RequestId>3989ED0C-20A1-4351-A127-2067FF8390AX</RequestId>
    <PageNumber>1</PageNumber>
    <TotalCount>1</TotalCount>
    <LaunchTemplateVersionSets>
        <LaunchTemplateName>testLaunchTemplateName</LaunchTemplateName>
        <DefaultVersion>true</DefaultVersion>
        <VersionNumber>1</VersionNumber>
        <ModifiedTime>2022-01-17T08:40:00Z</ModifiedTime>
        <LaunchTemplateId>lt-bp67acfmxazb4p****</LaunchTemplateId>
        <CreateTime>2022-01-17T08:22:43Z</CreateTime>
        <CreatedBy>123456789****</CreatedBy>
        <VersionDescription>testVersionDescription</VersionDescription>
        <LaunchTemplateData>
            <DeploymentSetId>ds-bp1brhwhoqinyjd6****</DeploymentSetId>
            <VpcId>v-bp67acfmxazb4p****</VpcId>
            <SystemDisk.PerformanceLevel>PL0</SystemDisk.PerformanceLevel>
            <KeyPairName>testKeyPairName</KeyPairName>
            <SecurityGroupId>sg-bp67acfmxazb4p****</SecurityGroupId>
            <NetworkType>vpc</NetworkType>
            <SpotStrategy>NoSpot</SpotStrategy>
            <EnableVmOsConfig>false</EnableVmOsConfig>
            <Description>testInstanceDescription</Description>
            <SpotDuration>1</SpotDuration>
            <InstanceName>testInstanceName</InstanceName>
            <SecurityEnhancementStrategy>active</SecurityEnhancementStrategy>
            <UserData>SGVsbG9FQ1M=</UserData>
            <SystemDisk.DiskName>testSystemDiskName</SystemDisk.DiskName>
            <SystemDisk.Size>40</SystemDisk.Size>
            <SpotPriceLimit>0.98</SpotPriceLimit>
            <PasswordInherit>true</PasswordInherit>
            <PrivateIpAddress>10.1.**.**</PrivateIpAddress>
            <ImageId>m-bp67acfmxazb4p****</ImageId>
            <SystemDisk.DeleteWithInstance>true</SystemDisk.DeleteWithInstance>
            <SystemDisk.Category>cloud_ssd</SystemDisk.Category>
            <AutoReleaseTime>2018-05-14T14:18:00Z</AutoReleaseTime>
            <SystemDisk.Description>testSystemDiskDescription</SystemDisk.Description>
            <ImageOwnerAlias>system</ImageOwnerAlias>
            <HostName>testHostName</HostName>
            <SystemDisk.Iops>101800</SystemDisk.Iops>
            <InternetMaxBandwidthOut>100</InternetMaxBandwidthOut>
            <InternetMaxBandwidthIn>5</InternetMaxBandwidthIn>
            <InstanceType>ecs.g5.large</InstanceType>
            <Period>1</Period>
            <InstanceChargeType>Postpaid</InstanceChargeType>
            <IoOptimized>none</IoOptimized>
            <RamRoleName>testRamRoleName</RamRoleName>
            <VSwitchId>vsw-bp67acfmxazb4p****</VSwitchId>
```

```
            <ResourceGroupId>rg-bp67acfmxazb4p****</ResourceGroupId>
            <InternetChargeType>PayByTraffic</InternetChargeType>
            <ZoneId>cn-hangzhou-g</ZoneId>
            <Ipv6AddressCount>1</Ipv6AddressCount>
            <DataDisks>
                <PerformanceLevel>PL1</PerformanceLevel>
                <Description>testDiskDescription</Description>
                <SnapshotId>s-bp67acfmxazb4p****</SnapshotId>
                <Device>/dev/xvda</Device>
                <Size>2000</Size>
                <DiskName>testDiskName</DiskName>
                <Category>cloud_ssd</Category>
                <DeleteWithInstance>true</DeleteWithInstance>
                <Encrypted>false</Encrypted>
            </DataDisks>
            <NetworkInterfaces>
                <NetworkInterfaceName>testNetworkInterfaceName</NetworkInterfaceName>
                <VSwitchId>vsw-bp67acfmxazb4p****</VSwitchId>
                <Description>testNetworkInterfacesDescription</Description>
                <PrimaryIpAddress>203.0.*.*</PrimaryIpAddress>
                <SecurityGroupId>sg-bp67acfmxazb4p****</SecurityGroupId>
                <SecurityGroupIds>["sg-bp15ed6xe1yxeycg7****"]</SecurityGroupIds>
            </NetworkInterfaces>
            <Tags>
                <Key>TestKey</Key>
                <Value>TestValue</Value>
            </Tags>
            <SecurityGroupIds>["sg-bp15ed6xe1yxeycg7****"]</SecurityGroupIds>
        </LaunchTemplateData>
    </LaunchTemplateVersionSets>
</DescribeLaunchTemplateVersionsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "PageSize" : 10,
  "RequestId" : "3989ED0C-20A1-4351-A127-2067FF8390AX",
  "PageNumber" : 1,
  "TotalCount" : 1,
  "LaunchTemplateVersionSets" : [ {
    "LaunchTemplateName" : "testLaunchTemplateName",
    "DefaultVersion" : true,
    "VersionNumber" : 1,
    "ModifiedTime" : "2022-01-17T08:40:00Z",
    "LaunchTemplateId" : "lt-bp67acfmxazb4p****",
    "CreateTime" : "2022-01-17T08:22:43Z",
    "CreatedBy" : "123456789****",
    "VersionDescription" : "testVersionDescription",
    "LaunchTemplateData" : {
      "DeploymentSetId" : "ds-bp1brhwhoqinyjd6****",
      "VpcId" : "v-bp67acfmxazb4p****",
      "SystemDisk.PerformanceLevel" : "PL0",
      "KeyPairName" : "testKeyPairName",
      "SecurityGroupId" : "sg-bp67acfmxazb4p****",
      "NetworkType" : "vpc",
      "SpotStrategy" : "NoSpot",
      "EnableVmOsConfig" : false,
      "Description" : "testInstanceDescription",
      "SpotDuration" : 1,
      "InstanceName" : "testInstanceName",
      "SecurityEnhancementStrategy" : "active",
      "UserData" : "SGVsbG9FQ1M=",
      "SystemDisk.DiskName" : "testSystemDiskName",
      "SystemDisk.Size" : 40,
      "SpotPriceLimit" : 0.98,
      "PasswordInherit" : true,
      "PrivateIpAddress" : "10.1.**.**",
      "ImageId" : "m-bp67acfmxazb4p****",
      "SystemDisk.DeleteWithInstance" : true,
      "SystemDisk.Category" : "cloud_ssd",
      "AutoReleaseTime" : "2018-05-14T14:18:00Z",
      "SystemDisk.Description" : "testSystemDiskDescription",
```

```
      "ImageOwnerAlias" : "system",
      "HostName" : "testHostName",
      "SystemDisk.Iops" : 101800,
      "InternetMaxBandwidthOut" : 100,
      "InternetMaxBandwidthIn" : 5,
      "InstanceType" : "ecs.g5.large",
      "Period" : 1,
      "InstanceChargeType" : "Postpaid",
      "IoOptimized" : "none",
      "RamRoleName" : "testRamRoleName",
      "VSwitchId" : "vsw-bp67acfmxazb4p****",
      "ResourceGroupId" : "rg-bp67acfmxazb4p****",
      "InternetChargeType" : "PayByTraffic",
      "ZoneId" : "cn-hangzhou-g",
      "Ipv6AddressCount" : 1,
      "DataDisks" : [ {
        "PerformanceLevel" : "PL1",
        "Description" : "testDiskDescription",
        "SnapshotId" : "s-bp67acfmxazb4p****",
        "Device" : "/dev/xvda",
        "Size" : 2000,
        "DiskName" : "testDiskName",
        "Category" : "cloud_ssd",
        "DeleteWithInstance" : true,
        "Encrypted" : "false"
      } ],
      "NetworkInterfaces" : [ {
        "NetworkInterfaceName" : "testNetworkInterfaceName",
        "VSwitchId" : "vsw-bp67acfmxazb4p****",
        "Description" : "testNetworkInterfacesDescription",
        "PrimaryIpAddress" : "203.0.*.*",
        "SecurityGroupId" : "sg-bp67acfmxazb4p****",
        "SecurityGroupIds" : [ "[\"sg-bp15ed6xe1yxeycg7****\"]" ]
      } ],
      "Tags" : [ {
        "Key" : "TestKey",
        "Value" : "TestValue"
      } ],
      "SecurityGroupIds" : [ "[\"sg-bp15ed6xe1yxeycg7****\"]" ]
    }
  } ]
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotExist	%s	The error message returned because the specified RegionId parameter does not exist.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
403	InnerServiceFailed	%s	The error message returned because an internal service cannot be called.
404	InvalidLaunchTemplate.NotFound	The specified LaunchTemplate is not found.	The error message returned because the specified launch template does not exist.

For a list of error codes, visit the API Error Center.

8.5. ModifyLaunchTemplateDefaultVersion

You can call this operation to change the default version of an instance launch template. If you do not specify a template version number when you create an instance (RunInstances), the default version is used.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyLaunchTemplateDefaultVersion	The operation that you want to perform. Set the value to ModifyLaunchTemplateDefaultVersion.
DefaultVersionNumber	Long	Yes	2	The default version number of the instance launch template.
RegionId	String	Yes	cn-hangzhou	The region ID of the launch template. You can call the DescribeRegions operation to query the most recent region list.
LaunchTemplateId	String	No	lt-s-bp177juajht6****	The ID of the launch template. You must specify the LaunchTemplateId or LaunchTemplateName parameter to determine an instance launch template.
LaunchTemplateName	String	No	testLaunchTemplateName	The name of the instance launch template. You must specify the LaunchTemplateId or LaunchTemplateName parameter to determine an instance launch template.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyLaunchTemplateDefaultVersion
&DefaultVersionNumber=2
&RegionId=cn-hangzhou
&LaunchTemplateId=lt-s-bp177juajht6****
&LaunchTemplateName=testLaunchTemplateName
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyLaunchTemplateDefaultVersionResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ModifyLaunchTemplateDefaultVersionResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotExist	%s	The error message returned because the specified RegionId parameter does not exist. Check whether the region ID is correct.
404	InvalidLaunchTemplate.NotFound	%s	The error message returned because the specified launch template does not exist. Check whether the specified LaunchTemplateId or LaunchTemplateName parameter is correct.

HTTP status code	Error code	Error message	Description
404	InvalidLaunchTemplateVersion.NotFound	%s	The error message returned because the specified LaunchTemplateVersion parameter does not exist. Check whether the launch template version is correct.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
403	InnerServiceFailed	%s	The error message returned because an internal service failed to be called.

For a list of error codes, visit the API Error Center.

8.6. DeleteLaunchTemplate

Deletes an instance launch template.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteLaunchTemplate	The operation that you want to perform. Set the value to **DeleteLaunchTemplate**.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance launch template. You can call the DescribeRegions operation to query the most recent region list.
LaunchTemplateId	String	No	lt-bp1apo0bbbkuy0rj****	The ID of the instance launch template. For more information, call the DescribeLaunchTemplates operation. You must specify the `LaunchTemplateId` parameter or the `LaunchTemplateName` parameter to determine an instance launch template.
LaunchTemplateName	String	No	testLaunchTemplateName	The name of the instance launch template. You must specify the `LaunchTemplateId` parameter or the `LaunchTemplateName` parameter to determine an instance launch template.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteLaunchTemplate
&RegionId=cn-hangzhou
&LaunchTemplateId=lt-bp1apo0bbbkuy0rj****
&LaunchTemplateName=testLaunchTemplateName
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DeleteLaunchTemplateResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DeleteLaunchTemplateResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidRegion.NotExist	%s	The error message returned because the specified RegionId parameter does not exist.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
403	InnerServiceFailed	%s	The error message returned because an internal service cannot be called.

For a list of error codes, visit the API Error Center.

8.7. DeleteLaunchTemplateVersion

Deletes a version of an instance launch template. This operation cannot delete the default version of an instance launch template. To delete the default version, you must call the DeleteLaunchTemplate operation to delete the instance launch template and all of its versions.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteLaunchTemplateVersion	The operation that you want to perform. Set the value to **DeleteLaunchTemplateVersion**.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the instance lauch template belongs. You can call the DescribeRegions operation to query the most recent region list.
LaunchTemplateId	String	No	lt-bp1apo0bbbkuy0rj****	The ID of the instance launch template. For more information, call the DescribeLaunchTemplates operation.
LaunchTemplateName	String	No	testLaunchTemplateName	The name of the instance launch template.
DeleteVersion.N	Long	Yes	2	The version number of the instance launch template. Valid values of N: 1 to 29. You can call the DescribeLaunchTemplateVersions operation to query all versions of an instance launch template.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteLaunchTemplateVersion
&DeleteVersion.1=2
&RegionId=cn-hangzhou
&LaunchTemplateId=lt-bp1apo0bbbkuy0rj****
&LaunchTemplateName=testLaunchTemplateName
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DeleteLaunchTemplateVersionResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DeleteLaunchTemplateVersionResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidRegion.NotExist	%s	The error message returned because the specified RegionId parameter does not exist.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
403	InvalidOperation.DeleteDefaultVersion	%s	The error message returned because the specified operation is invalid.
403	InnerServiceFailed	%s	The error message returned because an internal service cannot be called.

For a list of error codes, visit the API Error Center.

9.Resource assurance

9.1. CreateElasticityAssurance

Creates an elasticity assurance.

Description

Elasticity Assurance provides a new method to purchase and use resources with flexibility and assurance. It offers assured resource reservations for pay-as-you-go Elastic Compute Service (ECS) instances. For more information, see Overview of Elasticity Assurance.

- Elasticity assurances are not refundable after purchase.
- Elasticity assurances are applicable only to pay-as-you-go ECS instances.
- Only elasticity assurances in unlimited mode are supported. You can set `AssuranceTimes` only to `Unlimited`. Elasticity assurances in unlimited mode can be applied an unlimited number of times within their effective duration. Elasticity assurances in unlimited mode take effect immediately after they are purchased.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateElasticityAssurance	The operation that you want to perform. Set the value to **CreateElasticityAssurance**.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which to create the elasticity assurance. You can call the DescribeRegions operation to query the most recent region list.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the elasticity assurance.
Period	Integer	No	1	The effective duration of the elasticity assurance. The unit of the duration is determined by the `PeriodUnit` value. Valid values: • When the `PeriodUnit` parameter is set to `Month`, the valid values of the Period parameter are 1, 2, 3, 4, 5, 6, 7, 8, and 9. • When the `PeriodUnit` parameter is set to `Year`, the valid values of the Period parameter are 1, 2, 3, 4, and 5. Default value: 1.
PeriodUnit	String	No	Year	The unit of the effective duration of the elasticity assurance. Valid values: • Month • Year Default value: Year.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The `ClientToken` value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Parameter	Type	Required	Example	Description
PrivatePoolOptions.Name	String	No	eapTestName	The name of the elasticity assurance. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Description	String	No	This is description.	The description of the elasticity assurance. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`. This parameter is empty by default.
PrivatePoolOptions.MatchCriteria	String	No	Open	The type of the private pool associated with the elasticity assurance. Valid values: • Open: open private pool • Target: targeted private pool Default value: Open.
AssuranceTimes	String	No	Unlimited	The total number of times that the elasticity assurance can be applied. Set the value to Unlimited. This value indicates that the elasticity assurance can be applied an unlimited number of times within its effective duration. Default value: Unlimited.
InstanceAmount	Integer	No	2	The total number of instances for which to reserve the capacity of an instance type. Valid values: 1 to 1000.
StartTime	String	No	2020-10-30T06:32:00Z	The time when the elasticity assurance takes effect. The default value is the time when the CreateElasticityAssurance operation is called to create the elasticity assurance. Specify the time in the ISO 8601 standard in the `yyyy-MM-ddTHH:mm:ssZ` format. The time must be in UTC. For more information, see ISO 8601.
Tag.N.Key	String	No	TestKey	The key of tag N of the elasticity assurance. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.
Tag.N.Value	String	No	TestValue	The value of tag N of the elasticity assurance. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with `acs:`. It cannot contain `http://` or `https://`.
InstanceType.N	String	Yes	ecs.c6.xlarge	Instance type N. Currently, an elasticity assurance can be created to reserve the capacity of a single instance type. Set N to 1.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
PrivatePoolOptionsId	String	eap-bp67acfmxazb4****	The ID of the elasticity assurance.

Parameter	Type	Example	Description
OrderId	String	1234567890	The ID of the order.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateElasticityAssurance
&RegionId=cn-hangzhou
&InstanceType.1=ecs.c6.xlarge
&ZoneId.1=cn-hangzhou-h
&InstanceAmount=2
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateElasticityAssuranceResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <PrivatePoolOptionsId>eap-bp67acfmxazb4****</PrivatePoolOptionsId>
    <OrderId>1234567890</OrderId>
</CreateElasticityAssuranceResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "PrivatePoolOptionsId" : "eap-bp67acfmxazb4****",
  "OrderId" : "1234567890"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	OperationDenied	The specified InstanceType or Zone is not available or not authorized.	The error message returned because the specified instance type or zone is unavailable or because you are not authorized to use resources of the specified instance type or within the specified zone.
400	MissingParameter.RegionId	The specified RegionId should not be null.	The error message returned because the required RegionId parameter is not specified.
400	InvalidStartTime.NotSupported	The specified StartTime should be within 180 calendar days from the current date, and you must specify a precision to hour.	The error message returned because the specified StartTime parameter is invalid.
400	InvalidStartTime.MalFormed	The specified StartTime is out of the permitted range.	The error message returned because the specified StartTime parameter is invalid.
400	DedicatedHostNotSupported	DedicatedHost is not supported for PrivatePool.	The error message returned because private pools cannot be used to create instances on dedicated hosts.
400	SpotNotSupported	Spot is not supported for PrivatePool.	The error message returned because private pools cannot be used to create preemptible instances.
400	ClassicNetworkNotSupported	Classic network is not supported for PrivatePool.	The error message returned because private pools cannot be used to create instances in the classic network.
400	Invalid.InstanceId	Instance does not exist.	The error message returned because the instance does not exist.

HTTP status code	Error code	Error message	Description
400	Invalid.PrivatePoolOptions.MatchCriteria	Target mode does not support this operation.	The error message returned because the operation is not supported while the PrivatePoolOptions.MatchCriteria parameter is set to Target.
400	MissingParameter.PrivatePoolOptions.Id	The specified PrivatePoolOptions.Id should not be null.	The error message returned because the PrivatePoolOptions.Id parameter is not specified.
400	Invalid.PrivatePoolOptions.Id	The PrivatePool does not exist.	The error message returned because the specified private pool does not exist.
400	Invalid.InstanceType	The InstanceType does not match the PrivatePool.	The error message returned because the specified instance type does not match the specified private pool.
400	Invalid.InstanceChargeType	The InstanceChargeType does not match the PrivatePool.	The error message returned because the specified billing method of the instance does not match the specified private pool.
400	Invalid.ZoneId	The ZoneId does not match the PrivatePool.	The error message returned because the specified zone does not match the specified private pool.
400	Invalid.PrivatePoolOptions.MatchCriteria	The PrivatePoolOptions.MatchCriteria does not match the PrivatePool.	The error message returned because the specified PrivatePoolOptions.MatchCriteria parameter does not match the private pool.
400	InvalidPlatform.ValueNotSupported	The Platform does not match the PrivatePool.	The error message returned because the specified Platform parameter does not match the private pool.
400	InvalidAliUid	The PrivatePool does not belong to the user of the Instance.	The error message returned because the specified private pool does not belong to the user who attempted to create the instance.
400	Invalid.InstanceId	The Instance dose not attached to a PrivatePool.	The error message returned because the instance does not match the private pool.
400	Invalid.TooManyPrivatePoolOptions.Ids	Too many PrivatePoolOptions.Ids in this request.	The error message returned because the number of specified elasticity assurance IDs exceeds the upper limit.
400	Invalid.TooManyZoneIds	Too many ZoneIds in the request.	The error message returned because the number of specified zone IDs exceeds the upper limit.
400	Invalid.TooManyInstanceTypes	Too many InstanceTypes in the request.	The error message returned because the number of specified instance types exceeds the upper limit.
400	Invalid.TooManyUnpaidPrivatePool	Too many PrivatePools create but still unpaid.	The error message returned because multiple private pools are created but not paid.
400	Invalid.InstanceCpuCoreCountOrInstanceAmount	Both InstanceCpuCoreCount and InstanceAmount are provided.	The error message returned because the InstanceCpuCoreCount and InstanceAmount parameters cannot be specified at the same time.
400	Invalid.PrivatePool.Purchase	The PrivatePool has already paid.	The error message returned because the private pool is already paid.
400	Invalid.AssuranceTimes.NotSupported	The value of AssuranceTimes is not supported.	The error message returned because the specified AssuranceTimes parameter is invalid.
400	RepeatStartPrivatePool	PrivatePool has already been started.	The error message returned because the private pool is already started.
403	Zone.NotOpen	The specified zone is not granted to you to buy resources yet.	The error message returned because you are not authorized to purchase resources in the specified zone.

HTTP status code	Error code	Error message	Description
403	OperationDenied.NoStock	The resource is out of stock in the specified zone. Please try other types, or choose other regions and zones.	The error message returned because the requested resources are unavailable in the specified zone. Try other resource types or select other regions or zones.
403	InvalidInstanceType.NotSupported	The specified InstanceType is invalid.	The error message returned because the specified InstanceType.N parameter is invalid.
403	Zone.NotOnSale	The specified zone is not available for purchase.	The error message returned because the requested resources are unavailable in the specified zone. Try other resource types or select other regions or zones.
404	InvalidZoneId.NotFound	The specified zoneId does not exist.	The error message returned because the specified zone ID does not exist.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

9.2. CreateCapacityReservation

Creates an immediate capacity reservation.

Description

When you create a capacity reservation, you can specify attributes such as zone and instance type. The system uses a private pool to reserve resources that match the specified attributes. For more information, see Overview of Immediate Capacity Reservation.

- Currently, only immediate capacity reservations are supported. Immediate capacity reservations immediately take effect as soon as they are purchased. After you purchase an immediate capacity reservation, the specified instance type is billed on a pay-as-you-go basis, regardless of whether you actually use the capacity reservation to create pay-as-you-go instances. Billing stops until you manually release the capacity reservation or until the capacity reservation expires and is automatically released.
  - You can call the CreateInstance or RunInstances operation to specify private pool attributes when you create instances. You can also call the ModifyInstanceAttachmentAttributes operation to modify the attributes of a private pool. When an instance matches a private pool associated with a capacity reservation, you are charged based on the configurations of the instance such as the instance type, disks, and public bandwidth.
  - Before a private pool associated with a capacity reservation is used to create pay-as-you-go instances, you are charged only for the specified instance type.
- Savings plans or regional reserved instances can be applied to offset the hourly bills of the unused capacity of immediate capacity reservations and the hourly bills of the instances that match immediate capacity reservations. Zonal reserved instances cannot be applied to offset these bills. We recommend that you purchase reserved instances or savings plans before you purchase immediate capacity reservations. This way, you can have guaranteed access to resources for free within the coverage of the reserved instances or savings plans.

> **Note** This API operation can be called to create only immediate capacity reservations. The ECS console can be used to create immediate or scheduled capacity reservations. For more information, see Overview.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateCapacityReservation	The operation that you want to perform. Set the value to **CreateCapacityReservation**.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region in which to create the capacity reservation. You can call the DescribeRegions operation to query the most recent region list.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the capacity reservation.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The `ClientToken` value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
PrivatePoolOptions.Name	String	No	crpTestName	The name of the capacity reservation. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Description	String	No	This is description.	The description of the capacity reservation. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`. This parameter is empty by default.
PrivatePoolOptions.MatchCriteria	String	No	Open	The type of the private pool to be generated after the capacity reservation takes effect. Valid values: • Open: open private pool • Target: targeted private pool Default value: Open.
InstanceAmount	Integer	Yes	2	The total number of instances for which to reserve the capacity of an instance type.
InstanceType	String	Yes	ecs.g6.xlarge	The instance type. A capacity reservation can be created to reserve the capacity of only a single instance type.
StartTime	String	No	2021-10-30T05:32:00Z	The mode in which the capacity reservation takes effect. The CreateCapacityReservation operation can only be called to create immediate capacity reservations. **Note** If this parameter is empty, the capacity reservation is created as an immediate capacity reservation.
EndTime	String	No	2021-10-30T06:32:00Z	The expiration time of the capacity reservation. Specify the time in the ISO 8601 standard in the `yyyy-MM-ddTHH:mm:ssZ` format. The time must be in UTC. For more information, see ISO 8601.

Parameter	Type	Required	Example	Description
EndTimeType	String	No	Unlimited	The release mode of the capacity reservation. Valid values: • Limited: The capacity reservation is released at the specified time. If you specify this parameter, you must also specify the `EndTime` parameter. • Unlimited: The capacity reservation must be manually released. You can release it at anytime.
Platform	String	No	Linux	The operating system type. This parameter corresponds to the `Platform` parameter of regional reserved instances. If the operating system of a capacity reservation matches that of a regional reserved instance, the regional reserved instance can be applied to offset bills of the unused capacity of the capacity reservation. Valid values: • Windows: Windows Server operating system • Linux: Linux and UNIX-like operating system Default value: Linux. **Note** This parameter is unavailable.
Tag.N.Key	String	No	TestKey	The key of tag N of the capacity reservation. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.
Tag.N.Value	String	No	TestValue	The value of tag N of the capacity reservation. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with `acs:` or contain `http://` or `https://`.
ZoneId.N	String	Yes	cn-hangzhou-h	The ID of zone N within the region in which to create the capacity reservation. A capacity reservation can reserve resources within only a single zone.

Response parameters

Parameter	Type	Example	Description
PrivatePoolOptionsId	String	crp-bp67acfmxazb4****	The ID of the capacity reservation.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateCapacityReservation
&RegionId=cn-hangzhou
&InstanceType=ecs.g6.xlarge
&InstanceAmount=2
&ZoneId.1=cn-hangzhou-h
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateCapacityReservationResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <PrivatePoolOptionsId>crp-bp67acfmxazb4****</PrivatePoolOptionsId>
</CreateCapacityReservationResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "PrivatePoolOptionsId" : "crp-bp67acfmxazb4****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	OperationDenied	The specified InstanceType or Zone is not available or not authorized.	The error message returned because the specified instance type or zone is unavailable or because you are not authorized to use resources of the specified instance type or within the specified zone.
400	MissingParameter.RegionId	The specified RegionId should not be null.	The error message returned because the required RegionId parameter is not specified.
400	InvalidStartTime.NotSupported	The specified StartTime should be within 180 calendar days from the current date, and you must specify a precision to hour.	The error message returned because the specified StartTime parameter is invalid.
400	InvalidStartTime.MalFormed	The specified StartTime is out of the permitted range.	The error message returned because the specified StartTime parameter is invalid.
400	DedicatedHostNotSupported	DedicatedHost is not supported for PrivatePool.	The error message returned because private pools cannot be used to create instances on dedicated hosts.
400	SpotNotSupported	Spot is not supported for PrivatePool.	The error message returned because private pools cannot be used to create preemptible instances.
400	ClassicNetworkNotSupported	Classic network is not supported for PrivatePool.	The error message returned because private pools cannot be used to create instances in the classic network.
400	Invalid.InstanceId	Instance does not exist.	The error message returned because the specified instance does not exist.
400	Invalid.PrivatePoolOptions.MatchCriteria	Target mode does not support this operation.	The error message returned because this operation does not support targeted private pools.
400	MissingParameter.PrivatePoolOptions.Id	The specified PrivatePoolOptions.Id should not be null.	The error message returned because the PrivatePoolOptions.Id parameter is not specified.
400	Invalid.PrivatePoolOptions.Id	The PrivatePool does not exist.	The error message returned because the private pool does not exist.
400	Invalid.InstanceType	The InstanceType does not match the PrivatePool.	The error message returned because the specified instance type does not match the specified private pool.
400	Invalid.InstanceChargeType	The InstanceChargeType does not match the PrivatePool.	The error message returned because the private pool cannot be used to create instances that use the specified billing method.
400	Invalid.ZoneId	The ZoneId does not match the PrivatePool.	The error message returned because the zone does not match the private pool.

HTTP status code	Error code	Error message	Description
400	Invalid.PrivatePoolOptions.MatchCriteria	The PrivatePoolOptions.MatchCriteria does not match the PrivatePool.	The error message returned because the specified PrivatePoolOptions.MatchCriteria parameter does not match the private pool.
400	InvalidPlatform.ValueNotSupported	The Platform does not match the PrivatePool.	The error message returned because the specified Platform parameter does not match the private pool.
400	InvalidAliUid	The PrivatePool does not belong to the user of the Instance.	The error message returned because the specified private pool does not belong to the user who created the instance.
400	Invalid.InstanceId	The Instance dose not attached to a PrivatePool.	The error message returned because the instance is not matched to the private pool.
400	Invalid.TooManyPrivatePoolOptions.Ids	Too many PrivatePoolOptions.Ids in this request.	The error message returned because the number of specified capacity reservation IDs exceeds the upper limit.
400	Invalid.TooManyZoneIds	Too many ZoneIds in the request.	The error message returned because the number of specified zone IDs exceeds the upper limit.
400	Invalid.TooManyInstanceTypes	Too many InstanceTypes in the request.	The error message returned because the number of specified instance types exceeds the upper limit.
400	Invalid.TooManyUnpaidPrivatePool	Too many PrivatePools create but still unpaid.	The error message returned because multiple private pools are created but not paid.
400	Invalid.InstanceCpuCoreCountOrInstanceAmount	Both InstanceCpuCoreCount and InstanceAmount are provided.	The error message returned because the InstanceCpuCoreCount and InstanceAmount parameters cannot be specified at the same time.
400	Invalid.PrivatePool.Purchase	The PrivatePool has already paid.	The error message returned because the private pool is already paid.
400	Invalid.AssuranceTimes.NotSupported	The value of AssuranceTimes is not supported.	The error message returned because the specified AssuranceTimes parameter is invalid.
400	RepeatStartPrivatePool	PrivatePool has already been started.	The error message returned because the private pool is already started.
403	Zone.NotOpen	The specified zone is not granted to you to buy resources yet.	The error message returned because you are not authorized to purchase resources in the specified zone.
403	OperationDenied.NoStock	The resource is out of stock in the specified zone. Please try other types, or choose other regions and zones.	The error message returned because the requested resources are unavailable in the specified zone. Try other resource types or select other regions or zones.
403	InvalidInstanceType.NotSupported	The specified InstanceType is invalid.	The error message returned because the specified InstanceType parameter is invalid.
403	Zone.NotOnSale	The specified zone is not available for purchase.	The error message returned because the requested resources are unavailable in the specified zone. Try other resource types or select other regions or zones.
404	InvalidZoneId.NotFound	The specified zoneId does not exist.	The error message returned because the specified ZoneId.N parameter does not exist.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified resource group does not exist.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If this error persists, submit a ticket.

HTTP status code	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If this error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

9.3. DescribeElasticityAssurances

Queries the details of elasticity assurances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeElasticityAssurances	The operation that you want to perform. Set the value to **DescribeElasticityAssurances**.
RegionId	String	Yes	cn-hangzhou	The region ID of the elasticity assurance. You can call the DescribeRegions operation to query the most recent region list.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the elasticity assurance belongs.
MaxResults	Integer	No	10	The maximum number of entries to return on each page. Maximum value: 100. Default value: 10.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query. Set the value to the NextToken value obtained from the response to the previous request.
PrivatePoolOptions.Ids	String	No	["eap-bp67acfmxazb4****", "eap-bp67acfmxazb5****"]	The IDs of elasticity assurances. The value can be a JSON array that consists of up to 100 elasticity assurance IDs. Separate the IDs with commas (,).
InstanceType	String	No	ecs.c6.large	The instance type.
ZoneId	String	No	cn-hangzhou-h	The zone ID of the elasticity assurance.
InstanceChargeType	String	No	PostPaid	The billing method of the instances to be created by using the elasticity assurance. Set the value to PostPaid. Only pay-as-you-go instances can be created by using elasticity assurances. Default value: PostPaid.

Parameter	Type	Required	Example	Description
Status	String	No	Active	The state of the elasticity assurance. Valid values: • All: All states. • Preparing: The elasticity assurance is being prepared. • Prepared: The elasticity assurance is to take effect. • Active: The elasticity assurance is in effect. • Released: The elasticity assurance is released. Default value: Active.
Tag.N.Key	String	No	TestKey	The key of tag N of the elasticity assurance. Valid values of N: 1 to 20. If a single tag is specified to query resources, up to 1,000 resources that have this tag added can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources that have all these tags added can be displayed in the response. To query more than 1,000 resources that have specified tags added, call the ListTagResources operation.
Tag.N.Value	String	No	TestValue	The value of tag N of the elasticity assurance. Valid values of N: 1 to 20.

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of entries returned.
MaxResults	Integer	10	The number of entries returned per page.
ElasticityAssuranceSet	Array of ElasticityAssuranceItem		Details about the elasticity assurances.
ElasticityAssuranceItem			
Status	String	Active	The state of the elasticity assurance. Valid values: • Preparing: The elasticity assurance is being prepared. • Prepared: The elasticity assurance is to take effect. • Active: The elasticity assurance is in effect. • Released: The elasticity assurance is released.
PrivatePoolOptionsMatchCriteria	String	Target	The type of the private pool associated with the elasticity assurance. Valid values: • Open: open private pool • Target: targeted private pool
PrivatePoolOptionsId	String	eap-bp1ir35kqtn8ywci****	The ID of the elasticity assurance.
UsedAssuranceTimes	Integer	0	Note This parameter is unavailable.
LatestStartTime	String	null	Note This parameter is unavailable.

Parameter	Type	Example	Description
PrivatePoolOptionsName	String	eapTestName	The name of the elasticity assurance.
RegionId	String	cn-hangzhou	The region ID of the elasticity assurance.
EndTime	String	2021-12-03T16:00Z	The time when the elasticity assurance expires.
StartTime	String	2020-12-03T05:25Z	The time when the elasticity assurance takes effect.
Description	String	This is description.	The description of the elasticity assurance.
ResourceGroupId	String	rg-bp67acfmxazb4p****	The ID of the resource group to which the elasticity assurance belongs.
TotalAssuranceTimes	String	Unlimited	The total number of times that the elasticity assurance has been applied.
AllocatedResources	Array of AllocatedResource		Details about the allocated resources.
AllocatedResource			
UsedAmount	Integer	2	The number of instances that have used the elasticity assurance.
TotalAmount	Integer	2	The total number of instances for which capacity of an instance type is reserved.
zoneId	String	cn-hangzhou-h	The zone ID.
InstanceType	String	ecs.c6.large	The instance type.
Tags	Array of Tag		The tags of the elasticity assurance.
Tag			
TagValue	String	TestValue	The tag value.
TagKey	String	TestKey	The tag key.
InstanceChargeType	String	PostPaid	The billing method of the instances to be created by using the elasticity assurance. Set the value to PostPaid. Only pay-as-you-go instances can be created by using elasticity assurances.
StartTimeType	String	Now	Indicates when the elasticity assurance takes effect. Valid values: • Now: The elasticity assurance takes effect as soon as it is created. • Later: The elasticity assurance takes effect at the specified time.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeElasticityAssurances
&RegionId=cn-hangzhou
&PrivatePoolOptions.Ids=["eap-bp1ir35kqtn8ywci****", "eap-bp67acfmxazb5****"]
&InstanceType=ecs.c6.large
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeElasticityAssurancesResponse>
    <ElasticityAssuranceSet>
        <ElasticityAssuranceItem>
            <Status>Active</Status>
            <UsedAssuranceTimes>0</UsedAssuranceTimes>
            <Description>This is description.</Description>
            <EndTime>2021-12-03T16:00Z</EndTime>
            <ResourceGroupId>rg-bp67acfmxazb4p****</ResourceGroupId>
            <PrivatePoolOptionsName>eapTestName</PrivatePoolOptionsName>
            <LatestStartTime/>
            <InstanceChargeType>PostPaid</InstanceChargeType>
            <StartTime>2020-12-03T05:25Z</StartTime>
            <StartTimeType>Now</StartTimeType>
            <PrivatePoolOptionsMatchCriteria>Target</PrivatePoolOptionsMatchCriteria>
            <AllocatedResources>
                <AllocatedResource>
                    <UsedAmount>2</UsedAmount>
                    <zoneId>cn-hangzhou-h</zoneId>
                    <TotalAmount>2</TotalAmount>
                    <InstanceType>ecs.c6.large</InstanceType>
                </AllocatedResource>
            </AllocatedResources>
            <PrivatePoolOptionsId>eap-bp1ir35kqtn8ywci****</PrivatePoolOptionsId>
            <TotalAssuranceTimes>Unlimited</TotalAssuranceTimes>
            <RegionId>cn-hangzhou</RegionId>
            <Tags>
                <Tag>
                    <TagKey>TestKey</TagKey>
                    <TagValue>TestValue</TagValue>
                </Tag>
            </Tags>
        </ElasticityAssuranceItem>
    </ElasticityAssuranceSet>
    <TotalCount>1</TotalCount>
    <NextToken>caeba0bbb2be03f84eb48b699f0a4883</NextToken>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <MaxResults>10</MaxResults>
</DescribeElasticityAssurancesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "ElasticityAssuranceSet" : {
    "ElasticityAssuranceItem" : [ {
      "Status" : "Active",
      "UsedAssuranceTimes" : 0,
      "Description" : "This is description.",
      "EndTime" : "2021-12-03T16:00Z",
      "ResourceGroupId" : "rg-bp67acfmxazb4p****",
      "PrivatePoolOptionsName" : "eapTestName",
      "LatestStartTime" : "",
      "InstanceChargeType" : "PostPaid",
      "StartTime" : "2020-12-03T05:25Z",
      "StartTimeType" : "Now",
      "PrivatePoolOptionsMatchCriteria" : "Target",
      "AllocatedResources" : {
        "AllocatedResource" : [ {
          "UsedAmount" : 2,
          "zoneId" : "cn-hangzhou-h",
          "TotalAmount" : 2,
          "InstanceType" : "ecs.c6.large"
        } ]
      },
      "PrivatePoolOptionsId" : "eap-bp1ir35kqtn8ywci****",
      "TotalAssuranceTimes" : "Unlimited",
      "RegionId" : "cn-hangzhou",
      "Tags" : {
        "Tag" : [ {
          "TagKey" : "TestKey",
          "TagValue" : "TestValue"
        } ]
      }
    } ]
  },
  "TotalCount" : 1,
  "NextToken" : "caeba0bbb2be03f84eb48b699f0a4883",
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "MaxResults" : 10
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter.RegionId	The specified RegionId should not be null.	The error message returned because the required RegionId parameter is not specified.
400	DedicatedHostNotSupported	DedicatedHost is not supported for PrivatePool.	The error message returned because private pools cannot be used to create instances on dedicated hosts.
400	SpotNotSupported	Spot is not supported for PrivatePool.	The error message returned because private pools cannot be used to create preemptible instances.
400	ClassicNetworkNotSupported	Classic network is not supported for PrivatePool.	The error message returned because private pools cannot be used to create instances in the classic network.
400	Invalid.InstanceId	Instance does not exist.	The error message returned because the instance does not exist.
400	Invalid.PrivatePoolOptions.MatchCriteria	Target mode does not support this operation.	The error message returned because the operation does not support targeted private pools.
400	MissingParameter.PrivatePoolOptions.Id	The specified PrivatePoolOptions.Id should not be null.	The error message returned because the PrivatePoolOptions.Ids parameter is not specified.

HTTP status code	Error code	Error message	Description
400	Invalid.PrivatePoolOptions.Id	The PrivatePool does not exist.	The error message returned because the private pool does not exist.
400	Invalid.InstanceType	The InstanceType does not match the PrivatePool.	The error message returned because the instance type does not match the private pool.
400	Invalid.InstanceChargeType	The InstanceChargeType does not match the PrivatePool.	The error message returned because the private pool cannot be used to create instances that use the specified billing method.
400	Invalid.ZoneId	The ZoneId does not match the PrivatePool.	The error message returned because the zone does not match the private pool.
400	Invalid.PrivatePoolOptions.MatchCriteria	The PrivatePoolOptions.MatchCriteria does not match the PrivatePool.	The error message returned because the specified PrivatePoolOptions.MatchCriteria parameter does not match the private pool.
400	InvalidPlatform.ValueNotSupported	The Platform does not match the PrivatePool.	The error message returned because the specified Platform parameter does not match the private pool.
400	InvalidAliUid	The PrivatePool does not belong to the user of the Instance.	The error message returned because the private pool does not belong to the user who attempted to create the instance.
400	Invalid.InstanceId	The Instance dose not attached to a PrivatePool.	The error message returned because the instance does not match the private pool.
400	Invalid.TooManyPrivatePoolOptions.Ids	Too many PrivatePoolOptions.Ids in this request.	The error message returned because the number of specified elasticity assurance IDs exceeds the upper limit.
400	Invalid.TooManyZoneIds	Too many ZoneIds in the request.	The error message returned because the number of specified zone IDs exceeds the upper limit.
400	Invalid.TooManyInstanceTypes	Too many InstanceTypes in the request.	The error message returned because the number of specified instance types exceeds the upper limit.
400	Invalid.TooManyUnpaidPrivatePool	Too many PrivatePools create but still unpaid.	The error message returned because multiple private pools are created but not paid.
400	Invalid.InstanceCpuCoreCountOrInstanceAmount	Both InstanceCpuCoreCount and InstanceAmount are provided.	The error message returned because the InstanceCpuCoreCount and InstanceAmount parameters cannot be specified at the same time.
400	Invalid.PrivatePool.Purchase	The PrivatePool has already paid.	The error message returned because the private pool is already paid.
400	Invalid.AssuranceTimes.NotSupported	The value of AssuranceTimes is not supported.	The error message returned because the specified AssuranceTimes parameter is invalid.
400	RepeatStartPrivatePool	PrivatePool has already been started.	The error message returned because the private pool is already started.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

9.4. DescribeElasticityAssuranceInstances

You can call this operation to query the running ECS instances that were created by using an elasticity assurance.

Description

When an elasticity assurance expires, data about the association between instances and the private pool generated by the elasticity assurance becomes invalid. In this case, when you call this operation to query the expired elasticity assurance, no value is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeElasticityAssuranceInstances	The operation that you want to perform. Set the value to DescribeElasticityAssuranceInstances.
PrivatePoolOptions.Id	String	Yes	eap-bp67acfmxazb4****	The ID of the elasticity assurance.
RegionId	String	Yes	cn-hangzhou	The region ID of the elasticity assurance. You can call the DescribeRegions operation to query the most recent region list.
MaxResults	Integer	No	10	The number of entries to return on each page. Maximum value: 100 Default value: 10.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the query. The token is obtained from the response of the previous request.

Response parameters

Parameter	Type	Example	Description
ElasticityAssuranceItem	Array of InstanceIdSet		Details about the instances that were created by using the elasticity assurance.
InstanceIdSet			
InstanceId	String	i-bp67acfmxazb4****	The ID of the instance.
MaxResults	Integer	10	The number of entries returned per page.
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The number of entries that meet the query criteria.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeElasticityAssurances
&RegionId=cn-hangzhou
&PrivatePoolOptions.Ids=eap-bp67acfmxazb4****
&MaxResults=10
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeElasticityAssuranceInstancesResponse>
      <TotalCount>2</TotalCount>
      <RequestId>CAF995AD-487E-4A2F-A064-A209CBA9B4EC</RequestId>
      <NextToken>fdf5da380c6d6b48</NextToken>
      <MaxResults>10</MaxResults>
      <ElasticityAssuranceItem>
            <InstanceIdSet>
                  <InstanceId>i-bp67acfmxazb4****</InstanceId>
            </InstanceIdSet>
            <InstanceIdSet>
                  <InstanceId>i-bp67acfmxazb5****</InstanceId>
            </InstanceIdSet>
      </ElasticityAssuranceItem>
</DescribeElasticityAssuranceInstancesResponse>
```

`JSON` format

```
{"TotalCount":2,
 "RequestId":"CAF995AD-487E-4A2F-A064-A209CBA9B4EC",
 "NextToken":"fdf5da380c6d6b48",
 "MaxResults":10,
 "ElasticityAssuranceItem":
    {"InstanceIdSet":
        [{"InstanceId":"i-bp67acfmxazb4****"},
         {"InstanceId":"i-bp67acfmxazb5****"}]
     }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter.RegionId	The specified RegionId should not be null.	The error message returned because the RegionId parameter is not specified.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

9.5. DescribeCapacityReservations

Queries the details of one or more capacity reservations.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeCapacityReservations	The operation that you want to perform. Set the value to **DescribeCapacityReservations**.
RegionId	String	Yes	cn-hangzhou	The region ID of the capacity reservation. You can call the DescribeRegions operation to query the most recent region list.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the capacity reservation belongs.

Parameter	Type	Required	Example	Description
MaxResults	Integer	No	10	The maximum number of entries to return on each page. Maximum value: 100. Default value: 10.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query. Set the value to the NextToken value obtained from the response to the previous request.
PrivatePoolOptions.Ids	String	No	["crp-bp1gubrkqutenqdd****", "crp-bp67acfmxazb5****"]	The IDs of capacity reservations. The value can be a JSON array that consists of up to 100 capacity reservation IDs. Separate the IDs with commas (,).
Platform	String	No	linux	The operating system type of instances to be created by using the capacity reservation. Valid values: • Windows: Only capacity reservations for Windows instances are queried. • Linux: Only capacity reservations for Linux instances are queried. • all: All capacity reservations are queried. Default value: all.
InstanceType	String	No	ecs.c6.large	The instance type.
ZoneId	String	No	cn-hangzhou-h	The zone ID of the capacity reservation.
InstanceChargeType	String	No	PostPaid	The billing method of the instances to be created by using the capacity reservation. Valid values: • PostPaid: pay-as-you-go • PrePaid: subscription Default value: PostPaid.
Status	String	No	Active	The state of the capacity reservation. Valid values: • All: All states. • Pending: The capacity reservation is being initialized. Scheduled capacity reservations enter the Pending state after they are created. • Preparing: The capacity reservation is being prepared. Scheduled capacity reservations are in the Preparing state while resources are being delivered. • Prepared: The capacity reservation is to take effect. After resources are delivered, scheduled capacity reservations remain in the Prepared state until they take effect. • Active: The capacity reservation is in effect. • Released: The capacity reservation has been released manually or automatically when it expired. Default value: Active.
Tag.N.Key	String	No	TestKey	The key of tag N of the capacity reservation. Valid values of N: 1 to 20. If a single tag is specified to query resources, up to 1,000 resources that have this tag added can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources that have all these tags added can be displayed in the response. To query more than 1,000 resources that have specified tags added, call the ListTagResources operation.

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	TestValue	The value of tag N of the capacity reservation. Valid values of N: 1 to 20.

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of entries returned.
MaxResults	Integer	10	The maximum number of entries returned per page.
CapacityReservationSet	Array of CapacityReservationItem		Details about the capacity reservations.
CapacityReservationItem			
Status	String	Active	The state of the capacity reservation. Valid values: • Pending: The capacity reservation is being initialized. • Preparing: The capacity reservation is being prepared. • Prepared: The capacity reservation is to take effect. • Active: The capacity reservation is in effect. • Released: The capacity reservation has been released manually or automatically when it expired.
TimeSlot	String	null	**Note** This parameter is currently in invitational preview and unavailable for general users.
PrivatePoolOptionsMatchCriteria	String	Open	The type of the private pool associated with the capacity reservation. Valid values: • Open: open private pool • Target: targeted private pool
PrivatePoolOptionsId	String	crp-bp1gubrkqutenqdd****	The ID of the capacity reservation.
PrivatePoolOptionsName	String	crpTestName	The name of the capacity reservation.
RegionId	String	cn-hangzhou	The region ID of the capacity reservation.
InstanceChargeType	String	PostPaid	The billing method of the instances to be created by using the capacity reservation. Valid values: • PostPaid: pay-as-you-go • PrePaid: subscription
EndTime	String	2021-02-19T03:02Z	The time when the capacity reservation expires.
StartTime	String	2021-02-19T02:01Z	The time when the capacity reservation takes effect.
Description	String	This is description.	The description of the capacity reservation.

Parameter	Type	Example	Description
EndTimeType	String	Unlimited	The release mode of the capacity reservation. Valid values: • Limited: The capacity reservation is automatically released at the specified time. • Unlimited: The capacity reservation is manually released. You can release it at anytime.
ResourceGroupId	String	rg-bp67acfmxazb4p****	The ID of the resource group to which the capacity reservation belongs.
Platform	String	linux	The operating system type of the instances to be created by using the capacity reservation. Valid values: • windows • linux
AllocatedResources	Array of AllocatedResource		Details about the allocated resources.
AllocatedResource			
UsedAmount	Integer	2	The number of instances that have used the capacity reservation.
TotalAmount	Integer	2	The total number of instances for which capacity of an instance type is reserved.
zoneId	String	cn-hangzhou-h	The zone ID.
InstanceType	String	ecs.c6.large	The instance type.
Tags	Array of Tag		The tags of the capacity reservation.
Tag			
TagValue	String	TestValue	The tag value.
TagKey	String	TestKey	The tag key.
StartTimeType	String	Now	The mode in which the capacity reservation takes effect. Valid values: • Now: The capacity reservation takes effect as soon as it is created. • Later: The capacity reservation takes effect at the specified time.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeCapacityReservations
&RegionId=cn-hangzhou
&PrivatePoolOptions.Ids=["crp-bp1gubrkqutenqdd****", "crp-bp67acfmxazb5****"]
&InstanceType=ecs.c6.large
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeCapacityReservationsResponse>
    <TotalCount>1</TotalCount>
    <NextToken>caeba0bbb2be03f84eb48b699f0a4883</NextToken>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <MaxResults>10</MaxResults>
    <CapacityReservationSet>
        <CapacityReservationItem>
            <Status>Active</Status>
            <Description>This is description.</Description>
            <EndTime>2021-02-19T03:02Z</EndTime>
            <Platform>linux</Platform>
            <ResourceGroupId>rg-bp67acfmxazb4p****</ResourceGroupId>
            <PrivatePoolOptionsName>crpTestName</PrivatePoolOptionsName>
            <InstanceChargeType>PostPaid</InstanceChargeType>
            <StartTime>2021-02-19T02:01Z</StartTime>
            <StartTimeType>Now</StartTimeType>
            <PrivatePoolOptionsMatchCriteria>Open</PrivatePoolOptionsMatchCriteria>
            <TimeSlot/>
            <AllocatedResources>
                <AllocatedResource>
                    <UsedAmount>2</UsedAmount>
                    <zoneId>cn-hangzhou-h</zoneId>
                    <TotalAmount>2</TotalAmount>
                    <InstanceType>ecs.c6.large</InstanceType>
                </AllocatedResource>
            </AllocatedResources>
            <PrivatePoolOptionsId>crp-bp1gubrkqutenqdd****</PrivatePoolOptionsId>
            <EndTimeType>Unlimited</EndTimeType>
            <RegionId>cn-hangzhou</RegionId>
            <Tags>
                <Tag>
                    <TagKey>TestKey</TagKey>
                    <TagValue>TestValue</TagValue>
                </Tag>
            </Tags>
        </CapacityReservationItem>
    </CapacityReservationSet>
</DescribeCapacityReservationsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalCount" : 1,
  "NextToken" : "caeba0bbb2be03f84eb48b699f0a4883",
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "MaxResults" : 10,
  "CapacityReservationSet" : {
    "CapacityReservationItem" : [ {
      "Status" : "Active",
      "Description" : "This is description.",
      "EndTime" : "2021-02-19T03:02Z",
      "Platform" : "linux",
      "ResourceGroupId" : "rg-bp67acfmxazb4p****",
      "PrivatePoolOptionsName" : "crpTestName",
      "InstanceChargeType" : "PostPaid",
      "StartTime" : "2021-02-19T02:01Z",
      "StartTimeType" : "Now",
      "PrivatePoolOptionsMatchCriteria" : "Open",
      "TimeSlot" : "",
      "AllocatedResources" : {
        "AllocatedResource" : [ {
          "UsedAmount" : 2,
          "zoneId" : "cn-hangzhou-h",
          "TotalAmount" : 2,
          "InstanceType" : "ecs.c6.large"
        } ]
      },
      "PrivatePoolOptionsId" : "crp-bp1gubrkqutenqdd****",
      "EndTimeType" : "Unlimited",
      "RegionId" : "cn-hangzhou",
      "Tags" : {
        "Tag" : [ {
          "TagKey" : "TestKey",
          "TagValue" : "TestValue"
        } ]
      }
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter.RegionId	The specified RegionId should not be null.	The error message returned because the required RegionId parameter is not specified.
400	DedicatedHostNotSupported	DedicatedHost is not supported for PrivatePool.	The error message returned because private pools cannot be used to create instances on dedicated hosts.
400	SpotNotSupported	Spot is not supported for PrivatePool.	The error message returned because private pools cannot be used to create preemptible instances.
400	ClassicNetworkNotSupported	Classic network is not supported for PrivatePool.	The error message returned because private pools cannot be used to create instances in the classic network.
400	Invalid.InstanceId	Instance does not exist.	The error message returned because the instance does not exist.
400	Invalid.PrivatePoolOptions.MatchCriteria	Target mode does not support this operation.	The error message returned because the operation does not support targeted private pools.
400	MissingParameter.PrivatePoolOptions.Id	The specified PrivatePoolOptions.Id should not be null.	The error message returned because the PrivatePoolOptions.Ids parameter is not specified.

HTTP status code	Error code	Error message	Description
400	Invalid.PrivatePoolOptions.Id	The PrivatePool does not exist.	The error message returned because the private pool does not exist.
400	Invalid.InstanceType	The InstanceType does not match the PrivatePool.	The error message returned because the instance type does not match the private pool.
400	Invalid.InstanceChargeType	The InstanceChargeType does not match the PrivatePool.	The error message returned because the private pool cannot be used to create instances that use the specified billing method.
400	Invalid.ZoneId	The ZoneId does not match the PrivatePool.	The error message returned because the zone does not match the private pool.
400	Invalid.PrivatePoolOptions.MatchCriteria	The PrivatePoolOptions.MatchCriteria does not match the PrivatePool.	The error message returned because the specified PrivatePoolOptions.MatchCriteria parameter does not match the private pool.
400	InvalidPlatform.ValueNotSupported	The Platform does not match the PrivatePool.	The error message returned because the specified Platform parameter does not match the private pool.
400	InvalidAliUid	The PrivatePool does not belong to the user of the Instance.	The error message returned because the private pool does not belong to the user who attempted to create the instance.
400	Invalid.InstanceId	The Instance dose not attached to a PrivatePool.	The error message returned because the instance does not match the private pool.
400	Invalid.TooManyPrivatePoolOptions.Ids	Too many PrivatePoolOptions.Ids in this request.	The error message returned because the number of specified capacity reservation IDs exceeds the upper limit.
400	Invalid.TooManyZoneIds	Too many ZoneIds in the request.	The error message returned because the number of specified zone IDs exceeds the upper limit.
400	Invalid.TooManyInstanceTypes	Too many InstanceTypes in the request.	The error message returned because the number of specified instance types exceeds the upper limit.
400	Invalid.TooManyUnpaidPrivatePool	Too many PrivatePools create but still unpaid.	The error message returned because multiple private pools are created but not paid.
400	Invalid.InstanceCpuCoreCountOrInstanceAmount	Both InstanceCpuCoreCount and InstanceAmount are provided.	The error message returned because the InstanceCpuCoreCount and InstanceAmount parameters cannot be specified at the same time.
400	Invalid.PrivatePool.Purchase	The PrivatePool has already paid.	The error message returned because the private pool is already paid.
400	Invalid.AssuranceTimes.NotSupported	The value of AssuranceTimes is not supported.	The error message returned because the specified AssuranceTimes parameter is invalid.
400	RepeatStartPrivatePool	PrivatePool has already been started.	The error message returned because the private pool is already started.
400	InvalidParameter.RegionId	The specified RegionId is not exist.	The error message returned because the specified RegionId parameter does not exist.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

9.6. DescribeCapacityReservationInstances

You can call this operation to query the instances that were created by using a capacity reservation.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeCapacityReservationInstances	The operation that you want to perform. Set the value to DescribeCapacityReservationInstances.
PrivatePoolOptions.Id	String	Yes	crp-bp67acfmxazb4****	The ID of the capacity reservation.
RegionId	String	Yes	cn-hangzhou	The region ID of the capacity reservation. You can call the DescribeRegions operation to query the most recent region list.
MaxResults	Integer	No	10	The number of entries to return on each page. Maximum value: 100 Default value: 10.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the query. The token is obtained from the response of the previous request.

Response parameters

Parameter	Type	Example	Description
CapacityReservationItem	Array of InstanceIdSet		Details about the instances that were created by using the capacity reservation.
InstanceIdSet			
InstanceId	String	i-bp67acfmxazb4****	The ID of the instance.
MaxResults	Integer	10	The number of entries returned per page.
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	10	The number of entries that meet the query criteria.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeCapacityReservationInstances
&RegionId=cn-hangzhou
&PrivatePoolOptions.Id=crp-bp67acfmxazb4****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeCapacityReservationInstancesResponse>
      <TotalCount>2</TotalCount>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
      <NextToken>caeba0bbb2be03f84eb48b699f0a4883</NextToken>
      <MaxResults>10</MaxResults>
      <CapacityReservationItem>
            <InstanceIdSet>
                  <InstanceId>i-bp67acfmxazb4****</InstanceId>
            </InstanceIdSet>
            <InstanceIdSet>
                  <InstanceId>i-bp67acfmxazb5****</InstanceId>
            </InstanceIdSet>
      </CapacityReservationItem>
</DescribeCapacityReservationInstancesResponse>
```

`JSON` format

```
{
    "TotalCount":2,
    "RequestId":"473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
    "NextToken":"caeba0bbb2be03f84eb48b699f0a4883",
    "MaxResults":10,
    "CapacityReservationItem":
        {"InstanceIdSet":
            [{"InstanceId":"i-bp67acfmxazb4****"},
            {"InstanceId":"i-bp67acfmxazb5****"}]
        }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter.RegionId	The specified RegionId should not be null.	The error message returned because the RegionId parameter is not specified.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

9.7. DescribeInstanceAttachmentAttributes

You can call this operation to query information about the private pools from which instances are created.

Description

A private pool is generated after an elasticity assurance or a capacity reservation is created. The private pool is associated with information about instances that are created by using the private pool. You can configure a private pool when you create an ECS instance, so that the instance can match the corresponding elasticity assurance or capacity reservation.

When a private pool expires, data about the association between instances and the private pool becomes invalid. In this case, a call to this operation returns empty values related to private pools.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceAttachmentAttributes	The operation that you want to perform. Set the value to DescribeInstanceAttachmentAttributes.

Parameter	Type	Required	Example	Description
InstanceIds	String	Yes	["i-bp67acfmxazb4****", "i-bp67acfmxazb5****", "i-bp67acfmxazb6****"]	The IDs of instances. The value can be a JSON array that consists of up to 100 instance IDs. Separate multiple instance IDs with commas (,).
RegionId	String	Yes	cn-hangzhou	The region ID of the elasticity assurance. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. This value starts from 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 100 Default value: 10.

Response parameters

Parameter	Type	Example	Description
Instances	Array of Instance		Details about the private pools from which the instances are created.
Instance			
InstanceId	String	i-bp67acfmxazb4****	The ID of the instance.
PrivatePoolOptionsId	String	eap-bp67acfmxazb4****	The ID of the private pool. When the value of `PrivatePoolOptionsMatchCriteria` is `Open`, the private pool ID is the ID that was allocated by the system for automatic match.
PrivatePoolOptionsMatchCriteria	String	Open	The match mode of the private pool. Valid values: • Open: Instances automatically match an open private pool. • Target: Instances match a specified private pool. • None: Instances do not use private pools.
PageNumber	Integer	1	The number of the page returned.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The number of entries that meet the query criteria.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceAttachmentAttributes
&RegionId=cn-hangzhou
&InstanceIds=["i-bp67acfmxazb4****", "i-bp67acfmxazb5****", "i-bp67acfmxazb6****"]
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeInstanceAttachmentAttributesResponse>
      <Instances>
            <Instance>
                  <InstanceId>i-bp67acfmxazb4****</InstanceId>
                  <PrivatePoolOptionsMatchCriteria>Open</PrivatePoolOptionsMatchCriteria>
                  <PrivatePoolOptionsId>eap-bp67acfmxazb4****</PrivatePoolOptionsId>
            </Instance>
      </Instances>
      <TotalCount>1</TotalCount>
      <RequestId>395245CB-A6FD-4777-8F83-A0B0DFE43F23</RequestId>
      <PageSize>10</PageSize>
      <PageNumber>1</PageNumber>
</DescribeInstanceAttachmentAttributesResponse>
```

`JSON` format

```
{
    "Instances":
        {"Instance":
            [{"InstanceId":"i-bp67acfmxazb4****",
            "PrivatePoolOptionsMatchCriteria":"Open",
            "PrivatePoolOptionsId":"eap-bp67acfmxazb4****"}]
        },
    "TotalCount":1,
    "RequestId":"395245CB-A6FD-4777-8F83-A0B0DFE43F23",
    "PageSize":10,
    "PageNumber":1
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter.RegionId	The specified RegionId should not be null.	The error message returned because the RegionId parameter is not specified.
404	InvalidInstanceIds.NotFound	The specified InstanceIds does not exist.	The error message returned because the specified InstanceIds parameter does not exist. Check whether the InstanceIds parameter is valid. You can call the DescribeInstances operation to query the most recent instance list.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

9.8. ModifyElasticityAssurance

You can call this operation to modify the name and description of an elasticity assurance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	No	ModifyElasticityAssurance	The operation that you want to perform. Set the value to ModifyElasticityAssurance.
PrivatePoolOptions.Id	String	Yes	eap-bp67acfmxazb4****	The ID of the elasticity assurance.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the elasticity assurance. You can call the DescribeRegions operation to query the most recent region list.
PrivatePoolOptions.Name	String	No	eapTestName	The name of the elasticity assurance. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with http:// or https://. The name can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Description	String	No	This is description.	The description of the elasticity assurance. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
RequestId	String	8455DD10-84F8-43C9-8365-5F448EB169B6	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyElasticityAssurance
&PrivatePoolOptions.Id=eap-bp67acfmxazb4****
&RegionId=cn-hangzhou
&PrivatePoolOptions.Name=eapTestName
&Description=This is description.
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyElasticityAssuranceResponse>
      <RequestId>8455DD10-84F8-43C9-8365-5F448EB169B6</RequestId>
</ModifyElasticityAssuranceResponse>
```

`JSON` format

```
{
    "RequestId": "8455DD10-84F8-43C9-8365-5F448EB169B6"
}
```

Error codes

HTTP status code	Error code	Error message	Description
401	InvalidUser.Unauthorized	The user is not authorized	The error message returned because you are not authorized to perform this operation.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because resources are insufficient in the specified zone. Try other types of resources, or select other regions and zones.

For a list of error codes, visit the API Error Center.

9.9. ModifyCapacityReservation

You can call this operation to modify some information of a capacity reservation, such as its name, description, release mode, and total number of reserved instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	No	ModifyCapacityReservation	The operation that you want to perform. Set the value to ModifyCapacityReservation.
RegionId	String	Yes	cn-hangzhou	The region ID of the capacity reservation. You can call the DescribeRegions operation to query the most recent region list.
PrivatePoolOptions.Id	String	Yes	crp-bp67acfmxazb4****	The ID of the capacity reservation.
PrivatePoolOptions.Name	String	No	eapTestName	The name of the capacity reservation. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with http:// or https://. The name can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Description	String	No	This is description.	The description of the capacity reservation. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.
StartTime	String	No	Now	The effective mode of the capacity reservation. The capacity reservation can be set only to take effect immediately. You do not need to pass in a value for the parameter. **Note** The capacity reservation takes effect immediately when this parameter is left empty.
EndTimeType	String	No	Unlimited	The release mode of the capacity reservation. Valid values: • Limited: The capacity reservation is released at the specified time. You must also specify the `EndTime` parameter. • Unlimited: You must manually release the capacity reservation. You can release capacity reservations at any time.
EndTime	String	No	2021-10-30T06:32:00Z	The expiration time of the capacity reservation. This parameter takes effect only when `EndTimeType` is set to Limited. Specify the time in the ISO 8601 standard in the `yyyy-MM-ddTHH:mm:ssZ` format. The time must be in UTC. For more information, see ISO 8601.
Platform	String	No	Linux	The operating system type of the instance reserved. Valid values: • Windows: Windows Server operating systems • Linux: Linux and Unix-like operating systems **Note** This parameter is unavailable.

Parameter	Type	Required	Example	Description
InstanceAmount	Integer	No	100	The total number of instances reserved by the capacity reservation. Valid values: the number of created instances to 1000. **Note** When you increase the number of instances reserved, the increase may fail due to insufficient resources.

Response parameters

Parameter	Type	Example	Description
RequestId	String	8455DD10-84F8-43C9-8365-5F448EB169B6	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyCapacityReservation
&PrivatePoolOptions.Id=crp-bp67acfmxazb4****
&RegionId=cn-hangzhou
&PrivatePoolOptions.Name=eapTestName
&Description=This is description.
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyCapacityReservationResponse>
      <RequestId>8455DD10-84F8-43C9-8365-5F448EB169B6</RequestId>
</ModifyCapacityReservationResponse>
```

`JSON` format

```
{
    "RequestId": "8455DD10-84F8-43C9-8365-5F448EB169B6"
}
```

Error codes

HTTP status code	Error code	Error message	Description
401	InvalidUser.Unauthorized	The user is not authorized	The error message returned because you are not authorized to perform this operation.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because resources are insufficient in the specified zone. Try other types of resources, or select other regions and zones.

For a list of error codes, visit the API Error Center.

9.10. ModifyInstanceAttachmentAttributes

Modifies the attributes of the private pool for an Elastic Compute Service (ECS) instance.

Description

A private pool is generated after an elasticity assurance or a capacity reservation is created. The private pool is associated with information about instances that are created by using the private pool. You can configure whether to use a private pool when you create an ECS instance, so that the instance can match the elasticity assurance or capacity reservation.

- After you call this operation to modify the attributes of the private pool for an instance, you do not need to restart the instance.
- When you call the following operations, the system rematches the instance with private pools. If the instance already matches a specified private pool, the call to an operation may fail because the private pool capacity is used up or because the private pool is invalid. If the call

fails, call the ModifyInstanceAttachmentAttributes operation to change the match mode of the private pool to `Open`.

- StartInstance: Call this operation to restart a stopped instance in economical mode.
- ReActivateInstances
- ModifyInstanceChargeType
- ModifyPrepayInstanceSpec
- ReplaceSystemDisk

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceAttachmentAttributes	The operation that you want to perform. Set the value to **ModifyInstanceAttachmentAttributes**.
RegionId	String	Yes	cn-hangzhou	The region ID of the private pool. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	Yes	i-bp67acfmxazb4****	The ID of the instance for which you want to modify the attributes of the private pool.
PrivatePoolOptions.MatchCriteria	String	Yes	Open	The match mode of the private pool. Valid values: • Open: open private pool. The system matches the instance with open private pools. • Target: specified private pool. You must use `PrivatePoolOptions.Id` to specify the ID of a private pool. • None: no private pool. The instance starts normally without using private pools.
PrivatePoolOptions.Id	String	No	eap-bp67acfmxazb4****	The ID of the private pool. Set the value to the ID of the elasticity assurance or capacity reservation that generates the private pool. • This parameter is required when `PrivatePoolOptions.MatchCriteria` is set to `Target`. • This parameter must be empty when `PrivatePoolOptions.MatchCriteria` is set to `Open` or `None`.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceAttachmentAttributes
&RegionId=cn-hangzhou
&InstanceId=i-bp67acfmxazb4****
&PrivatePoolOptions.MatchCriteria=Open
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyInstanceAttachmentAttributesResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ModifyInstanceAttachmentAttributesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter.RegionId	The specified RegionId should not be null.	The error message returned because the required RegionId parameter is not specified.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

9.11. ReleaseCapacityReservation

You can call this operation to release a capacity reservation.

Description

When the release mode of a capacity reservation that takes effect immediately is set to manual release, you can call this operation to release the capacity reservation.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ReleaseCapacityReservation	The operation that you want to perform. Set the value to ReleaseCapacityReservation.
PrivatePoolOptions.Id	String	Yes	crp-bp67acfmxazb4****	The ID of the capacity reservation.
RegionId	String	Yes	cn-hangzhou	The region ID of the capacity reservation. You can call the DescribeRegions operation to query the most recent region list.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request. Set the value to false. The validity of the request is not checked. Capacity reservations are directly released.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ReleaseCapacityReservation
&RegionId=cn-hangzhou
&PrivatePoolOptions.Id=crp-bp67acfmxazb4****
&DryRun=false
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ReleaseCapacityReservationResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ReleaseCapacityReservationResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter.RegionId	The specified RegionId should not be null.	The error message returned because the RegionId parameter is not specified.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

10.Auto provisioning group

10.1. DescribeAutoProvisioningGroups

Queries information of one or more auto provisioning groups.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer.OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeAutoProvisioningGroups	The operation that you want to perform. Set the value to DescribeAutoProvisioningGroups.
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group.
AutoProvisioningGroupId.N	RepeatList	No	apg-sn54avj8htgvtyh8****	The ID of auto provisioning group N. Valid values of N: 1 to 20.
AutoProvisioningGroupName	String	No	testAutoProvisioningGroupName	The name of the auto provisioning group.
PageSize	Integer	No	2	The number of entries to return on each page. Maximum value: 100. Default value: 10.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
AutoProvisioningGroupStatus.N	RepeatList	No	active	The status of auto provisioning group N. Valid values: • submitted: The auto provisioning group is created and has not started to execute scheduling tasks. • active: The auto provisioning group is executing scheduling tasks. • deleted: The auto provisioning group is deleted. • deleted-running: The auto provisioning group is being deleted. • modifying: The auto provisioning group is being modified.

Response parameters

Parameter	Type	Example	Description
AutoProvisioningGroups	Array of AutoProvisioningGroup		Details about the auto provisioning groups.
AutoProvisioningGroup			
AutoProvisioningGroupId	String	apg-sn54avj8htgvtyh8****	The ID of the auto provisioning group.
AutoProvisioningGroupName	String	EcsDocTest	The name of the auto provisioning group.

Parameter	Type	Example	Description
AutoProvisioningGroupType	String	maintain	The delivery type of the auto provisioning group. Valid values: • request: one-time delivery.After the auto provisioning group is started, it attempts to deliver an instance cluster once. If the cluster fails to be delivered, the group does not retry the operation. • maintain: continuous delivery.After the auto provisioning group is started, it continuously attempts to deliver an instance cluster. The auto provisioning group compares the real-time capacity and the target cluster capacity. If the cluster does not meet the target capacity, the group creates instances until the cluster meets the target capacity.
CreationTime	String	2019-04-01T15:10:20Z	The time when the auto provisioning group was created.
ExcessCapacityTerminationPolicy	String	termination	Indicates whether to release the scaled-in instances when the real-time capacity exceeds the target capacity and the group is triggered to scale in. Valid values: • termination: releases the scaled-in instances. • no-termination: removes the scaled-in instances from the auto provisioning group but not releases the instances.
LaunchTemplateConfigs	Array of LaunchTemplateConfig		Details about the extended configurations.
LaunchTemplateConfig			
InstanceType	String	ecs.g5.large	The instance type specified in the extended configurations.
MaxPrice	Float	3	The maximum price of the instance type specified in the extended configurations.
Priority	Float	1	The priority of the instance type specified in the extended configurations. A value of 0 indicates the highest priority.
VSwitchId	String	vsw-sn5bsitu4lfzgc5o7****	The ID of the vSwitch specified in the extended configurations.
WeightedCapacity	Float	2	The weight of the instance type specified in the extended configurations.
LaunchTemplateId	String	lt-bp1fgzds4bdogu03****	The ID of the launch template associated with the auto provisioning group.
LaunchTemplateVersion	String	1	The version of the launch template associated with the auto provisioning group.
MaxSpotPrice	Float	2	The maximum price for preemptible instances in the auto provisioning group. **Note** If both the MaxSpotPrice and LaunchTemplateConfig.N.MaxPrice parameters are specified, the maximum price is the lower value of the two parameters. The LaunchTemplateConfig.N.MaxPrice parameter is set when the auto provisioning group is created, and cannot be modified.
PayAsYouGoOptions	Struct		The policies related to pay-as-you-go instances.

Parameter	Type	Example	Description
AllocationStrategy	String	prioritized	The provisioning policy for pay-as-you-go instances. Valid values: • lowest-price: the cost optimization policy. This policy indicates that instance types of the lowest cost are used to create instances. • prioritized: the priority-based policy. This policy indicates that instances are created based on the priority specified by the LaunchTemplateConfig.N.Priority parameter. **Note** The LaunchTemplateConfig.N.Priority parameter is set when the auto provisioning group is created, and cannot be modified.
RegionId	String	cn-hangzhou	The region ID of the auto provisioning group.
SpotOptions	Struct		The policy related to preemptible instances.
AllocationStrategy	String	diversified	The provisioning policy for preemptible instances. Valid values: • lowest-price: the cost optimization policy. This policy indicates that instance types of the lowest cost are used to create instances. • diversified: balanced distribution policy. This policy indicates that instances are created evenly across multiple zones specified in the extended configurations.
InstanceInterruptionBehavior	String	stop	The action to be performed after the extra preemptible instances are stopped. Valid values: • stop: retains the extra preemptible instances in the stopped state. • terminate: releases the extra preemptible instances.
InstancePoolsToUseCount	Integer	2	The number of instances that the auto provisioning group used the instance type of the lowest cost to create. **Note** This parameter is set when the auto provisioning group is created, and cannot be modified.
State	String	fulfilled	The overall status of instance scheduling of the auto provisioning group. Valid values: • fulfilled: Scheduling is complete and the instance cluster is delivered. • pending-fulfillment: The instances are being created. • pending-termination: The instances are being removed. • error: An exception has occurred during scheduling and the instance cluster was not delivered.
Status	String	submitted	The status of the auto provisioning group. Valid values: • submitted: The auto provisioning group is created and has not started to execute scheduling tasks. • active: The auto provisioning group is executing scheduling tasks. • deleted: The auto provisioning group is deleted. • deleted-running: The auto provisioning group is being deleted. • modifying: The auto provisioning group is being modified.

Parameter	Type	Example	Description
TargetCapacitySpecification	Struct		The settings of the target capacity of the auto provisioning group.
DefaultTargetCapacityType	String	Spot	The billing method of supplemental instances. The target capacity of the auto provisioning group must be at least the sum of the pay-as-you-go instance capacity specified by the PayAsYouGoTargetCapacity parameter and the preemptible instance capacity specified by the SpotTargetCapacity parameter. Valid values: • PayAsYouGo: pay-as-you-go • Spot: preemptible instance
PayAsYouGoTargetCapacity	Float	30	The target capacity of pay-as-you-go instances in the auto provisioning group.
SpotTargetCapacity	Float	20	The target capacity of preemptible instances in the auto provisioning group.
TotalTargetCapacity	Float	60	The target capacity of the auto provisioning group. The capacity consists of the following three parts: • PayAsYouGoTargetCapacity • SpotTargetCapacity • The supplemental capacity besides instance capacities specified by the PayAsYouGoTargetCapacity and SpotTargetCapacity parameters
TerminateInstances	Boolean	false	Indicates whether to release the instances in the auto provisioning group when the auto provisioning group is deleted. Valid values: • true: releases the instances. • false: retains the instances.
TerminateInstancesWithExpiration	Boolean	true	Indicates whether to release instances in the auto provisioning group when the auto provisioning group expires. Valid values: • true: releases the instances. • false: removes the instances in the group from the auto provisioning group but not releases the instances.
ValidFrom	String	2019-04-01T15:10:20Z	The time when the auto provisioning group was started. The period of time between this point in time and the point in time specified by the ValidUntil parameter is the effective time period of the auto provisioning group.
ValidUntil	String	2019-06-01T15:10:20Z	The time when the auto provisioning group expires. The period of time between this point in time and the point in time specified by the ValidFrom parameter is the effective time period of the auto provisioning group.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	745CEC9F-0DD7-4451-9FE7-8B752F39****	The ID of the request.
TotalCount	Integer	10	The number of queried auto provisioning groups.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeAutoProvisioningGroups
&AutoProvisioningGroupId.1=apg-sn54avj8htgvtyh8****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeAutoProvisioningGroups>
    <PageNumber>1</PageNumber>
    <TotalCount>1</TotalCount>
    <PageSize>10</PageSize>
    <RequestId>85331AC9-82C0-4604-9A14-048865BE****</RequestId>
    <AutoProvisioningGroups>
        <AutoProvisioningGroup>
            <TerminateInstancesWithExpiration>false</TerminateInstancesWithExpiration>
            <TerminateInstances>false</TerminateInstances>
            <ValidFrom>2019-06-17T15:22Z</ValidFrom>
            <AutoProvisioningGroupType>maintain</AutoProvisioningGroupType>
            <PayAsYouGoOptions>
                <AllocationStrategy>lowest-price</AllocationStrategy>
            </PayAsYouGoOptions>
            <AutoProvisioningGroupName>test61****</AutoProvisioningGroupName>
            <CreationTime></CreationTime>
            <ExcessCapacityTerminationPolicy>no-termination</ExcessCapacityTerminationPolicy>
            <Status>active</Status>
            <MaxSpotPrice>5</MaxSpotPrice>
            <LaunchTemplateVersion>1</LaunchTemplateVersion>
            <ValidUntil>2100-01-01T07:59Z</ValidUntil>
            <TargetCapacitySpecification>
                <SpotTargetCapacity>180</SpotTargetCapacity>
                <TotalTargetCapacity>300</TotalTargetCapacity>
                <PayAsYouGoTargetCapacity>120</PayAsYouGoTargetCapacity>
                <DefaultTargetCapacityType>PayAsYouGo</DefaultTargetCapacityType>
            </TargetCapacitySpecification>
            <State>fulfilled</State>
            <LaunchTemplateId>lt-uf657o6auob6aivd****</LaunchTemplateId>
            <RegionId>cn-shanghai</RegionId>
            <AutoProvisioningGroupId>apg-uf6c7pl7b30t4m98****</AutoProvisioningGroupId>
            <SpotOptions>
                <InstancePoolsToUseCount>1</InstancePoolsToUseCount>
                <InstanceInterruptionBehavior>terminate</InstanceInterruptionBehavior>
                <AllocationStrategy>lowest-price</AllocationStrategy>
            </SpotOptions>
            <LaunchTemplateConfigs>
                <LaunchTemplateConfig>
                    <MaxPrice>3</MaxPrice>
                    <WeightedCapacity>1</WeightedCapacity>
                    <VSwitchId>vsw-uf6qbjwokzl67uqqf****</VSwitchId>
                    <Priority>1</Priority>
                    <InstanceType>ecs.c5.xlarge</InstanceType>
                </LaunchTemplateConfig>
                <LaunchTemplateConfig>
                    <MaxPrice>2</MaxPrice>
                    <WeightedCapacity>2</WeightedCapacity>
                    <VSwitchId>vsw-uf6n6iylib39eqvph****</VSwitchId>
                    <Priority>1</Priority>
                    <InstanceType>ecs.g5.large</InstanceType>
                </LaunchTemplateConfig>
                <LaunchTemplateConfig>
                    <MaxPrice>1</MaxPrice>
                    <WeightedCapacity>3</WeightedCapacity>
                    <VSwitchId>vsw-uf6gs8uerj5osels4****</VSwitchId>
                    <Priority>1</Priority>
                    <InstanceType>ecs.hfc5.large</InstanceType>
                </LaunchTemplateConfig>
            </LaunchTemplateConfigs>
        </AutoProvisioningGroup>
    </AutoProvisioningGroups>
</DescribeAutoProvisioningGroups>
```

JSON format


```
{
    "PageNumber": 1,
    "TotalCount": 1,
    "PageSize": 10,
    "RequestId": "85331AC9-82C0-4604-9A14-048865BE****",
    "AutoProvisioningGroups": {
        "AutoProvisioningGroup": {
            "TerminateInstancesWithExpiration": false,
            "TerminateInstances": false,
            "ValidFrom": "2019-06-17T15:22Z",
            "AutoProvisioningGroupType": "maintain",
            "PayAsYouGoOptions": {
                "AllocationStrategy": "lowest-price"
            },
            "AutoProvisioningGroupName": "test61****",
            "CreationTime": "",
            "ExcessCapacityTerminationPolicy": "no-termination",
            "Status": "active",
            "MaxSpotPrice": 5,
            "LaunchTemplateVersion": 1,
            "ValidUntil": "2100-01-01T07:59Z",
            "TargetCapacitySpecification": {
                "SpotTargetCapacity": 180,
                "TotalTargetCapacity": 300,
                "PayAsYouGoTargetCapacity": 120,
                "DefaultTargetCapacityType": "PayAsYouGo"
            },
            "State": "fulfilled",
            "LaunchTemplateId": "lt-uf657o6auob6aivd****",
            "RegionId": "cn-shanghai",
            "AutoProvisioningGroupId": "apg-uf6c7pl7b30t4m98****",
            "SpotOptions": {
                "InstancePoolsToUseCount": 1,
                "InstanceInterruptionBehavior": "terminate",
                "AllocationStrategy": "lowest-price"
            },
            "LaunchTemplateConfigs": {
                "LaunchTemplateConfig": [
                    {
                        "MaxPrice": 3,
                        "WeightedCapacity": 1,
                        "VSwitchId": "vsw-uf6qbjwokzl67uqqf****",
                        "Priority": 1,
                        "InstanceType": "ecs.c5.xlarge"
                    },
                    {
                        "MaxPrice": 2,
                        "WeightedCapacity": 2,
                        "VSwitchId": "vsw-uf6n6iy1ib39eqvph****",
                        "Priority": 1,
                        "InstanceType": "ecs.g5.large"
                    },
                    {
                        "MaxPrice": 1,
                        "WeightedCapacity": 3,
                        "VSwitchId": "vsw-uf6gs8uerj5osels4****",
                        "Priority": 1,
                        "InstanceType": "ecs.hfc5.large"
                    }
                ]
            }
        }
    }
}
```


Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.

For a list of error codes, visit the API Error Center.

10.2. DescribeAutoProvisioningGroupInstances

You can call this operation to query instances in an auto provisioning group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeAutoProvisioningGroupInstances	The operation that you want to perform. Set the value to DescribeAutoProvisioningGroupInstances.
AutoProvisioningGroupId	String	Yes	apg-uf6jel2bbl62wh13****	The ID of the auto provisioning group.
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
Instances	Array		An array consisting of Instance data.
Instance			
CPU	Integer	2	The number of vCPUs.
CreationTime	String	2017-12-10T04:04Z	The time when the instance was created.
InstanceId	String	i-bp67acfmxazb4p****	The ID of the instance.
InstanceType	String	ecs.g5.large	The instance type of the ECS instance.
IoOptimized	Boolean	true	Indicates whether the instance is I/O optimized.
IsSpot	Boolean	True	Indicates whether the instance is a preemptible instance.
Memory	Integer	1024	The memory size of the instance. Unit: MiB.

Parameter	Type	Example	Description
NetworkType	String	vpc	The network type of the instance. Valid values: • vpc • classic
OsType	String	linux	The operating system type of the instance. Valid values: • windows • linux
RegionId	String	cn-hangzhou	The region ID of the instance.
Status	String	Running	The status of the instance.
ZoneId	String	cn-hangzhou-g	The zone ID of the instance.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	B48A12CD-1295-4A38-A8F0-0E92C937****	The ID of the request.
TotalCount	Integer	2	The number of queried instances in the auto provisioning group.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeAutoProvisioningGroupInstances
&AutoProvisioningGroupId=apg-uf6je12bbl62wh13****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeAutoProvisioningGroupInstancesResponse>
      <PageNumber>1</PageNumber>
      <TotalCount>2</TotalCount>
      <PageSize>2</PageSize>
      <RequestId>A43735F7-30BD-4D89-AB8A-030EB24B****</RequestId>
      <Instances>
            <Instance>
                  <CreationTime>2019-06-17T15:25Z</CreationTime>
                  <IoOptimized>true</IoOptimized>
                  <OsType>linux</OsType>
                  <NetworkType>vpc</NetworkType>
                  <Status>Running</Status>
                  <Memory>8192</Memory>
                  <RegionId>cn-shanghai</RegionId>
                  <InstanceId>i-bp67acfmxazb4p****</InstanceId>
                  <CPU>2</CPU>
                  <ZoneId>cn-shanghai-a</ZoneId>
                  <InstanceType>ecs.g5.large</InstanceType>
            </Instance>
            <Instance>
                  <CreationTime>2019-06-17T15:25Z</CreationTime>
                  <IoOptimized>true</IoOptimized>
                  <OsType>linux</OsType>
                  <NetworkType>vpc</NetworkType>
                  <Status>Running</Status>
                  <Memory>8192</Memory>
                  <RegionId>cn-shanghai</RegionId>
                  <InstanceId>i-bp67acfmxazb5p****</InstanceId>
                  <CPU>2</CPU>
                  <ZoneId>cn-shanghai-a</ZoneId>
                  <InstanceType>ecs.g5.large</InstanceType>
            </Instance>
      </Instances>
</DescribeAutoProvisioningGroupInstancesResponse>
```

`JSON` format

```
{
    "PageNumber": 1,
    "TotalCount": 2,
    "PageSize": 2,
    "RequestId":"A43735F7-30BD-4D89-AB8A-030EB24B****",
    "Instances": {
        "Instance": [
            {
                "CreationTime": "2019-06-17T15:25Z",
                "IoOptimized": true,
                "OsType": "linux",
                "NetworkType": "vpc",
                "Status": "Running",
                "Memory": 8192,
                "RegionId": "cn-shanghai",
                "InstanceId": "i-bp67acfmxazb4p****",
                "CPU": 2,
                "ZoneId": "cn-shanghai-a",
                "InstanceType": "ecs.g5.large"
            },
            {
                "CreationTime": "2019-06-17T15:25Z",
                "IoOptimized": true,
                "OsType": "linux",
                "NetworkType": "vpc",
                "Status": "Running",
                "Memory": 8192,
                "RegionId": "cn-shanghai",
                "InstanceId": "i-bp67acfmxazb5p****",
                "CPU": 2,
                "ZoneId": "cn-shanghai-a",
                "InstanceType": "ecs.g5.large"
            }
        ]
    }
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	Forbidden.RAM	User not authorized to operate on the specified resource, or this API doesn't support RAM.	The error message returned because you are not authorized to manage this resource, or this API operation does not support RAM roles.
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.

For a list of error codes, visit the API Error Center.

10.3. DescribeAutoProvisioningGroupHistory

You can call this operation to query the scheduling tasks of an auto provisioning group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeAutoProvisioningGroupHistory	The operation that you want to perform. Set the value to DescribeAutoProvisioningGroupHistory.
AutoProvisioningGroupId	String	Yes	apg-bp67acfmxazb4p****	The ID of the auto provisioning group.
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	5	The number of entries to return on each page. Maximum value: 100. Default value: 10.
StartTime	String	No	2019-04-01T15:10:20Z	The beginning of the time range of the queried data. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
EndTime	String	No	2019-06-20T15:10:20Z	The end of the time range of the queried data. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.

Response parameters

Parameter	Type	Example	Description
AutoProvisioningGroupHistories	Array		An array consisting of AutoProvisioningGroupHistory data.
AutoProvisioningGroupHistory			
ActivityDetails	Array		An array consisting of ActivityDetail data.
ActivityDetail			

Parameter	Type	Example	Description
Detail	String	New ECS instances "i-bp67acfmxazb4p****, i-bp67acfmxazb5p****" created.	The execution details of instance creation performed by the single scheduling task.
Status	String	Successful	The execution status of instance creation performed by the single scheduling task. Valid values: • Successful: Instances are created. • Failed: Instances failed to be created. • InProgress: Instances are being created. • Warning: Partial instances are created.
LastEventTime	String	2019-04-01T15:10:20Z	The execution time of the last instance creation performed by the single scheduling task.
StartTime	String	2019-04-01T15:10:20Z	The start time of executing the single scheduling task.
Status	String	Success	The execution status of the single scheduling task. Valid values: • prepare: The scheduling task is being executed. • success: The scheduling task is executed. • failed: The scheduling task failed to be executed.
TaskId	String	apg-task-bp67acfmxazb4p****	The ID of the scheduling task.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	B48A12CD-1295-4A38-A8F0-0E92C937****	The ID of the request.
TotalCount	Integer	10	The number of queried scheduling tasks in the auto provisioning group.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeAutoProvisioningGroupHistory
&AutoProvisioningGroupId=apg-bp67acfmxazb4p****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeAutoProvisioningGroups>
      <PageNumber>1</PageNumber>
      <TotalCount>1</TotalCount>
      <PageSize>10</PageSize>
      <RequestId>BA55349F-6E36-4E64-964B-419515D1****</RequestId>
      <AutoProvisioningGroupHistories>
            <AutoProvisioningGroupHistory>
                  <Status>success</Status>
                  <ActivityDetails>
                        <ActivityDetail>
                              <Detail>New ECS instances i-bp67acfmxazb4ph***, i-bp67acfmxazb4pi*** created. </Detail>
                              <Status>Successful</Status>
                        </ActivityDetail>
                  </ActivityDetails>
                  <LastEventTime>2019-06-17T08:48:00Z</LastEventTime>
                  <StartTime>2019-06-17T08:47:52Z</StartTime>
                  <TaskId>apg-task-uf66bqtabg10wcf6****</TaskId>
            </AutoProvisioningGroupHistory>
      </AutoProvisioningGroupHistories>
</DescribeAutoProvisioningGroups>
```

`JSON` format

```
{
    "PageNumber": 1,
    "TotalCount": 1,
    "PageSize": 10,
    "RequestId": "BA55349F-6E36-4E64-964B-419515D1****",
    "AutoProvisioningGroupHistories": {
        "AutoProvisioningGroupHistory": [
            {
                "Status":"success",
                "ActivityDetails": {
                    "ActivityDetail": [
                        {
                            "Detail": "New ECS instances i-bp67acfmxazb4ph***, i-bp67acfmxazb4pi*** created.",
                            "Status": "Successful"
                        }
                    ]
                },
                "LastEventTime": "2019-06-17T08:48:00Z",
                "StartTime": "2019-06-17T08:47:52Z",
                "TaskId": "apg-task-uf66bqtabg10wcf6****"
            }
        ]
    }
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	Forbidden.RAM	User not authorized to operate on the specified resource, or this API doesn't support RAM.	The error message returned because you are not authorized to manage this resource, or this API operation does not support RAM roles.
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.

For a list of error codes, visit the API Error Center.

10.4. ModifyAutoProvisioningGroup

Modifies the configurations of an auto provisioning group.

Description

Before you call this operation, take note of the following items:

- If you modify the capacity or capacity-related settings of an auto provisioning group, the group executes the scheduling task once after the group is modified.

- You cannot modify an auto provisioning group when the group is being deleted.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyAutoProvisioningGroup	The operation that you want to perform. Set the value to ModifyAutoProvisioningGroup.
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group. You can call the DescribeRegions operation to query the most recent region list.
AutoProvisioningGroupId	String	No	apg-bp67acfmxazb4ph****	The ID of the auto provisioning group.
ExcessCapacityTerminationPolicy	String	No	no-termination	Specifies whether to release scaled-in instances when the real-time capacity of the auto provisioning group exceeds the target capacity and the group is triggered to scale in. Valid values: • termination: releases the scaled-in instances. • no-termination: removes the scaled-in instances from the auto provisioning group but not releases the instances.
DefaultTargetCapacityType	String	No	Spot	The billing method of supplemental instances. The target capacity of the auto provisioning group must be at least the sum of the capacity of pay-as-you-go instances specified by the PayAsYouGoTargetCapacity parameter and the capacity of preemptible instances specified by the SpotTargetCapacity parameter. Valid values: • PayAsYouGo: pay-as-you-go • Spot: preemptible instance
TerminateInstancesWithExpiration	Boolean	No	false	Specifies whether to release instances in the auto provisioning group when the auto provisioning group expires. Valid values: • true: releases instances in the auto provisioning group. • false: removes the instances in the group from the auto provisioning group but not releases the instances.
MaxSpotPrice	Float	No	0.5	The maximum price of preemptible instances in the auto provisioning group. **Note** If both the MaxSpotPrice and LaunchTemplateConfig.N.MaxPrice parameters are specified, the maximum price is the lower value of the two parameters. The LaunchTemplateConfig.N.MaxPrice parameter is set when the auto provisioning group is created, and cannot be modified.

Parameter	Type	Required	Example	Description
TotalTargetCapacity	String	No	70	The target capacity of the auto provisioning group. The parameter value is a positive integer. The target capacity of the auto provisioning group must be at least the sum of the capacity of pay-as-you-go instances specified by the PayAsYouGoTargetCapacity parameter and the capacity of preemptible instances specified by the SpotTargetCapacity parameter.
PayAsYouGoTargetCapacity	String	No	30	The target capacity of pay-as-you-go instances in the auto provisioning group. Valid values: Set this parameter to a value smaller than the TotalTargetCapacity value.
SpotTargetCapacity	String	No	30	The target capacity of preemptible instances in the auto provisioning group. Valid values: Set this parameter to a value smaller than the TotalTargetCapacity value.
AutoProvisioningGroupName	String	No	apg-test	The name of the auto provisioning group. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. The name can contain letters, digits, colons (:), underscores (_), and hyphens (-).
LaunchTemplateConfig.N.InstanceType	String	No	ecs.g5.large	The instance type of extended configuration N. Valid values of N: 1 to 20. For more information about valid values of this parameter, see Instance families.
LaunchTemplateConfig.N.MaxPrice	Double	No	3	The maximum price of preemptible instances in extended configuration N.
LaunchTemplateConfig.N.VSwitchId	String	No	vsw-sn5bsitu4lfzgc5o7****	The ID of the vSwitch in extended configuration N. The zone of the ECS instances created from the extended configurations is determined by the vSwitch.
LaunchTemplateConfig.N.WeightedCapacity	Double	No	2	The weight of the instance type specified in extended configuration N. A greater weight indicates that a single instance has more computing power, and as a result fewer instances are required. This parameter value must be greater than 0. The weight is calculated based on the computing power of the specified instance type and the minimum computing power of a single node of the cluster. For example, if the minimum computing power of a single node is 8 vCPUs and 60 GiB: • The weight of the instance type with 8 vCPUs and 60 GiB can be set to 1. • The weight of the instance type with 16 vCPUs and 120 GiB can be set to 2.
LaunchTemplateConfig.N.Priority	Integer	No	1	The priority of extended configuration N. A value of 0 indicates the highest priority. This parameter value must be greater than 0.

Response parameters

Parameter	Type	Example	Description
RequestId	String	B48A12CD-1295-4A38-A8F0-0E92C937****	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=ModifyAutoProvisioningGroup
&RegionId=cn-hangzhou
&AutoProvisioningGroupId=apg-bp67acfmxazb4ph****
&TotalTargetCapacity=70
&MaxSpotPrice=0.5
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyAutoProvisioningGroupResponse>
    <RequestId>928E2273-5715-46B9-A730-238DC996****</RequestId>
</ModifyAutoProvisioningGroupResponse>
```

`JSON` format

```
{
    "RequestId": "B48A12CD-1295-4A38-A8F0-0E92C937****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	Forbidden.RAM	User not authorized to operate on the specified resource, or this API doesn't support RAM.	The error message returned because you are not authorized to manage this resource, or this API operation does not support RAM roles.
400	OperationDenied	%s	The error message returned because the operation is denied.

For a list of error codes, visit the API Error Center.

10.5. DeleteAutoProvisioningGroup

You can call this operation to delete an auto provisioning group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteAutoProvisioningGroup	The operation that you want to perform. Set the value to DeleteAutoProvisioningGroup.
AutoProvisioningGroupId	String	Yes	apg-bpuf6jel2bbl62wh13****	The ID of the auto provisioning group to be deleted.
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group.
TerminateInstances	Boolean	Yes	true	Specifies whether to release instances in the auto provisioning group. Valid values: • true: releases instances in the auto provisioning group. • false: retains instances in the auto provisioning group.

Response parameters

Parameter	Type	Example	Description
RequestId	String	B48A12CD-1295-4A38-A8F0-0E92C937****	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=DeleteAutoProvisioningGroup
&AutoProvisioningGroupId=apg-bpuf6jel2bbl62wh13****
&RegionId=cn-hangzhou
&TerminateInstances=true
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteAutoProvisioningGroupResponse>
    <RequestId>928E2273-5715-46B9-A730-238DC996****</RequestId>
</DeleteAutoProvisioningGroupResponse>
```

`JSON` format

```
{
    "RequestId": "B48A12CD-1295-4A38-A8F0-0E92C937****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	Forbidden.RAM	User not authorized to operate on the specified resource, or this API doesn't support RAM.	The error message returned because you are not authorized to manage this resource, or this API operation does not support RAM roles.

For a list of error codes, visit the API Error Center.

11.Disks

11.1. CreateDisk

Creates a pay-as-you-go or subscription data disk. The disk can be a basic disk, an ultra disk, a standard SSD, or an enhanced SSD (ESSD).

Description

- When you create disks, you may be charged for the resources used. We recommend that you understand the Elastic Compute Service (ECS) billing methods before you create a disk. For more information, see Billing overview.
- By default, the `DeleteAutoSnapshot` parameter is set to `true` when a disk is created. This indicates that when the disk is released, its automatic snapshots are also deleted. You can call the ModifyDiskAttribute operation to modify the parameter.
- If you do not configure the performance level when you create an ESSD, the performance level for the ESSD is PL1 by default. You can call the ModifyDiskSpec operation to modify the performance level of the ESSD.
- By default, for a disk that is created by calling this operation, the `Portable` attribute is set to `true` and the billing method is pay-as-you-go.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateDisk	The operation that you want to perform. Set the value to CreateDisk.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which to create the disk. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-hangzhou-g	The ID of the zone in which to create the pay-as-you-go disk. • If the InstanceId parameter is not specified, the ZoneId parameter is required. • You cannot specify ZoneId and InstanceId at the same time.
SnapshotId	String	No	s-bp67acfmxazb4p****	The ID of the snapshot used to create the disk. Snapshots that were created on or before July 15, 2013 cannot be used to create disks. The following limits apply to the `SnapshotId` and `Size` parameters: • If the size of the snapshot specified by the `SnapshotId` parameter is greater than the specified `Size` value, the size of the created disk is equal to the size of the specified snapshot. • If the size of the snapshot specified by the `SnapshotId` parameter is smaller than the specified `Size` value, the size of the created disk is equal to the specified `Size` value.
DiskName	String	No	testDiskName	The name of the disk. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, periods (.), underscores (_), and hyphens (-).

Parameter	Type	Required	Example	Description

Size	Integer	No	2000	The size of the disk. Unit: GiB. This parameter is required. Valid values:
				• Valid values when DiskCategory is set to cloud: 5 to 2000
				• Valid values when DiskCategory is set to cloud_efficiency: 20 to 32768
				• Valid values when DiskCategory is set to cloud_ssd: 20 to 32768
				• Valid values when DiskCategory is set to cloud_essd:
				  ○ Valid values when the performance level of the ESSD is set to PL0: 40 to 32768
				  ○ Valid values when the performance level of the ESSD is set to PL1: 20 to 32768
				  ○ Valid values when the performance level of the ESSD is set to PL2: 461 to 32768
				  ○ Valid values when the performance level of the ESSD is set to PL3: 1261 to 32768
				If the `SnapshotId` parameter is specified, the following limits apply to the `SnapshotId` and `Size` parameters:
				• If the size of the snapshot specified by the `SnapshotId` parameter is greater than the specified `Size` value, the size of the created disk is equal to the size of the specified snapshot.
				• If the size of the snapshot specified by the `SnapshotId` parameter is smaller than the specified `Size` value, the size of the created disk is equal to the specified `Size` value.

DiskCategory	String	No	cloud_ssd	The category of the data disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • cloud_essd: ESSD Default value: cloud.
Description	String	No	testDescription	The description of the disk. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.
Encrypted	Boolean	No	false	Specifies whether to encrypt the disk. Default value: false.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Parameter	Type	Required	Example	Description
InstanceId	String	No	i-bp18pnlg1ds9rky4****	The ID of the instance to which the created subscription disk is automatically attached. • After you specify the instance ID, the specified ResourceGroupId, Tag.N.Key, Tag.N.Value, ClientToken, and KMSKeyId parameters are ignored. • You cannot specify ZoneId and InstanceId at the same time. This parameter is empty by default. This indicates that a pay-as-you-go disk is created, and the RegionId and ZoneId parameters specify where the disk resides.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the disk.
KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d3fb40826X	The ID of the Key Management Service (KMS) key used by the disk.
PerformanceLevel	String	No	PL1	The performance level of the ESSD. Valid values: • PL0: A single ESSD can deliver up to 10,000 random read/write IOPS. • PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. • PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. • PL3: A single ESSD can deliver up to 1,000,000 random read/write IOPS. Default value: PL1. For more information about ESSD performance levels, see ESSDs.
StorageSetId	String	No	ss-bp67acfmxazb4p****	The ID of the storage set. **Note** You can specify only one of the storage set-related parameters (`StorageSetId` and `StorageSetPartitionNumber`) and dedicated block storage cluster-related parameter (`StorageClusterId`). If you specify more than one of the preceding parameters, the call fails.
StorageSetPartitionNumber	Integer	No	3	The number of partitions in the storage set.
StorageClusterId	String	No	dbsc-j5e1sf2vaf5he8m2****	The ID of the dedicated block storage cluster. To create a disk in a specific dedicated block storage cluster, you must specify this parameter. For more information about dedicated block storage clusters, see What is Dedicated Block Storage Cluster? **Note** You can specify only one of the storage set-related parameters (`StorageSetId` and `StorageSetPartitionNumber`) and dedicated block storage cluster-related parameter (`StorageClusterId`). If you specify more than one of the preceding parameters, the call fails.

Parameter	Type	Required	Example	Description
MultiAttach	String	No	Disabled	Specifies whether to enable the multi-attach feature for the disk. Valid values: • Disabled: disables the multi-attach feature. • Enabled: enables the multi-attach feature. Set the value to `Enabled` only for ESSDs. Default value: Disabled. Take note of the following items: • The multi-attach feature is in public preview. To learn more about this feature, submit a ticket. • Disks for which the multi-attach feature is enabled support only the pay-as-you-go billing method. When the `MultiAttach` parameter is set to Enabled, you cannot specify the `InstanceId` parameter. You can call the AttachDisk operation to attach disks to instances after the disks are created. Disks for which the multi-attach feature is enabled can be attached only as data disks.
Tag.N.Key	String	No	TestKey	The key of tag N of the disk. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain `http://` or `https://`. It must not start with `acs:` or `aliyun`.
Tag.N.Value	String	No	TestValue	The value of tag N of the disk. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length. It cannot start with `acs:` or contain `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
DiskId	String	d-bp131n0q38u3a4zi****	The ID of the disk.
OrderId	String	20413515388****	The ID of the order. **Note** This parameter is returned only when you create a subscription disk.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateDisk
&RegionId=cn-hangzhou
&ZoneId=cn-hangzhou-g
&SnapshotId=s-bp67acfmxazb4p****
&DiskName=testDiskName
&Size=2000
&DiskCategory=cloud_ssd
&Description=testDescription
&Encrypted=false
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&Tag.1.Key=TestKey
&Tag.1.Value=TestValue
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateDiskResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
      <DiskId>d-bp131n0q38u3a4zi****</DiskId>
</CreateDiskResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
    "DiskId": "d-bp131n0q38u3a4zi****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidSize.ValueNotSupported	The specified parameter Size is not valid.	The error message returned because the specified Size parameter is invalid.
400	InvalidDiskName.Malformed	The specified disk name is wrongly formed.	The error message returned because the specified DiskName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	MissingParameter	The input parameter either "SnapshotId" or "Size" should be specified.	The error message returned because the SnapshotId and Size parameters are not specified. You must specify at least one of them.
400	InvalidDiskCategory.NotSupported	The specified disk category is not support.	The error message returned because the specified DiskCategory parameter is invalid.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned because you have overdue payments in your account.
400	InvalidDiskCategory.ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned because the specified DiskCategory parameter is invalid. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidParameter.Conflict	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist. %s is a variable. An error message is dynamically returned based on call conditions.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to perform the operation in the specified region. %s is a variable. An error message is dynamically returned based on call conditions.
400	Zone.NotOnSale	%s	The error message returned because the requested resources are unavailable in the specified zone. %s is a variable. An error message is dynamically returned based on call conditions.

HTTP status code	Error code	Error message	Description
400	InvalidDataDiskSize.ValueNotSupported	%s	The error message returned because the specified Size parameter is invalid. %s is a variable. An error message is dynamically returned based on call conditions.
400	OperationDenied	The specified Zone is not available or not authorized.	The error message returned because the specified zone is unavailable or because you are not authorized to access it.
400	InvalidDiskSize.NotSupported	The specified parameter size is not valid.	The error message returned because the specified Size parameter is invalid.
400	InvalidDiskSizeOrCategory	The specified disk category or size is invalid.	The error message returned because the specified DiskCategory or Size parameter is invalid.
400	InvalidParameter.EncryptedIllegal	%s	The error message returned because the specified parameter is invalid. Check whether your encryption operation is valid. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidParameter.EncryptedNotSupported	%s	The error message returned because the specified parameter is invalid and your encryption operation is not supported. %s is a variable. An error message is dynamically returned based on call conditions.
400	EncryptedOption.Conflict	%s	The error message returned because the parameter used to encrypt disks is not supported. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidParameter.EncryptedIllegal	The specified parameter Encrypted must be true when kmsKeyId is not empty.	The error message returned because the encryption feature is not enabled after a KMS key ID is specified.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	InvalidPerformanceLevel.Malformed	The specified parameter PerformanceLevel is not valid.	The error message returned because the specified PerformanceLevel parameter is invalid.
400	InvalidInstance.NotFoundSystemDisk	The specified instance has no system disk.	The error message returned because the specified instance does not have a system disk attached. Make sure that the specified instance has a system disk attached. You can call the DescribeInstances operation to query the details of the specified instance.
403	InvalidDataDiskCategory.NotSupported	Specified disk category is not supported.	The error message returned because the specified DiskCategory parameter is invalid.
403	InstanceDiskCategoryLimitExceed	The total size of specified disk category in an instance exceeds.	The error message returned because the total size of disks of the specified category exceeds the maximum capacity allowed for an instance.
403	InvalidSnapshot.NotReady	The specified snapshot creation is not completed yet.	The error message returned because the specified snapshot is not created.
403	InvalidSnapshot.TooOld	This operation is forbidden because the specified snapshot is created before 2013-07-15.	The error message returned because the specified snapshot was created on or before July 15, 2013 and cannot be used to create disks.

HTTP status code	Error code	Error message	Description
403	InvalidSnapshot.TooLarge	The capacity of snapshot exceeds 2000GB.	The error message returned because the snapshot size exceeds 2,000 GB.
403	OperationDenied	The specified snapshot is not allowed to create disk.	The error message returned because the specified snapshot cannot be used to create disks.
403	QuotaExceed.PortableCloudDisk	The quota of portable cloud disk exceeds.	The error message returned because the maximum number of removable disks has been reached.
403	InvalidDiskCategory.ValueUnauthorized	The disk category is not authorized.	The error message returned because you are not authorized to manage the specified disk category.
403	InvalidSnapshotId.NotReady	The specified snapshot has not completed yet.	The error message returned because the specified snapshot is being created.
403	InvalidSnapshotId.NotDataDiskSnapshot	The specified snapshot is system disk snapshot.	The error message returned because the specified snapshot is a system disk snapshot.
403	InvalidDiskSize.TooSmall	Specified disk size is less than the size of snapshot.	The error message returned because the specified disk size is smaller than the snapshot size.
403	OperationDenied	The type of the disk does not support the operation.	The error message returned because the specified disk category does not support this operation.
403	InvalidDataDiskCategory.NotSupported	%s	The error message returned because the specified DiskCategory parameter is invalid. %s is a variable. An error message is dynamically returned based on call conditions.
403	InvalidDiskSize.NotSupported	disk size is not supported.	The error message returned because the specified Size parameter is invalid.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.
403	InvalidPayMethod	The specified pay method is not valid.	The error message returned because the specified payment method is invalid.
403	InvalidDiskCategory.NotSupported	The specified disk category is not supported.	The error message returned because the specified disk category does not support the operation.
403	InvalidDiskSize.NotSupported	The specified disk size is not supported.	The error message returned because the specified disk size is not supported.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not authorized to manage the disk. Try again when you are authorized.
403	QuotaExceed.PostPaidDisk	Living postPaid disks quota exceeded.	The error message returned because the maximum number of pay-as-you-go disks has been reached.
403	InvalidRegion.NotSupport	The specified region does not support byok.	The error message returned because the bring your own key (BYOK) feature is not supported in the region.
403	UserNotInTheWhiteList	The user is not in byok white list.	The error message returned because you are not in the BYOK whitelist. Try again when you are in the whitelist.

HTTP status code	Error code	Error message	Description
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a KMS key ID is specified for a disk. You can call the DescribeKey operation of KMS to query the information of the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
403	SecurityRisk.3DVerification	We have detected a security risk with your default credit or debit card. Please proceed with verification via the link in your email.	The error message returned because risks are detected in your default credit card or debit card. Click the URL in the email for verification.
403	InvalidStatus.Upgrading	The instance is upgrading; please try again later.	The error message returned because the configurations of the specified instance are being upgraded. Try again later.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit. %s is a variable. An error message is dynamically returned based on call conditions.
403	OperationDenied.SnapshotNotAllowed	The specified snapshot is not allowed to create disk.	The error message returned because the specified snapshot cannot be used to create disks.
403	LastTokenProcessing	The last token request is processing.	The error message returned because the last token request is being processed. Try again later.
403	InvalidParameter.MultiAttach	The specified param MultiAttach is not valid.	The error message returned because the specified MultiAttach parameter is invalid.
403	InvalidParameter.MultiAttachAndInstanceIdConflict	The parameter MultiAttach and InstanceId are conflict.	The error message returned because the MultiAttach and InstanceId parameters are both specified.
403	InvalidParameter.DiskCategoryAndMultiAttachConflict	The specified disk category does not support multi attach set.	The error message returned because the MultiAttach parameter is specified for the Shared Block Storage device.
403	InvalidParameter.DiskCategoryAndMultiAttachNotMatch	The specified disk category does not support multi attach enabled.	The error message returned because the specified disk category does not support the multi-attach feature.
403	OperationDenied.ZoneNotSupportMultiAttachDisk	The specified zone does support multi attach disk.	The error message returned because disks for which the multi-attach feature is enabled cannot be created in the specified zone.
403	InvalidAccountStatus.CouponAmountNotEnough	Your coupon balance is insufficient or has expired.	The error message returned because your coupon balance is insufficient or because your coupons have expired.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	InvalidZoneId.NotFound	The specified zone does not exist.	The error message returned because the specified ZoneId parameter does not exist.
404	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The error message returned because the specified SnapshotId parameter does not exist.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
404	InvalidParameter.KMSKeyId.NotFound	The specified KMSKeyId does not exist.	The error message returned because the specified KMSKeyId parameter does not exist.
404	InvalidInstanceId.NotFound	The InstanceId provided does not exist in our records.	The error message returned because the specified InstanceId parameter does not exist.

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

11.2. AttachDisk

Attaches a pay-as-you-go data disk or a system disk to an instance. The instance and the disk must reside in the same zone.

Description

When you call this operation, take note of the following items:

- The disk must be in the **Unattached** (`Available`) state.
- When the disk is attached as a data disk, take note of the following items:
  - The instance must be in the **Running** (`Running`) or **Stopped** (`Stopped`) state.
  - If the disk is separately purchased, the billing method of the disk must be pay-as-you-go.
  - If the disk is a system disk detached from an instance, no limit applies to the billing method of the disk.
- When the disk is attached as a system disk, take note of the following items:
  - The instance must be the original instance from which the system disk is detached.
  - The instance must be in the **Stopped** (`Stopped`) state.
  - The logon credentials must be configured.
- When you query the instance information and the responses contain `{"OperationLocks": {"LockReason" : "security"}}` , the instance is locked for security reasons and all operations cannot take effect on the instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachDisk	The operation that you want to perform. Set the value to AttachDisk.
DiskId	String	Yes	d-bp1j4l5axzdy6ftk****	The ID of the disk to be attached. The disk specified by the `DiskId` parameter and the instance specified by the `InstanceId` parameter must reside in the same zone. **Note** For more information about the limits on attaching a data disk and a system disk, see the "Description" section.
InstanceId	String	Yes	i-bp1dq5lozx5f4pmd****	The ID of the instance to which to attach the disk.

Parameter	Type	Required	Example	Description
Device	String	No	testDeviceName	The name of the disk. **Note** This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
DeleteWithInstance	Boolean	No	false	Specifies whether to release the disk together with the instance. Valid values: • true: The disk is released together with the instance. • false: The disk is not released together with the instance. It is retained as a pay-as-you-go data disk. Default value: false. When you specify this parameter, take note of the following items: • If `OperationLocks` for an instance contains `"LockReason" : "security"`, the instance is locked for security reasons. Even if `DeleteWithInstance` of attached disks is set to `false`, the DeleteWithInstance parameter is ignored and disks are released together with the instance. • This parameter is unavailable for disks for which the multi-attach feature is enabled.
Bootable	Boolean	No	false	Specifies whether to attach the disk as a system disk. Default value: false. **Note** If the `Bootable` parameter is set to true, the instance must be in the No System Disk state.
Password	String	No	EcsV587!	The password set when you attach the system disk. The password is applicable only to the administrator and root users. The password must be 8 to 30 characters in length. It must contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. The following special characters can be used: `()`~!@#$%^&*-_+=|{}[]:;'<>,.?/` For Windows instances, the password cannot start with a forward slash (/). **Note** If the `Password` parameter is specified, we recommend that you send requests over HTTPS to avoid password leaks.
KeyPairName	String	No	KeyPairTestName	The name of the SSH key pair that you bind to the Linux instance when you attach the system disk. • Windows instances do not support logons based on SSH key pairs. The `Password` parameter takes effect even if the KeyPairName parameter is specified. • For Linux instances, the password-based logon method is disabled by default.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AttachDisk
&DiskId=d-bp1j4l5axzdy6ftk****
&InstanceId=i-bp1dq5lozx5f4pmd****
&DeleteWithInstance=false
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AttachDiskResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</AttachDiskResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidDevice.Malformed	The specified device is not valid.	The error message returned because the specified Device parameter does not exist.
400	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	InvalidParameter	The input parameter is mandatory for processing this request is empty.	The error message returned because a required parameter is not specified.
400	InvalidRegionId.MalFormed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.
400	InvalidOperation.InstanceTypeNotSupport	The instance type of the specified instance does not support hot attach disk.	The error message returned because the instance to which the disk is attached does not support the hot swapping of disks.
400	DiskCategory.OperationNotSupported	The operation is not supported to the specified disk due to its disk category	The error message returned because the specified disk category does not support the operation.
400	InvalidOperation.InstanceTypeNotSupport	The specified disk which has kms key should only attach to ioOptimized instance.	The error message returned because the specified instance is not supported. You can set Key Management Service (KMS) keys only for I/O optimized instances.
400	InvalidParameter.AllEmpty	%s	The error message returned because the required parameters are not specified.
403	InstanceDiskLimitExceeded	The amount of the disk on instance in question reach its limits.	The error message returned because the maximum number of disks that can be attached to the specified instance has been reached.
403	InvalidDevice.InUse	The specified device has been occupied.	The error message returned because the specified device already has a disk attached.
403	DiskNotPortable	The specified disk is not a portable disk.	The error message returned because the specified disk is not removable.

HTTP status code	Error code	Error message	Description
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the resource is locked for security reasons.
403	ResourcesNotInSameZone	The specified instance and disk are not in the same zone.	The error message returned because the specified instance and disk are not in the same zone.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance and try again.
403	DiskInArrears	The specified operation is denied as your disk owing fee.	The error message returned because you have overdue payments for the disk.
403	DiskError	IncorrectDiskStatus.	The error message returned because the state of the specified disk is invalid.
403	DiskId.ValueNotSupported	The specified parameter diskid is not supported.	The error message returned because the category of the specified Elastic Block Storage (EBS) device does not support this operation.
403	DiskId.StatusNotSupported	The specified disk status is not supported.	The error message returned because this operation is not supported while the disk is in the current state.
403	IncorrectDiskStatus	The operation is not supported in this status.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payments for it.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not authorized to manage the disk. Try again when you are authorized.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a KMS key ID is specified for a disk. You can call the DescribeKey operation of KMS to query information about the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because Elastic Compute Service (ECS) is not authorized to access your KMS resources.
403	InvalidInstanceType.NotSupportDiskCategory	The instanceType of the specified instance does not support this disk category.	The error message returned because the instance type specified by the InstanceType parameter does not support the disk category of the instance. Try another instance type. For information about the disk categories supported by instance types, see the instance family documentation.
403	InvalidInstanceType.NvmeRequired	The instanceType of the specified instance requires nvme protocol.	The error message returned because the instance type of the specified instance does not use the NVMe protocol.
403	InvalidInstanceType.NvmeUnsupported	The instanceType of the specified instance does not support nvme protocol.	The error message returned because the instance type of the specified instance does not support the NVMe protocol.
403	InvalidInstanceType.NotSupportMultiAttachDisk	The instanceType of the specified instance does not support multi attach disk.	The error message returned because disks for which the multi-attach feature is enabled cannot be attached to instances of the specified instance type.
403	DiskAttachedNumberExceeded	The attaching times of the specified disk exceeded.	The error message returned because the maximum number of instances to which the specified disk can be attached has been reached.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.CanNotAttachMultiAttachDiskAsSystemDisk	Multi attach disk can not be attached as system disk.	The error message returned because disks for which the multi-attach feature is enabled cannot be attached as system disks.
403	DeleteWithInstance.Conflict	Multi attach disk cannot be set to DeleteWithInstance attribute.	The error message returned because the DeleteWithInstance attribute is invalid for disks for which the multi-attach feature is enabled.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified disk does not exist. Check whether the disk ID is correct.
404	InvalidDisk.InUse	The specified disk has been occupied.	The error message returned because the specified disk is in use.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

11.3. DescribeDisks

Queries one or more Elastic Block Storage (EBS) devices that you created, including cloud disks and local disks.

Description

- You can specify multiple request parameters such as `RegionId`, `ZoneId`, `DiskIds`, and `InstanceId` to be queried. Specified parameters have logical AND relations. Only the specified parameters are included in the filter conditions.
- The `DiskIds` value is a JSON array. If DiskIds is not specified, it is not used as a filter condition. If `DiskIds` is set to an empty JSON array, it is regarded as a valid filter condition, and an empty result is returned.
- You can use one of the following methods to check the responses:
  - Method 1: Use `NextToken` to configure the query token. Set the value to the `NextToken` value that is returned in the last call to the DescribeInstances operation. Then, use `MaxResults` to specify the maximum number of entries to return on each page.
  - Method 2: Use `PageSize` to specify the number of entries to return on each page and then use `PageNumber` to specify the number of the page to return.

    You can use only one of the preceding methods. If a large number of entries are to be returned, we recommend that you use method 1. If `NextToken` is specified, `PageSize` and `PageNumber` do not take effect and `TotalCount` in the response is invalid.
- A disk that has the multi-attach feature enabled can be attached to multiple instances. You can query the attachment information of the disk based on the `Attachment` values in the response.

When you call an API operation by using Alibaba Cloud CLI, you must specify request parameter values of different data types in the required formats. For more information, see Parameter format overview.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDisks	The operation that you want to perform. Set the value to DescribeDisks.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the disk. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-hangzhou-g	The zone ID of the disk.
DiskIds	String	No	["d-bp67acfmxazb4p****", "d-bp67acfmxazb4g****", ... "d-bp67acfmxazb4d****"]	The IDs of disks. The value is a JSON array that consists of up to 100 disk IDs. Separate the disk IDs with commas (,).
InstanceId	String	No	i-bp67acfmxazb4q****	The ID of the instance to which the disk is attached.
DiskType	String	No	all	The type of the disk. Valid values: • all: system disk and data disk • system: system disk • data: data disk Default value: all.
Category	String	No	all	The category of the disk. Valid values: • all: all disk categories • cloud: basic disk. • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • cloud_essd: enhanced SSD (ESSD) • local_ssd_pro: I/O-intensive local disk • local_hdd_pro: throughput-intensive local disk • ephemeral: retired local disk • ephemeral_ssd: retired local SSD Default value: all.
Status	String	No	All	The state of the cloud disk. For more information, see Disk states. Valid values: • In_use • Available • Attaching • Detaching • Creating • ReInniting • All Default value: All.
SnapshotId	String	No	s-bp67acfmxazb4p****	The ID of the snapshot used to create the cloud disk.

Parameter	Type	Required	Example	Description
Portable	Boolean	No	false	Specifies whether the disk is removable. Valid values: • true: The disk is removable. A removable disk can independently exist and can be attached to or detached from an instance within the same zone. • false: The disk is not removable. A disk that is not removable cannot independently exist or be attached to or detached from an instance within the same zone. The `Portable` attribute of the following disks is `false`, and these disks share the same lifecycle with their associated instances: • Local disks • Local SSDs • Subscription data disks
DeleteWithInstance	Boolean	No	false	Specifies whether to release the cloud disk when its associated instance is released. Valid values: • true: The cloud disk is released when its associated instance is released. • false: The cloud disk is not released but is retained as a pay-as-you-go data disk when its associated instance is released. Default value: false.
DeleteAutoSnapshot	Boolean	No	false	Specifies whether to delete the automatic snapshots of the cloud disk when the disk is released. Default value: false.
PageNumber	Integer	No	1	The number of the page to return. Page starts from 1. Default: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.
NextToken	String	No	AAAAAdDWBF2****	The query token. Set the value to the `NextToken` value returned in the last call to the DescribeDisks operation. For more information about how to check the responses returned by this operation, see the preceding "Description" section.
MaxResults	Integer	No	50	The maximum number of entries to return on each page. Valid values: 1 to 500. Default value: 10
DiskName	String	No	testDiskName	The name of the disk.
AutoSnapshotPolicyId	String	No	sp-m5e2w2jutw8bv31****	The ID of the automatic snapshot policy that is applied to the cloud disk.

Parameter	Type	Required	Example	Description
EnableAutoSnapshot	Boolean	No	true	Specifies whether the automatic snapshot policy feature is enabled for the cloud disk. • true: The automatic snapshot policy feature is enabled for the cloud disk. • false: The automatic snapshot policy feature is disabled for the cloud disk. **Note** By default, the automatic snapshot policy feature is enabled for created cloud disks. You need only to apply an automatic snapshot policy to a cloud disk before you can use the automatic snapshot policy.
EnableAutomatedSnapshotPolicy	Boolean	No	false	Specifies whether an automatic snapshot policy is applied to the cloud disk. • true: An automatic snapshot policy is applied to the cloud disk. • false: No automatic snapshot policy is applied to the cloud disk. Default value: false.
DiskChargeType	String	No	PostPaid	The billing method of the disk. Valid values: • PrePaid: subscription • PostPaid: pay-as-you-go
LockReason	String	No	recycling	The reason why the disk is locked. Valid values: • financial: The disk is locked due to overdue payments. • security: The disk is locked due to security reasons. • recycling: The preemptible instance is locked and pending for release. • dedicatedhostfinancial: The instance is locked due to overdue payments for the dedicated host.
Filter.1.Key	String	No	CreationStartTime	The key of filter 1 used to query resources. Set the value to `CreationStartTime`. You can set both `Filter.1.Key` and `Filter.1.Value` to specify the beginning of the time range in which to query the created resources.
Filter.2.Key	String	No	CreationEndTime	The key of filter 2 used to query resources. Set the value to `CreationEndTime`. You can set both `Filter.2.Key` and `Filter.2.Value` to specify the end of the time range in which to query the created resources.
Filter.1.Value	String	No	2017-12-05T22:40Z	The value of filter 1 used to query resources. Set the value to the beginning of the time range to query. If you specify this parameter, you must also specify `Filter.1.Key`. Specify the time in the `yyyy-MM-ddTHH:mmZ` format. The time must be in UTC.
Filter.2.Value	String	No	2017-12-06T22:40Z	The value of filter 2 used to query resources. Set the value to the end of the time range to query. If you specify this parameter, you must also specify `Filter.2.Key`. Specify the time in the `yyyy-MM-ddTHH:mmZ` format. The time must be in UTC.

Parameter	Type	Required	Example	Description
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the disk belongs. If this parameter is specified to query resources, up to 1,000 resources that belong to the specified resource group can be displayed in the response.
EnableShared	Boolean	No	false	Specifies whether the disk is a Shared Block Storage device.
Encrypted	Boolean	No	false	Specifies whether to query only encrypted cloud disks. Default value: false.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are authorized, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the `DryRunOperation` error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned, and the request is made. Default value: false.
KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d3fb40****	The ID of the Key Management Service (KMS) key used by the cloud disk.
MultiAttach	String	No	Disabled	Specifies whether the multi-attach feature is enabled for the disk. Valid values: • Disabled: The multi-attach feature is disabled. • Enabled: The multi-attach feature is enabled. • LegacyShared: Shared Block Storage devices are queried. The multi-attach feature is in invitational preview. To use this feature, submit a ticket.
Tag.N.key	String	No	null	The key of tag N of the disk. **Note** We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N of the disk. Valid values of N: 1 to 20. If a single tag is specified to query resources, up to 1,000 resources that have this tag added can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources that have all these tags added can be displayed in the response. To query more than 1,000 resources that have specified tags added, call the ListTagResources operation.
Tag.N.Value	String	No	TestValue	The value of tag N of the disk. Valid values of N: 1 to 20.

Parameter	Type	Required	Example	Description
Tag.N.value	String	No	null	The value of tag N of the disk. **Note** We recommend that you use the Tag.N.Value parameter to ensure future compatibility.
AdditionalAttributes.N	RepeatList	No	IOPS	The value of attribute N. Set the value to IOPS, which indicates the maximum IOPS of the disk.

Response parameters

Parameter	Type	Example	Description
Disks	Array of Disk		Details about the disks.
Disk			
AttachedTime	String	2021-06-07T06:08:56Z	The time when the cloud disk was last attached. The time follows the ISO 8601 standard in the yyyy-MM-ddThh:mmZ format. The time is displayed in UTC.
Attachments	Array of Attachment		The attachment information of the cloud disk. The value is an array that consists of the `Attachment` values. This value is not returned when you query Shared Block Storage devices.
Attachment			
AttachedTime	String	2021-06-07T06:08:56Z	The time when the disk was attached. The time is displayed in UTC.
Device	String	/dev/xvda	The name of the disk.
InstanceId	String	i-bp67acfmxazb4q****	The ID of the instance to which the disk is attached.
AutoSnapshotPolicyId	String	sp-bp67acfmxazb4p****	The ID of the automatic snapshot policy that is applied to the cloud disk.
BdfId	String	null	This parameter is in invitational preview and unavailable.
Category	String	cloud_ssd	The category of the disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • cloud_essd: ESSD • local_ssd_pro: I/O-intensive local disk • local_hdd_pro: throughput-intensive local disk • ephemeral: retired local disk • ephemeral_ssd: retired local SSD
CreationTime	String	2021-06-07T06:08:54Z	The time when the disk was created.

Parameter	Type	Example	Description
DeleteAutoSnapshot	Boolean	false	Indicates whether the automatic snapshots of the cloud disk are deleted when the disk is released. Valid values: • true: The automatic snapshots of the cloud disk are deleted when the disk is released. • false: The automatic snapshots of the cloud disk are retained when the disk is released. Snapshots that are created by calling the CreateSnapshot operation or by using the Elastic Compute Service (ECS) console are retained and not affected by this parameter.
DeleteWithInstance	Boolean	true	Indicates whether the cloud disk is released when its associated instance is released. Valid values: • true: The cloud disk is released when its associated instance is released. • false: The cloud disk is retained when its associated instance is released.
Description	String	testDescription	The description of the disk.
DetachedTime	String	2021-06-07T21:01:22Z	The time when the cloud disk was last detached.
Device	String	/dev/xvda	The device name of the disk on its associated instance. Example: /dev/xvdb. Take note of the following items: • This parameter has a value only when the `Status` value is `In_use`. • This parameter is empty for cloud disks that have the multi-attach feature enabled. You can query the attachment information of the disk based on the `Attachment` values. **Note** This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
DiskChargeType	String	PrePaid	The billing method of the disk. Valid values: • PrePaid: subscription • PostPaid: pay-as-you-go
DiskId	String	d-bp18um4r4f2fve24****	The ID of the disk.
DiskName	String	testDiskName	The name of the disk.
EnableAutoSnapshot	Boolean	false	Indicates whether the automatic snapshot policy feature was enabled for the cloud disk.
EnableAutomatedSnapshotPolicy	Boolean	false	Indicates whether an automatic snapshot policy was applied to the cloud disk.
Encrypted	Boolean	false	Indicates whether the cloud disk was encrypted.
ExpiredTime	String	2021-07-07T16:00Z	The time when the subscription cloud disk expires.
IOPS	Integer	4000	The number of IOPS.
IOPSRead	Integer	2000	The number of read operations per second.

Parameter	Type	Example	Description
IOPSWrite	Integer	2000	The number of write operations per second.
ImageId	String	m-bp13aqm171qynt3u***	The ID of the image that was used to create the instance. This parameter is empty unless the cloud disk was created from an image. The value of this parameter remains unchanged throughout the lifecycle of the cloud disk.
InstanceId	String	i-bp67acfmxazb4q****	The ID of the instance to which the disk was attached. Take note of the following items: • This parameter has a value only when the `Status` value is `In_use`. • This parameter is empty for cloud disks that have the multi-attach feature enabled. You can query the attachment information of the disk based on the `Attachment` values.
KMSKeyId	String	0e478b7a-4262-4802-b8cb-00d3fb408***	The ID of the KMS key used by the cloud disk.
MountInstanceNum	Integer	1	The number of instances to which the Shared Block Storage device is attached.
MountInstances	Array of MountInstance		The attachment information of the disk.
MountInstance			
AttachedTime	String	2017-12-05T2340:00Z	The time when the cloud disk was attached. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
Device	String	/dev/xvda	The mount point of the disk.
InstanceId	String	i-bp1j4i2jdf3owlhe****	The ID of the instance to which the disk was attached.
MultiAttach	String	Disabled	Indicates whether the multi-attach feature was enabled for the cloud disk.
OperationLocks	Array of OperationLock		The reasons why the disk was locked.
OperationLock			
LockReason	String	security	The security reason why the disk was locked.
PerformanceLevel	String	PL0	The performance level of the ESSD. Valid values: • PL0: A single ESSD can deliver up to 10,000 random read/write IOPS. • PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. • PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. • PL3: A single ESSD can deliver up to 1,000,000 random read/write IOPS.
Portable	Boolean	false	Indicates whether the disk is removable.
ProductCode	String	jxsc000204	The product code in Alibaba Cloud Marketplace.
RegionId	String	cn-hangzhou	The region ID of the disk.

Parameter	Type	Example	Description
ResourceGroupId	String	rg-bp67acfmxazb4p****	The ID of the resource group to which the disk belongs.
SerialNumber	String	bp18um4r4f2fve2****	The serial number of the disk.
Size	Integer	60	The size of the disk. Unit: GiB.
SourceSnapshotId	String	s-bp67acfmxazb4p****	The ID of the snapshot that is used to create the cloud disk. This parameter is empty unless the cloud disk was created from a snapshot. The value of this parameter remains unchanged throughout the lifecycle of the cloud disk.
Status	String	In_use	The state of the cloud disk. Valid values: • In_use • Available • Attaching • Detaching • Creating • ReIniting
StorageClusterId	String	dbsc-j5e1sf2vaf5he8m2****	The ID of the dedicated block storage cluster to which the cloud disk belongs. If your cloud disk belongs to the public block storage cluster, an empty value is returned.
StorageSetId	String	ss-i-bp1j4i2jdf3owlhe****	The ID of the storage set.
StorageSetPartitionNumber	Integer	11	The maximum number of partitions in the storage set.
Tags	Array of Tag		The tags of the disk.
Tag			
TagKey	String	TestKey	The tag key of the disk.
TagValue	String	TestValue	The tag value of the disk.
Type	String	system	The type of the disk. Valid values: • system: system disk • data: data disk
ZoneId	String	cn-hangzhou-i	The zone ID of the disk.
NextToken	String	AAAAAdDWBF2****	The query token returned in this call.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	15	The total number of entries returned.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDisks
&RegionId=cn-hangzhou
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeDisksResponse>
      <TotalCount>15</TotalCount>
      <NextToken>AAAAAdDWBF2****</NextToken>
      <PageSize>1</PageSize>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
      <PageNumber>1</PageNumber>
      <Disks>
            <Disk>
                  <DetachedTime></DetachedTime>
                  <Category>cloud_ssd</Category>
                  <Description>testDescription</Description>
                  <KMSKeyId></KMSKeyId>
                  <ResourceGroupId></ResourceGroupId>
                  <Encrypted>false</Encrypted>
                  <Size>40</Size>
                  <DeleteAutoSnapshot>false</DeleteAutoSnapshot>
                  <DiskChargeType>PrePaid</DiskChargeType>
                  <MultiAttach>Disabled</MultiAttach>
                  <Attachments>
                        <Attachment>
                              <AttachedTime>2021-06-07T06:08:56Z</AttachedTime>
                              <InstanceId>i-bp67acfmxazb4q****</InstanceId>
                              <Device>/dev/xvda</Device>
                        </Attachment>
                  </Attachments>
                  <ExpiredTime>2021-07-07T16:00Z</ExpiredTime>
                  <ImageId>m-bp13aqm171qynt3u***</ImageId>
                  <StorageSetId></StorageSetId>
                  <Tags>
            </Tags>
                  <Status>In_use</Status>
                  <AttachedTime>2021-06-07T06:08:56Z</AttachedTime>
                  <StorageClusterId>dbsc-j5e1sf2vaf5he8m2****</StorageClusterId>
                  <ZoneId>cn-hangzhou-i</ZoneId>
                  <InstanceId>i-bp67acfmxazb4q****</InstanceId>
                  <SourceSnapshotId></SourceSnapshotId>
                  <ProductCode></ProductCode>
                  <PerformanceLevel>PL0</PerformanceLevel>
                  <Device>/dev/xvda</Device>
                  <DeleteWithInstance>true</DeleteWithInstance>
                  <EnableAutomatedSnapshotPolicy>false</EnableAutomatedSnapshotPolicy>
                  <EnableAutoSnapshot>false</EnableAutoSnapshot>
                  <AutoSnapshotPolicyId>sp-bp67acfmxazb4p****</AutoSnapshotPolicyId>
                  <DiskName>testDiskName</DiskName>
                  <OperationLocks>
            </OperationLocks>
                  <BdfId></BdfId>
                  <Portable>false</Portable>
                  <Type>system</Type>
                  <SerialNumber>bp18um4r4f2fve2****</SerialNumber>
                  <CreationTime>2021-06-07T06:08:54Z</CreationTime>
                  <RegionId>cn-hangzhou</RegionId>
                  <DiskId>d-bp18um4r4f2fve24****</DiskId>
            </Disk>
      </Disks>
</DescribeDisksResponse>
```

`JSON` format

```
{
    "TotalCount": 15,
    "NextToken": "AAAAAdDWBF2****",
    "PageSize": 1,
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
    "PageNumber": 1,
    "Disks": {
        "Disk": [
            {
                "DetachedTime": "",
                "Category": "cloud_ssd",
                "Description": "testDescription",
                "KMSKeyId": "",
                "ResourceGroupId": "",
                "Encrypted": false,
                "Size": 40,
                "DeleteAutoSnapshot": false,
                "DiskChargeType": "PrePaid",
                "MultiAttach": "Disabled",
                "Attachments": {
                    "Attachment": [
                        {
                            "AttachedTime": "2021-06-07T06:08:56Z",
                            "InstanceId": "i-bp67acfmxazb4q****",
                            "Device": "/dev/xvda"
                        }
                    ]
                },
                "ExpiredTime": "2021-07-07T16:00Z",
                "ImageId": "m-bp13aqm171qynt3u***",
                "StorageSetId": "",
                "Tags": {
                    "Tag": []
                },
                "Status": "In_use",
                "AttachedTime": "2021-06-07T06:08:56Z",
                "StorageClusterId": "dbsc-j5e1sf2vaf5he8m2****",
                "ZoneId": "cn-hangzhou-i",
                "InstanceId": "i-bp67acfmxazb4q****",
                "SourceSnapshotId": "",
                "ProductCode": "",
                "PerformanceLevel": "PL0",
                "Device": "/dev/xvda",
                "DeleteWithInstance": true,
                "EnableAutomatedSnapshotPolicy": false,
                "EnableAutoSnapshot": false,
                "AutoSnapshotPolicyId": "sp-bp67acfmxazb4p****",
                "DiskName": "testDiskName",
                "OperationLocks": {
                    "OperationLock": []
                },
                "BdfId": "",
                "Portable": false,
                "Type": "system",
                "SerialNumber": "bp18um4r4f2fve2****",
                "CreationTime": "2021-06-07T06:08:54Z",
                "RegionId": "cn-hangzhou",
                "DiskId": "d-bp18um4r4f2fve24****"
            }
        ]
    }
}
```


Error codes

HTTP status code	Error code	Error message	Description
400	InvalidDiskType.ValueNotSupported	The specified disk type is not supported.	The error message returned because the specified DiskType parameter is invalid.
400	InvalidCategory.ValueNotSupported	The specified disk category is not supported.	The error message returned because the specified Category parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidStatus.ValueNotSupported	The specified disk status is not supported.	The error message returned because the operation is not supported while the disk is in the current state.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags exceeds the upper limit.
400	InvalidRegion.NotFound	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.
400	InvalidZoneId.NotFound	The zoneId provided does not exist in our records.	The error message returned because the specified ZoneId parameter does not exist.
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the required RegionId parameter is not specified.
400	InvalidParameter.DiskIds	The specified parameter diskIds is not valid.	The error message returned because the specified DiskIds parameter is invalid.
400	IncompleteParamter	Some fields can not be null in this request.	The error message returned because a required parameter is not specified.
400	InvalidParamter	Some parameters are invalid in this request.	The error message returned because the request contains invalid parameters.
400	InvalidSnapshot.NotFound	The specified parameter SnapshotId is not valid.	The error message returned because the specified SnapshotId parameter is invalid.
403	InvalidDiskIds.Malformed	The amount of specified disk Ids exceeds the limit.	The error message returned because the specified DiskIds parameter is invalid.
403	UserNotInTheWhiteList	The user is not in volume white list.	The error message returned because you are not authorized to manage Shared Block Storage devices. Submit a ticket to apply for the authorization.
403	InvalidParameter.MultiAttachAndEnableSharedNotMatch	The parameter MultiAttach and EnableShared are not match.	The error message returned because the specified MultiAttach and EnableShared parameters do not match.
403	InvalidParameter.MultiAttach	The specified param MultiAttach is not valid.	The error message returned because the specified MultiAttach parameter is invalid.
404	InvalidDiskChargeType.NotFound	The DiskChargeType does not exist in our records	The error message returned because the specified DiskChargeType parameter does not exist.
404	InvalidLockReason.NotFound	The specified LockReason is not found	The error message returned because the specified LockReason parameter does not exist.
404	InvalidDiskIds.ValueNotSupported	The specified parameter "DiskIds" is not supported.	The error message returned because the specified DiskIds parameter is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

11.4. ModifyDiskChargeType

You can call this operation to change the billing method for one or up to 16 disks attached to a single ECS instance.

Description

After you change the billing method, automatic payment is enabled by default. Make sure that you have sufficient balance in your account. Otherwise, your order becomes invalid and must be canceled. If your account balance is insufficient, you can set the AutoPay parameter to false to generate an unpaid order. Then, you can log on to the ECS console to pay for the order.

When you call this operation, take note of the following items:

- You can change the billing method from subscription to pay-as-you-go for subscription disks that are attached to a subscription instance.
- You can change the billing method from pay-as-you-go to subscription for pay-as-you-go data disks that are attached to a subscription or pay-as-you-go instance.
- The instance cannot be in the Stopped state due to overdue payments.
- You can change the billing method for each disk three times at most. A maximum of three refunds can be made for price differences for a single instance.
- The price difference is refunded to the payment account you used. Coupons that have been redeemed are not refundable.
- You cannot change the billing method of a disk again within five minutes after the billing method is changed.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDiskChargeType	The operation that you want to perform. Set the value to ModifyDiskChargeType.
DiskIds	String	Yes	["d-bp67acfmxazb4ph****", "d-bp67acfmxazb4pi****", ... "d-bp67acfmxazb4pj****"]	The list of disk IDs. The value is a JSON array that consists of up to 16 disk IDs. Separate multiple disk IDs with commas (,).
InstanceId	String	Yes	i-bp1i778bq705cvx1****	The ID of the instance to which the disk is attached.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
AutoPay	Boolean	No	true	Specifies whether to enable automatic payment. Default value: true. Valid values: • true: Automatic payment is enabled. Make sure that you have sufficient balance in your account. Otherwise, your order becomes invalid and must be canceled. • false: An order is generated but no payment is made. If your account balance is insufficient, you can set the AutoPay parameter to false to generate an unpaid order. Then, you can log on to the ECS console to pay for the order.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
DiskChargeType	String	No	PostPaid	The new billing method of the disk. Default value: PrePaid. Valid values: • PrePaid: changes the billing method from pay-as-you-go to subscription. • PostPaid: changes the billing method from subscription to pay-as-you-go.

Response parameters

Parameter	Type	Example	Description
OrderId	String	1234567890	The ID of the generated order.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyDiskChargeType
&DiskIds=["d-bp67acfmxazb4ph****", "d-bp67acfmxazb4pi****", … "d-bp67acfmxazb4pj****"]
&InstanceId=i-bp1i778bq705cvx1****
&RegionId=cn-hangzhou
&AutoPay=true
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&DiskChargeType=PostPaid
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyDiskChargeType>
        <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
        <Order>1234567890</Order>
</ModifyDiskChargeType>
```

`JSON` format

```
{
    "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368",
    "Order": "1234567890"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The RegionId provided does not exist.	The error message returned because the specified RegionId parameter does not exist. Check whether the region ID is correct.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType is not supported.	The error message returned because the specified instance type is not supported. Try another instance type.
400	MissingParameter.RegionId	RegionId should not be null.	The error message returned because the required RegionId parameter is not specified.
400	MissingParameter.InstanceIdNotSupported	InstanceId should not be null.	The error message returned because the required InstanceId parameter is not specified.
400	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the operation is not supported while the instance uses the current billing method.
400	InvalidInstanceId.Released	The specified Instance is not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
400	InvalidInstance.PurchaseNotFound	The specified Instance has no purchase.	The error message returned because the specified instance cannot be purchased.

HTTP status code	Error code	Error message	Description
400	InvalidInstance.UnPaidOrder	The specified Instance has unpaid order.	The error message returned because the specified instance has outstanding orders. You must pay for the orders before you proceed.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
400	Account.Arrearage	Your account has been in arrears.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
400	Idempotence.SignatureMismatch	There is a idempotence signature mismatch between this and last request.	The error message returned because the ClientToken value is the same in the current and last requests but the other parameters in these requests do not match.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not Supported.	The error message returned because you are not authorized to use the specified instance type.
400	OrderCreationFailed	Create Order failed, please check your parameters and try it later.	The error message returned because the order failed to be created. Check your parameter settings and try again.
400	Throttling	Request was denied due to request throttling, please try again after 5 minutes.	The error message returned because your request is denied due to throttling. Try again five minutes later.
403	Forbidden	%s	The error message returned because you are not authorized to use the specified resource.
404	PaymentMethodNotFound	No billing method has been registered on the account.	The error message returned because you have not selected a payment method. Select a payment method and try again.
404	InvalidRamRole.NotFound	The specified parameter "RAMRoleName" does not exist.	The error message returned because the specified RAM role does not exist.
400	InstanceDowngrade.QuotaExceed	Quota of instance downgrade is exceed.	The error message returned because the maximum number of configuration downgrades allowed for the instance has reached.
404	InvalidDiskIds.NotFound	Some of the specified data disks do not exist.	The error message returned because some data disks specified by the DiskIds parameter do not exist.
404	InvalidDiskIds.NotPortable	The specified DiskId is not portable.	The error message returned because the specified disk is not removable.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidInstanceChargeType.NotFound	The chargeType of the instance does not support this operation.	The error message returned because instances that use the specified billing method do not support the operation.
404	InvalidDataDiskSize.ValueNotSupported	The specified parameter "Size" is not supported.	The error message returned because the specified DataDiskSize parameter is not supported.
404	InvalidAction.NotSupported	The specified action is not supported.	The error message returned because the specified Action parameter is not supported.
404	InvalidInstanceStatus.NotSupported	The status of the specified instance is invalid.	The error message returned because the operation is not supported while the instance is in the current state.

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NOT_FOUND	The specified instance is not exist.	The error message returned because the specified InstanceId parameter does not exist.
400	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
400	LastOrderProcessing	The previous order is still processing, please try again later.	The error message returned because the previous order is being processed. Try again later.

For a list of error codes, visit the API Error Center.

11.5. ModifyDiskAttribute

You can call this operation to modify the properties of one or more Elastic Block Storage (EBS) devices, including their names, descriptions, and whether they are released along with their associated instances.

Description

- If you set DeleteWithInstance to false for a disk and the instance to which the disk is attached is locked for security reasons, the DeleteWithInstance parameter is ignored and the disk will be released along with the instance. If the value of `LockReason` is security in OperationLocks of the API response when you query information of an instance, the instance is locked for security reasons.
- You can use the `DiskIds.N` parameter to modify the properties of multiple EBS devices at a time, including their names, descriptions, and whether they are released along with their associated instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDiskAttribute	The operation that you want to perform. Set the value to ModifyDiskAttribute.
RegionId	String	Yes	cn-hangzhou	The region ID of the disk. You can call the DescribeRegions operation to query the most recent region list.
DiskId	String	No	d-bp1famypsnar20bv****	The ID of the disk. **Note** You can specify `DiskId` or `DiskIds.N`, but you cannot specify both of them.
DiskIds.N	RepeatList	No	d-bp1famypsnar20bv****	The ID of disk N. Valid values of N: 0 to 100. **Note** You can specify `DiskId` or `DiskIds.N`, but you cannot specify both of them.
DiskName	String	No	MyDiskName	The name of the disk. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Description	String	No	TestDescription	The description of the disk. It must be 2 to 256 characters in length and cannot start with http:// or https://.

Parameter	Type	Required	Example	Description
DeleteWithInstance	Boolean	No	false	Specifies whether to release the disk along with its associated instance. This parameter is empty by default, which indicates that the current value remains unchanged. An error is returned if you set this parameter to false in the following cases: • Category is set to ephemeral. • Category is set to cloud and Portable is set to false.
DeleteAutoSnapshot	Boolean	No	false	Specifies whether to delete the automatic snapshots of the disk when the disk is released. This parameter is empty by default, which indicates that the current value remains unchanged.
EnableAutoSnapshot	Boolean	No	true	Specifies whether to enable the automatic snapshot policy feature for the disk. • true: enables the automatic snapshot policy feature for the disk. • false: disables the automatic snapshot policy feature for the disk. This parameter is empty by default, which indicates that the current value remains unchanged. **Note** By default, the automatic snapshot policy feature is enabled for created disks. You need only to apply an automatic snapshot policy to a disk before you can use the policy.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyDiskAttribute
&RegionId=cn-hangzhou
&DiskId=d-bp1famypsnar20bv****
&DiskName=MyDiskName
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyDiskAttributeResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ModifyDiskAttributeResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified disk does not exist. Check whether the disk ID is correct.
400	InvalidDiskName.Malformed	The specified disk name is wrongly formed.	The error message returned because the specified DiskName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, colons (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
404	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	NoAttributeToModify	No attribute to be modified in this request.	The error message returned because no properties of the specified EBS device are modified.
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The error message returned because the maximum number of snapshots has been reached. To store new snapshots, delete the snapshots that are no longer needed.
403	DiskNotPortable	The specified disk is not a portable disk.	The error message returned because the specified disk is not removable.
403	IncorrectDiskStatus	The operation is not supported in this status.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payments for it.
400	IncompleteParamter	Some fields can not be null in this request.	The error message returned because a required parameter is not specified.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not authorized to manage the disk. Try again when you are authorized.
400	InvalidRegionId.MalFormed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.
404	InvalidInstanceId.NotFound	Specified attached instance does not exist.	The error message returned because the specified instance does not exist. Check whether instance ID is correct.

For a list of error codes, visit the API Error Center.

11.6. ModifyDiskSpec

You can call this operation to change the category of a disk or modify the performance level of an enhanced SSD (ESSD).

Description

When you call this operation, take note of the following items:

- To modify the performance level of an ESSD, take note of the following items:
  - For a subscription ESSD, you can only upgrade its performance level.
  - For a pay-as-you-go ESSD, You can upgrade or downgrade its performance level. However, you cannot downgrade the performance level to PL0.
  - The ESSD must be in the **In Use** (In_Use) or **Unattached** (Available) state.
  - If the ESSD is attached to an ECS instance, the instance must be in the **Running** (Running) or **Stopped** (Stopped) state. The instance cannot be in the Expired state or stopped due to an overdue payment.
  - If you cannot upgrade the performance level of the ESSD due to its capacity, resize the ESSD by calling the ResizeDisk operation and then try again. For more information, see Enhanced SSDs.
- For more information about the limits on changing the category of a disk, see the "Limits" section of the Change the category of a disk topic.

The new disk category or performance level takes effect immediately after this operation is executed. Alibaba Cloud calculates the bill based on the new disk category and performance level.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDiskSpec	The operation that you want to perform. Set the value to ModifyDiskSpec.
DiskId	String	Yes	d-bp131n0q38u3a4zi****	The ID of the disk.
DiskCategory	String	No	cloud_essd	The new category of the disk. Valid values: • cloud_essd: ESSD • cloud_ssd: standard SSD • cloud_efficiency: ultra disk This parameter is empty by default, which indicates that the disk category is not changed. **Note** The preceding values are listed in descending order of disk performance. The disk cannot be downgraded if it is a subscription disk.
PerformanceLevel	String	No	PL2	The new performance level of the ESSD. Valid values: • PL0: A single ESSD can deliver up to 10,000 random read/write IOPS. • PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. • PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. • PL3: A single ESSD can deliver up to 1,000,000 random read/write IOPS. Default value: PL1.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include the required parameters, request format, service limits, and available ECS resources. If the check fails, the corresponding error message is returned. If the check succeeds, the `DryRunOperation` error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2xx HTTP status code is returned and the request is made. Default value: false.

Response parameters

Parameter	Type	Example	Description
OrderId	String	20413515388****	The ID of the order. **Note** This parameter is returned only when the category of a subscription disk or the performance level of a subscription ESSD is modified.

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TaskId	String	t-bp67acfmxazb4p****	The task ID of changing the disk category. **Note** If you only modify the performance level of an ESSD, this parameter is not returned.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyDiskSpec
&DiskId=d-bp131n0q38u3a4zi****
&PerformanceLevel=PL2
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyDiskSpecResponse>
    <TaskId>t-bp67acfmxazb4p****</TaskId>
    <RequestId>5B38289D-88AB-42BD-B021-12FC6942F099</RequestId>
    <OrderId>20413515388****</TaskId>
</ModifyDiskSpecResponse>
```

`JSON` format

```
{
  "TaskId": "t-bp67acfmxazb4p****",
  "RequestId": "5B38289D-88AB-42BD-B021-12FC6942F099",
  "OrderId": "20413515388****"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified disk does not exist. Check whether the disk ID is correct.
403	DiskInArrears	The specified operation is denied as your disk owing fee.	The error message returned because you have an overdue payment for the disk.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance does not exist. Check whether the InstanceId parameter is correct.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payments for it.
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is not completed yet.	The error message returned because a snapshot is being created for the specified disk.
403	OperationDenied	The type of the disk does not support the operation.	The error message returned because the specified disk category does not support this operation.

HttpCode	Error code	Error message	Description
400	InvalidPerformanceLevel.Malformed	The specified parameter PerformanceLevel is not valid.	The error message returned because the specified PerformanceLevel parameter is invalid.
403	OperationDenied.PerformanceLevelNotMatch	The specified PerformanceLevel and disk size do not match.	The error message returned because the performance level of the ESSD cannot be upgraded due to its capacity.
400	InvalidDiskCategory.ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified disk category is invalid.
403	InvalidInstanceType.NotSupportDiskCategory	The instanceType of the specified instance does not support this disk category.	The error message returned because the instance type specified by the InstanceType parameter does not support the disk category of the instance. Try another instance type. For information about the disk categories supported by instance types, see documents on instance families.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because resources are insufficient in the specified zone. Try other types of resources or select other regions and zones.

For a list of error codes, visit the API Error Center.

11.7. ResetDisk

Restores a disk to a specific point in time from a snapshot of the disk.

Description

When you call this operation, take note of the following items:

- The disk must be in the In Use (In_Use) state.
- The Elastic Compute Service (ECS) instance to which the disk is attached must be in the Stopped (Stopped) state. You can call the StopInstances operation to stop an instance.
- The specified snapshot must be created from the disk specified by the DiskId parameter.
- When you call the DescribeInstances operation to query the instance information and the responses contain `{"OperationLocks": {"LockReason" : "security"}}`, the instance is locked for security reasons and no operations can take effect on the instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ResetDisk	The operation that you want to perform. Set the value to **ResetDisk**.
DiskId	String	Yes	d-bp199lyny9b3****	The ID of the disk that you want to restore.
SnapshotId	String	Yes	s-bp199lyny9b3****	The ID of the snapshot that is used to restore the disk.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include the required parameters, request format, and resource status limits. If the check fails, the corresponding error message is returned. If the check succeeds, the `DryRunOperation` error code is returned. • false: The validity of the request is checked. If the check succeeds, the request is made. Default value: false.

Response parameters

Parameter	Type	Example	Description
RequestId	String	F3CD6886-D8D0-4FEE-B93E-1B73239673DE	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ResetDisk
&DiskId=d-bp199lyny9b3****
&SnapshotId=s-bp199lyny9b3****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ResetDiskResponse>
    <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ResetDiskResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	DiskCategory.OperationNotSupported	The operation is not supported to the specified disk due to its disk category	The error message returned because the specified disk category does not support this operation.
400	InvalidRegionId.MalFormed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.
400	DryRunOperation	Request validation has been passed with DryRun flag set.	The error message returned because your request is determined as valid when the DryRun flag is set to true.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payments for it.

HTTP status code	Error code	Error message	Description
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InvalidParameter.Mismatch	The specified snapshot is not created from the specified disk.	The error message returned because an encrypted snapshot cannot be used to restore an unencrypted disk.
403	InvalidSnapshot.TooOld	The snapshotId is created before 2013-07-15, it cannot be restored since the first time the disk detached.	The error message returned because snapshots created before July 15, 2013 do not support this operation.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance and try again.
403	OperationDenied	The specified snapshot dees not support ResetDisk.	The error message returned because the specified snapshot does not support this operation.
403	InvalidSnapshotId.NotReady	The specified snapshot has not completed yet.	The error message returned because the specified snapshot is being created.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.
403	Operation.Conflict	The operation may conflicts with others.	The error message returned because this operation conflicts with other operations.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not authorized to manage the disk. Try again when you are authorized.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a Key Management Service (KMS) key ID is specified for a disk. You can call the DescribeKey operation of KMS to query the information of the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
404	InvalidParameter.KMSKeyId.NotFound	The specified KMSKeyId does not exist.	The error message returned because the specified KMSKeyId parameter does not exist.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
404	Disk.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
404	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The error message returned because the specified SnapshotId parameter does not exist. Check whether the snapshot ID is correct.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.

HTTP status code	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

11.8. ReplaceSystemDisk

Replaces the system disk or the operating system of an Elastic Compute Service (ECS) instance. After the system disk is replaced, the ID of the system disk changes and the original disk is released.

Description

When you call this operation, take note of the following items:

- You must specify `ImageId` or `DiskId`. If both `ImageId` and `DiskId` are specified, `DiskId` takes effect.
- You cannot change the category of the system disk.
- You cannot change the billing method of the system disk.
- The instance must be in the Stopped (`Stopped`) state.

> **Note** This item is applicable to only instances in virtual private clouds (VPCs). If the instance is a pay-as-you-go instance and the economical mode is enabled by default for the instance, you must disable the economical mode and enable the standard mode when you stop the instance. This prevents the instance from being unable to restart due to insufficient ECS resources after the system disk is replaced. For more information, see StopInstance.

- The instance must not be locked for security reasons. If the value of `OperationLocks` in the DescribeInstances response contains `"LockReason": "security"` for an instance, the instance is locked for security reasons. For more information, see API behavior when an instance is locked for security reasons.
- You cannot have overdue payments for the instance to which the system disk is attached.
- You can configure the `SystemDisk.Size` parameter to specify the capacity of the new system disk.

After you call this operation, you can use one of the following methods to check whether the system disk is replaced:

- Call the DescribeDisks operation to query the state of the new system disk. If the new system disk is in the In_use state, the system disk is replaced.
- Call the DescribeInstances operation to query the state of the instance whose system disk is replaced. If the `OperationLocks` response parameter is empty, the system disk is replaced.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ReplaceSystemDisk	The operation that you want to perform. Set the value to **ReplaceSystemDisk**.
InstanceId	String	Yes	i-bp67acfmxazb4ph****	The ID of the instance.
ImageId	String	No	m-bp67acfmxazb4ph****	The ID of the image to be used to replace the system disk. If the `DiskId` parameter is not specified, this parameter is required.

Parameter	Type	Required	Example	Description
SystemDisk.Size	Integer	No	80	The capacity of the new system disk. Unit: GiB. Valid values: Max{20, Size of the image specified by ImageId} to 500. Default value: Max{40, Size of the image specified by ImageId}. **Note** You are charged for the capacity that exceeds `Max{20, Capacity of the original system disk}`.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
UseAdditionalService	Boolean	No	true	Specifies whether to use the system configurations for virtual machines provided by Alibaba Cloud (Windows: NTP and KMS. Linux: NTP and YUM). **Note** This parameter takes effect only when you attach a system disk whose device name is /dev/xvda.
Password	String	No	EcsV587!	Specifies whether to reset the password for the instance. The password must be 8 to 30 characters in length and must contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include: `()`~!@#$%^&*-_+=|{}[]:;'<>,.?/` The password of a Windows instance cannot start with a forward slash (/). This parameter is empty by default, which indicates that the current password remains unchanged. **Note** For security reasons, we recommend that you use HTTPS to send requests if the `Password` parameter is specified.
PasswordInherit	Boolean	No	false	Specifies whether to use the password preset in the image. Default value: false **Note** If the PasswordInherit parameter is specified, you must leave the Password parameter empty and make sure that the selected image has a password preset.

Parameter	Type	Required	Example	Description
KeyPairName	String	No	testKeyPairName	The name of the key pair bound to the instance. **Note** This parameter is applicable to only Linux instances. You can bind an SSH key pair to the instance as a logon credential. After the SSH key pair is bound, the username and password logon method is disabled for the instance.
DiskId	String	No	d-bp67acfmxazb4ph****	The ID of the disk to be used to replace the operating system. If the `ImageId` parameter is not specified, this parameter is required. If the DiskId parameter is specified, the `Platform` and `Architecture` parameters must be specified. The specified value of `Platform` and `Architecture` must be consistent with that of `Platform` and `Architecture` of the instance.
Platform	String	No	CentOS	The distribution of the operating system. Valid values: • CentOS • Ubuntu
Architecture	String	No	i386	The system architecture. Valid values: • i386 • x86_64
SecurityEnhancementStrategy	String	No	Active	Specifies whether to activate Security Center for free after the system disk is replaced. Valid values: • Active: Security Center is used for free after the system disk is replaced. This value is applicable to only public images. • Deactive: Security Center is not used after the system disk is replaced. This value is applicable to all images. Default value: Deactive.

Response parameters

Parameter	Type	Example	Description
DiskId	String	d-bp67acfmxazb4ph****	The ID of the new system disk.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=ReplaceSystemDisk
&InstanceId=i-bp67acfmxazb4ph****
&ImageId=m-bp67acfmxazb4ph****
&SystemDisk.Size=80
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&UseAdditionalService=true
&Password=EcsV587!
&PasswordInherit=false
&KeyPairName=testKeyPairName
&Platform=CentOS
&Architecture=i386
&SecurityEnhancementStrategy=Active
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ReplaceSystemDiskResponse>
    <DiskId>d-bp67acfmxazb4ph****</DiskId>
    <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ReplaceSystemDiskResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "337568C5-64F3-4B76-8CDD-D3D8C57B5B8C",
  "DiskId" : "d-bp67acfmxazb4ph****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidSystemDiskSize.ValueNotSupported	The specified parameter SystemDisk.Size is invalid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	InvalidParameter.Conflict	The specified image does not support the specified instance type.	The error message returned because the specified image does not support the specified instance type.
400	InvalidSystemDiskSize.ImageNotSupportResize	The specified image does not support resize.	The error message returned because the specified image does not support resizing.
400	InvalidSystemDiskSize	The specified parameter SystemDisk.Size is invalid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	InvalidSystemDiskSize.ValueNotSupported	The specified parameter SystemDisk.Size is invalid	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.
400	InvalidPasswordParam.Mismatch	The input password should be null when passwdInherit is true.	The error message returned because the Password parameter is not left empty when the PasswdInherit parameter is used.
400	OperationDenied	The specified image contains the snapshot of the data disk,does not support this operation.	The error message returned because the operation is not supported when the specified image contains data disk snapshots.
400	InvalidDiskCategory.ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.Conflict	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	OperationDenied	%s	The error message returned because the operation is denied.
400	InvalidKeyPairName.NotFound	The specified KeyPairName does not exist.	The error message returned because the name of the specified key pair does not exist.
400	DependencyViolation.IoOptimize	The specified parameter InstanceId is not valid.	The error message returned because the I/O optimization configuration of the instance is invalid.
400	MissingParameter.Architecture	Architecture should not be null.	The error message returned because the Architecture parameter is not specified.
400	InvalidArchitecture.Malformed	Architecture is not valid.	The error message returned because the specified Architecture parameter is invalid.
400	MissingParameter.Platform	Platform should not be null.	The error message returned because the Platform parameter is not specified.
400	InvalidPlatform.Malformed	Platform is not valid.	The error message returned because the specified Platform parameter is invalid.
400	InvalidParameter.AllEmpty	%s	The error message returned because the required parameters are not specified.
400	InvalidDiskId.NotFound	The specified disk do not exist.	The error message returned because the specified disk does not exist.
400	InvalidDatadisk.DiskStatusViolation	The operation is not permitted due to status of the Datadisk.	The error message returned because the operation is not supported while the data disk is in the current state.
400	InvalidDatadisk.DiskCategoryViolation	The operation is not permitted due to category of the Datadisk.	The error message returned because the category of the data disk does not support the operation.
400	InvalidSystemDiskSize.ValueNotSupported	The specified SystemDiskSize is not valid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	MissingParameter	The input parameter "ImageId" that is mandatory for processing this request is not supplied.	The error message returned because the ImageId parameter is not specified.
400	InvalidInstance.NotFoundSystemDisk	The specified instance has no system disk.	The error message returned because the specified instance does not have a system disk attached. Make sure that the specified instance has a system disk attached. You can call the DescribeInstances operation to query the details of the specified instance.
403	InvalidSystemDiskStatus.IsTransfering	The current status of the resource does not support this operation, system disk is transfering.	The error message returned because the operation is not supported while the resource is in the current state. Try again after the system disk stops transmitting data.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is usable and you have no overdue payments for it.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.

HTTP status code	Error code	Error message	Description
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	ImageNotSubscribed	The specified image has not be subscribed.	The error message returned because you have not subscribed to the specified Alibaba Cloud Marketplace image.
403	ImageRemovedInMarket	The specified market image is not available, Or the specified user defined image includes product code because it is based on an image subscribed from marketplace, and that image in marketplace includeing exact the same product code has been removed.	The error message returned because the specified Alibaba Cloud Marketplace image is unavailable, or because the specified custom image contains the product code of the Alibaba Cloud Marketplace image from which the custom image is derived, and the Alibaba Cloud Marketplace image was removed from Alibaba Cloud Marketplace.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance and try again.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the billing method of the instance does not support this operation.
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is not completed yet.	The error message returned because a snapshot is being created for the specified disk.
403	IoOptimized.NotSupported	The specified image is not support IoOptimized Instance.	The error message returned because the specified image does not support I/O optimized instances.
403	ImageNotSupportInstanceType	The specified image don not support the InstanceType instance.	The error message returned because the specified image does not support the instance type.
403	QuotaExceed.BuyImage	The specified image is from the image market,You have not bought it or your quota has been exceeded.	The error message returned because you have not purchased the specified Alibaba Cloud Marketplace image or because your image quota has been used up.
403	INST_HAS_UNPAID_ORDER	The instance has unpaid order.	The error message returned because you have unpaid orders for the instance.
403	OperationDenied.InstanceCreating	The specified instance is creating.	The error message returned because the specified instance is being created.
403	InvalidParameter.NotMatch	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
403	ResourcesNotInSameZone	The specified instance and disk are not in the same zone.	The error message returned because the specified instance and disk are not in the same zone.
403	ImageNotSupportInstanceType	The specified instanceType is not supported by instance with marketplace image.	The error message returned because the specified Alibaba Cloud Marketplace image does not support the instance type.
403	OperationDenied.UnpaidOrder	The specified instance has unpaid order.	The error message returned because you have unpaid orders for the specified instance. You can log on to the ECS console to pay for the orders.
403	OperationDenied.ImageNotValid	%s	The error message returned because the image does not support the operation.
403	InvalidOperation.MultiAttachDisk	Multi attach disk does not support this operation.	The error message returned because the disk that has the multi-attach feature enabled does not support the operation.

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
404	InvalidInstanceId.NotFound	The specified instance does not exist.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist within this account. Check whether the image ID is correct.
404	InvalidSystemDiskSize.MoreThanMaxSize	The specified SystemDisk.Size parameter exceeds the maximum size.	The error message returned because the specified system disk size exceeds the upper limit.
404	InvalidSystemDiskSize.LessThanImageSize	The specified parameter SystemDisk.Size is less than the image size.	The error message returned because the specified system disk size is smaller than the image size.
404	InvalidSystemDiskSize.LessThanMinSize	The specified parameter SystemDisk.Size is less than the min size.	The error message returned because the specified system disk size is smaller than the minimum allowable size.
404	NoSuchResource	The specified resource is not found.	The error message returned because the specified resource does not exist.
500	OperationDenied	Internal Error.	The error message returned because an internal error has occurred.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

11.9. ReInitDisk

You can call this operation to re-initialize a disk to restore it to the status when it was created.

Description

When you call this operation, take note of the following items:

- The disk to be re-initialized must be in the **In Use** (In_use) state and the instance to which the disk is attached must be in the **Stopped** (Stopped) state.
- If an instance has never been started since it was created, its attached disks cannot be re-initialized.
- If a local snapshot has been created for a disk, the disk cannot be re-initialized.
- When a system disk is re-initialized, it is restored to the state of the image from which it was created. If the source image is deleted, the system disk cannot be re-initialized.
- When a separately created data disk is re-initialized, it is restored to an empty data disk.
- When a data disk that is created from a snapshot is re-initialized, the disk is restored to the state of the source snapshot.

> **Note** If the source snapshot is deleted, the disk cannot be re-initialized and an error is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer automatically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ReInitDisk	The operation that you want to perform. Set the value to ReInitDisk.
DiskId	String	Yes	d-bp67acfmxazb4ph****	The ID of the disk.
Password	String	No	EcsV587!	Specifies whether to reset the password of the instance when you re-initialize its system disk. The password must be 8 to 30 characters in length. It must include at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include `( ) ` ~ ! @ # $ % ^ & * - _ + = | { } [ ] : ; ' < > , . ? /` For a Windows instance, the password cannot start with a forward slash (/). **Note** If the `Password` parameter is specified, we recommend that you send requests over HTTPS to secure your password.
KeyPairName	String	No	testKeyPairName	The name of the key pair. **Note** The parameter is applicable only to Linux instances. You can bind an SSH key pair to an instance as the logon credential when you re-initialize its system disk. After the SSH key pair is bound, the username and password logon method is disabled for the instance.
AutoStartInstance	Boolean	No	true	Specifies whether to automatically start the instance after the disk is re-initialized. Default value: false.
SecurityEnhancementStrategy	String	No	Active	Specifies whether to use Security Center for free after the system disk is re-initialized. Valid values: • Active: Security Center is used for free after the system disk is replaced. This value is applicable only to public images. • Deactive: Security Center is not used for free after the system disk is replaced. This value is applicable to all images. Default value: Deactive.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ReInitDisk
&DiskId=d-bp67acfmxazb4ph****
&KeyPairName=testKeyPairName
&AutoStartInstance=true
&SecurityEnhancementStrategy=Active
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ReInitDiskResponse>
      <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ReInitDiskResponse>
```

`JSON` format

```
{
    "RequestId":"F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and your account has no overdue payment for it.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InvalidSnapshot.TooOld	The disk is created from a snapshotId made before 2013-07-15, it cannot be re-initiated the specified disk any more since the detached first time.	The error message returned because snapshots created before July 15, 2013 do not support this operation.
403	OperationDenied	The snapshot which is used to create the specified disk has been deleted.	The error message returned because the snapshot used to create the specified disk does not exist.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is not completed yet.	The error message returned because a snapshot of the specified disk is being created.
403	InvalidSourceSnapshot	The snapshot which is used to create the specified disk has been deleted.	The error message returned because the snapshot used to create the specified disk is deleted.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account. Check whether the image ID is correct.
403	SharedImageDeleted	The specified image by others shared is deleted.	The error message returned because the specified shared image is deleted.
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.

HTTP status code	Error code	Error message	Description
400	DiskCategory.OperationNotSupported	The operation is not supported to the specified disk due to its disk category	The error message returned because the specified disk category does not support the operation.
400	InvalidKeyPairName.NotFound	The specified KeyPairName does not exist.	The error message returned because the specified KeyPairName parameter does not exist.
400	DependencyViolation.IoOptimize	The specified parameter InstanceId is not valid.	The error message returned because the I/O optimization of the instance is invalid.
403	UserNotInTheWhiteList	The user is not in volume white list.	The error message returned because you are not in the Shared Block Storage whitelist. Submit a ticket to apply for the permission.
400	InvalidRegionId.MalFormed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.
404	InvalidDiskId.OperationNotSupported	The operation is not supported due to image not exist.	The error message returned because the specified image does not exist.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

For a list of error codes, visit the API Error Center.

11.10. ResizeDisk

You can call this operation to resize a system disk or data disk.

Description

> **Note** Before you call this operation, you must check the partition format of the disk. You cannot resize an MBR-formatted disk to greater than or equal to 2 TiB without data loss. To resize an MBR-formatted disk to greater than or equal to 2 TiB in size, we recommend that you create and attach a new data disk with the desired size. Then, you can partition and format the new data disk to GPT and copy data from the MBR-formatted data disk to the new GPT-formatted data disk. For more information, see Resize cloud disks offline.

- You can resize the following categories of disks: basic disks (`cloud`), ultra disks (`cloud_efficiency`), standard SSDs (`cloud_ssd`), and enhanced SSDs (ESSDs) (`cloud_essd`).
- You cannot resize a disk when a snapshot is being created for the disk.
- The instance to which the disk to be resized is attached must be in the **Running** (`Running`) or **Stopped** (`Stopped`) state.
- After you resize a disk, its partitions and file systems are not changed. You must manually allocate the storage space on the disk after it is resized.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ResizeDisk	The operation that you want to perform. Set the value to ResizeDisk.
DiskId	String	Yes	d-bp67acfmxazb4p****	The ID of the disk.

Parameter	Type	Required	Example	Description
NewSize	Integer	Yes	1900	The new disk capacity. Unit: GiB. Valid values: • Ultra disk (cloud_efficiency): 20 to 32768 • Standard SSD (cloud_ssd): 20 to 32768 • Enhanced SSD (cloud_essd): 20 to 32768 • Basic disk (cloud): 5 to 2000 The new disk capacity must be greater than the original disk capacity.
Type	String	No	offline	The method that you use to resize the disk. Default value: offline. Valid values: • offline. After you resize a disk offline, you must restart the instance by using the ECS console or by calling the RebootInstance operation for the resizing operation to take effect. For more information, see Restart the instance and RebootInstance. • online. After you resize a disk online, the resizing operation takes effect immediately and you do not need to restart the instance. You can resize ultra disks, standard SSDs, and ESSDs online.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example	Description
OrderId	String	20413515388****	The ID of the order. **Note** This parameter is returned only when subscription disks are resized.
RequestId	String	F3CD6886-D8D0-4FEE-B93E-1B73239673DE	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ResizeDisk
&DiskId=d-bp67acfmxazb4p****
&NewSize=1900
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ResizeDiskResponse>
      <OrderId>20413515388****</OrderId>
      <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ResizeDiskResponse>
```

`JSON` format

```
{
    "OrderId": "20413515388****",
    "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidDataDiskSize.ValueNotSupported	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified DataDisk.N.Size parameter is invalid or the snapshot size exceeds the maximum capacity that is allowed for the specified category.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified disk does not exist. Check whether the disk ID is correct.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified Instance does not exist. Check whether the instance ID is correct.
403	OperationDenied	The type of the disk does not support the operation.	The error message returned because the specified disk category does not support this operation.
403	OperationDenied	The status of the disk or the instance that the disk is attaching with does not support the operation.	The error message returned because the operation is not supported while the disk or instance is in the current state.
403	InvalidDiskSize.TooSmall	Specified new disk size is less than the original disk size.	The error message returned because the specified new disk capacity is smaller than the original disk capacity.
403	InvalidDiskSize.TooLarge	Specified new disk size is beyond the permitted range.	The error message returned because the specified new disk capacity exceeds the capacity limit.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	DiskError	IncorrectDiskStatus	The error message returned because the status of the specified disk is invalid.
403	DiskInArrears	The specified operation is denied as your disk owing fee.	The error message returned because you have overdue payments for the disk.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is not completed yet.	The error message returned because a snapshot is being created for the specified disk.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned because the specified data disk category is invalid.
400	InvalidParameter.Conflict	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
400	InvalidDataDiskSize.ValueNotSupported	%s	The error message returned because the specified data disk capacity is invalid.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned because the specified system disk size is not supported.

HTTP status code	Error code	Error message	Description
403	InvalidDiskSize	Specified new disk size is less than or equal the original disk size.	The error message returned because the specified new disk capacity is smaller than or equal to the original disk capacity.
400	IncompleteParamter	Some fields can not be null in this request.	The error message returned because some required parameters are not specified.
403	Operation.Conflict	The operation may conflicts with others.	The error message returned because the operation conflicts with other operations.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the resource is locked for security reasons.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payments for it.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not authorized to manage the disk. Try again when you are authorized.
400	InvalidRegionId.MalFormed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.
403	InvalidDiskCategory.NotSupported	The specified disk category is not supported.	The error message returned because the specified disk category does not support the current operation.
400	InvalidParam.Type	The specified type is not supported.	The error message returned because the specified Type parameter is invalid.
403	InvalidRegion.NotSupport	The specified region does not support resize online.	The error message returned because online resizing is not supported in the specified region.
403	InvalidDiskCategory.NotSupported	The specified disk category does not support resize online.	The error message returned because the specified disk category does not support online resizing.
403	IncorrectInstanceStatus	The current status of the resource does not support resize online.	The error message returned because this operation is not supported while the resource is in the current state.
403	InvalidInstanceStatus.NotRunning	The status of instance to which the disk attachs must be running when resizing online.	The error message returned because the instance to which the disk is attached is not in the Running state when you resize the disk online.
403	IncorrectDiskStatus	The current status of the resource does not support resize online	The error message returned because online resizing is not supported while the resource is in the current state.
400	LastOrderProcessing	The previous order is still processing, please try again later.	The error message returned because the order is being processed. Try again later.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a Key Management Service (KMS) key ID is specified for a disk. You can call the DescribeKey operation provided by KMS to query the information about a specific CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because Elastic Compute Service (ECS) is not authorized to access your KMS resources.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

HTTP status code	Error code	Error message	Description
403	SecurityRisk.3DVerification	We have detected a security risk with your default credit or debit card. Please proceed with verification via the link in your email.	The error message returned because risks are detected in your default credit card or debit card. Click the link in the email for verification.
400	InvalidSystemDiskSize.ImageNotSupportResize	The specified image does not support resize.	The error message returned because disks created by using the specified image cannot be resized.

For a list of error codes, visit the API Error Center.

11.11. DetachDisk

Detaches a pay-as-you-go data disk or a system disk from an Elastic Compute Service (ECS) instance.

Description

When you call this operation, take note of the following limits:

- The disk must be attached to an ECS instance and in the In Use (`In_Use`) state.
- The instance from which you want to detach the data disk must be in the **Running** (`Running`) or **Stopped** (`Stopped`) state.
- The instance from which you want to detach the system disk must be in the **Stopped** (`Stopped`) state.
- If `OperationLocks` in the response contains `"LockReason" : "security"` when you query information of an instance, the instance is locked for security reasons and all operations cannot take effect on the instance.
- DetachDisk is an asynchronous operation. It takes about 1 minute for a disk to be detached from an instance after the operation is called.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DetachDisk	The operation that you want to perform. Set the value to DetachDisk.
DiskId	String	Yes	d-bp67acfmxazb4p****	The ID of the disk to be detached.
InstanceId	String	Yes	i-bp67acfmxazb4p****	The ID of the ECS instance from which the disk is to be detached.
DeleteWithInstance	Boolean	No	false	Specifies whether to automatically release the system disk when the instance from which the system disk is to be detached is released. Valid values: • true: The system disk is released when the instance is released. • false: The system disk is not released when the instance is released. The system disk is retained as a pay-as-you-go data disk. Default value: true. Take note of the following items: • This parameter cannot be set for disks for which the multi-attach feature is enabled. • If a data disk is to be detached, the default value is `false` .

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DetachDisk
&DiskId=d-bp67acfmxazb4p****
&InstanceId=i-bp67acfmxazb4p****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DetachDiskResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DetachDiskResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidParameter	The input parameter is mandatory for processing this request is empty.	The error message returned because a required parameter is not set.
400	InvalidRegionId.MalFormed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.
400	InvalidOperation.InstanceType NotSupport	The instance type of the specified instance does not support hot detach disk.	The error message returned because the instance to which the disk is attached does not support the hot swapping of disks.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is usable and you have no overdue payments for it.
403	DiskNotPortable	The specified disk is not a portable disk.	The error message returned because the specified disk is not removable.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	DependencyViolation	The specified disk has not been attached on the specified instance.	The error message returned because the operation is not supported while the resource has other dependencies. For example, the specified disk is not attached to the specified instance, or the specified security group cannot be deleted while it contains instances. Remove the dependencies and try again.
403	DiskTypeViolation	The specified disk is a system disk and cannot support the operation.	The error message returned because the specified disk is the system disk and cannot be detached from the instance to which it is attached.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not authorized to manage the disk. Try again when you are authorized.

HTTP status code	Error code	Error message	Description
403	InvalidInstance.ImageCategory	The image category of the specified instance does not support detaching system disk.	The error message returned because the specified system disk cannot be detached from the specified instance while the image of the instance is in the current state. Possible cause: The image used to create the instance was deleted.
403	DeleteWithInstance.Conflict	Multi attach disk cannot be set to DeleteWithInstance attribute.	The error message returned because the DeleteWithInstance attribute is invalid for disks for which the multi-attach feature is enabled.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter is invalid.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified disk does not exist. Check whether the disk ID is correct.
404	InvalidDisk.AlreadyDetached	The specified disk has been detached.	The error message returned because the specified disk has been detached from the instance.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

11.12. DeleteDisk

You can call this operation to release a pay-as-you-go data disk. The data disk can be a basic disk, an ultra disk, a standard SSD, or an enhanced SSD (ESSD).

Description

When you call this operation to release a pay-as-you-go data disk, take note of the following items:

- Manual snapshots of the disk are retained.
- You can call the ModifyDiskAttribute operation to configure whether to release automatic snapshots together with the disk. We recommend that you delete unneeded snapshots to maintain an enough snapshot quota for new automatic snapshots.
- The disk must be in the Unattached (Available) state.
- If the specified disk does not exist, the request is ignored.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteDisk	The operation that you want to perform. Set the value to DeleteDisk.
DiskId	String	Yes	d-bp14k9cxvr5uzy5****	The ID of the disk to be released.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteDisk
&DiskId=d-bp14k9cxvr5uzy5****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteDiskResponse>
      <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</DeleteDiskResponse>
```

`JSON` format

```
{
    "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and your account has no overdue payments.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	DiskNotPortable	The specified disk is not a portable disk.	The error message returned because the specified disk is not removable.
403	DiskTypeViolation	The specified disk is a system disk and cannot support the operation.	The error message returned because the specified disk is a system disk and cannot be detached from the instance to which it is attached.
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is not completed yet.	The error message returned because a snapshot of the specified disk is being created.
403	IncorrectDiskStatus.Initializing	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and your account has no overdue payments.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
403	DiskStillAttached	The disk is still attached to the disk.	The error message returned because the disk to be released is still attached to an instance.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not in the whitelist to manage the disk. Try again when you are in the whitelist.
400	InvalidRegionId.MalFormed	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.

For a list of error codes, visit the API Error Center.

11.13. CreateDedicatedBlockStorageCluster

Creates a dedicated block storage cluster.

Description

> **Note** Dedicated Block Storage Cluster is available in the China (Heyuan), Indonesia (Jakarta), and China South 1 Finance regions.

Dedicated block storage clusters are physically isolated from public block storage clusters. The owner of each dedicated block storage cluster has exclusive access to all resources in the cluster. For more information, see Overview.

Disks created in a dedicated block storage cluster can be attached only to Elastic Compute Service (ECS) instances within the same zone as the cluster. Before you create a dedicated block storage cluster, you must have an understanding of the region and zone in which cloud resources are located to create the cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateDedicatedBlockStorageCluster	The operation that you want to perform. Set the value to **CreateDedicatedBlockStorageCluster**.
RegionId	String	Yes	cn-heyuan	The ID of the region in which to create the dedicated block storage cluster. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	Yes	cn-heyuan-b	The ID of the zone in which to create the dedicated block storage cluster. You can call the DescribeZones operation to query the most recent zone list.
DedicatedBlockStorageClusterName	String	No	myDBSCCluster	The name of the dedicated block storage cluster.
Category	String	Yes	cloud_essd	The category of disks that can be created in the dedicated block storage cluster. Valid value: cloud_essd. Only enhanced SSDs (ESSDs) can be created in dedicated block storage clusters.
Capacity	Integer	Yes	60	The capacity of the dedicated block storage cluster. Valid values: 60 to 2304. Unit: TiB.
Description	String	No	This is description.	The description of the dedicated block storage cluster.
Type	String	No	Premium	The type of the dedicated block storage cluster. Valid values: • Standard: When you set Type to Standard, ESSDs at performance level 0 (PL0 ESSDs) can be created in the dedicated block storage cluster. • Premium: When you set Type to Premium, ESSDs at performance level 1 (PL1 ESSDs) can be created in the dedicated block storage cluster. Default value: Premium.

Parameter	Type	Required	Example	Description
Period	Integer	No	2	The subscription period of the dedicated block storage cluster. The unit is specified by the `PeriodUnit` parameter. Valid values: • When `PeriodUnit` is set to Year, the valid values of Period are 1, 2, 3, and 4. • When `PeriodUnit` is set to Month, the valid values of Period are 6, 7, 8, 9, 10, and 11. **Note** Dedicated Block Storage Cluster supports only the subscription billing method. You must specify the `Period` and `PeriodUnit` parameters.
PeriodUnit	String	No	Year	The unit of the subscription period. Valid values: • Year • Month **Note** Dedicated Block Storage Cluster supports only the subscription billing method. You must specify the `Period` and `PeriodUnit` parameters.
ClientToken	String	No	123e4567-e89b-12d3-a456-426612340000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The `ClientToken` value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example	Description
DedicatedBlockStorageClusterOrderId	String	50155660025****	The ID of the order.
RequestId	String	20758A-585D-4A41-A9B2-28DA8F4F534F	The ID of the request.
DedicatedBlockStorageClusterId	String	dbsc-f8z4d3k4nsgg9okb****	The ID of the dedicated block storage cluster.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateDedicatedBlockStorageCluster
&RegionId=cn-heyuan
&ZoneId=cn-heyuan-b
&Capacity=60
&Category=cloud_essd
&Type=Premium
&Period=6
&PeriodUnit=Month
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateDedicatedBlockStorageClusterResponse>
    <DedicatedBlockStorageClusterOrderId>50155660025****</DedicatedBlockStorageClusterOrderId>
    <RequestId>20758A-585D-4A41-A9B2-28DA8F4F534F</RequestId>
    <DedicatedBlockStorageClusterId>dbsc-f8z4d3k4nsgg9okb****</DedicatedBlockStorageClusterId>
</CreateDedicatedBlockStorageClusterResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "DedicatedBlockStorageClusterOrderId" : "50155660025****",
  "RequestId" : "20758A-585D-4A41-A9B2-28DA8F4F534F",
  "DedicatedBlockStorageClusterId" : "dbsc-f8z4d3k4nsgg9okb****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidZoneId.NotFound	The specified zone does not exist.	The error message returned because the specified ZoneId parameter does not exist.
404	InvalidRegionId.NotFound	The specified region does not exist.	The error message returned because the specified RegionId parameter does not exist. Check whether the service is available in the specified region.

For a list of error codes, visit the API Error Center.

11.14. DescribeDedicatedBlockStorageClusters

Queries the created dedicated block storage clusters.

Description

Note Dedicated Block Storage Cluster is available in the China (Heyuan), Indonesia (Jakarta), and China South 1 Finance regions.

- You can specify multiple request parameters to be queried. Specified parameters have logical AND relations. Only the specified parameters are included in the filter conditions.
- We recommend that you use the NextToken and MaxResults parameters for a paged query. During a paged query, when you call the DescribeDedicatedBlockStorageClusters operation to retrieve the first page of results, set MaxResults to specify the maximum number of entries to return in the call. The return value of NextToken is a pagination token, which can be used in the next call to retrieve a new page of results. When you call the DescribeDedicatedBlockStorageClusters operation to retrieve a new page of results, set NextToken to the NextToken value returned in the previous call and set MaxResults to specify the maximum number of entries to return in this call.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDedicatedBlockStorageClusters	The operation that you want to perform. Set the value to **DescribeDedicatedBlockStorageClusters**.
RegionId	String	Yes	cn-heyuan	The region ID of the dedicated block storage cluster. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-heyuan-b	The zone ID of the dedicated block storage cluster. You can call the DescribeZones operation to query the most recent zone list.

Parameter	Type	Required	Example	Description
Category	String	No	cloud_essd	The category of disks that can be created in the dedicated block storage cluster. Valid value: cloud_essd. Only enhanced SSDs (ESSDs) can be created in dedicated block storage clusters.
NextToken	String	No	AAAAAdDWBF2	The pagination token. Set the value to the NextToken value returned from a previous call to the DescribeDedicatedBlockStorageClusters operation. Leave this parameter empty when you call this operation for the first time.
MaxResults	Integer	No	10	The maximum number of entries to return on each page. Maximum value: 500. Default value: 10.
DedicatedBlockStorageClusterId.N	String	No	dbsc-f8z4d3k4nsgg9okb****	The ID of dedicated block storage cluster N. You can specify multiple cluster IDs.
Status.N	String	No	Running	The state of the dedicated block storage clusters. Valid values: • Preparing: The clusters are pending delivery. • Running: The clusters are running. • Expired: The clusters expire. • Offline: The clusters are offline. Valid value of N: 1 to 4. You can specify multiple cluster states to query dedicated block storage clusters in these states.

Response parameters

Parameter	Type	Example	Description
NextToken	String	AAAAAdDWBF2	The pagination token returned in this call.
RequestId	String	11B55F58-D3A4-4A9B-9596-342420D02FF8	The ID of the request.
DedicatedBlockStorageClusters	Array of DedicatedBlockStorageCluster		Details about one or more dedicated block storage clusters.
DedicatedBlockStorageCluster			
Status	String	Running	The state of the dedicated block storage clusters. Valid values: • Preparing: The clusters are pending delivery. • Running: The clusters are running. • Expired: The clusters expire. • Offline: The clusters are offline.
Type	String	Standard	The type of the dedicated block storage cluster. Valid values: • Standard: ESSDs at performance level 0 (PL0 ESSDs) can be created in basic dedicated block storage clusters. • Premium: ESSDs at performance level 1 (PL1 ESSDs) can be created in basic dedicated block storage clusters.
Description	String	This is description.	The description of the dedicated block storage cluster.
ExpiredTime	String	2022-03-09 00:00:00	The expiration time of the dedicated block storage cluster.

Parameter	Type	Example	Description
CreateTime	String	2021-09-08 16:45:45	The time when the dedicated block storage cluster was created.
ZoneId	String	cn-heyuan-b	The zone ID of the dedicated block storage cluster.
Category	String	cloud_essd	The category of the disks created in the dedicated block storage cluster.
DedicatedBlockStorageClusterName	String	myDBSCCluster	The name of the dedicated block storage cluster.
DedicatedBlockStorageClusterId	String	dbsc-f8z4d3k4nsgg9okb****	The ID of the dedicated block storage cluster.
DedicatedBlockStorageClusterCapacity	Object		The storage capacity of the dedicated block storage cluster.
TotalCapacity	Long	61440	The total capacity of the dedicated block storage cluster. Unit: GiB.
AvailableCapacity	Long	61440	The available capacity of the dedicated block storage cluster. Unit: GiB.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDedicatedBlockStorageClusters
&RegionId=cn-heyuan
&&DedicatedBlockStorageClusterId.1=dbsc-f8z4d3k4nsgg9okb****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeDedicatedBlockStorageClustersResponse>
    <DedicatedBlockStorageClusters>
        <DedicatedBlockStorageCluster>
            <Status>Running</Status>
            <Type>Standard</Type>
            <Category>cloud_essd</Category>
            <Description>This is description.</Description>
            <ZoneId>cn-heyuan-b</ZoneId>
            <DedicatedBlockStorageClusterId>dbsc-f8z4d3k4nsgg9okb****</DedicatedBlockStorageClusterId>
            <ExpiredTime>2022-03-09 00:00:00</ExpiredTime>
            <CreateTime>2021-09-08 16:45:45</CreateTime>
            <DedicatedBlockStorageClusterName>myDBSCCluster</DedicatedBlockStorageClusterName>
            <DedicatedBlockStorageClusterCapacity>
                <AvailableCapacity>61440</AvailableCapacity>
                <TotalCapacity>61440</TotalCapacity>
            </DedicatedBlockStorageClusterCapacity>
        </DedicatedBlockStorageCluster>
    </DedicatedBlockStorageClusters>
    <NextToken>AAAAAdDWBF2</NextToken>
    <RequestId>11B55F58-D3A4-4A9B-9596-342420D02FF8</RequestId>
</DescribeDedicatedBlockStorageClustersResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "DedicatedBlockStorageClusters" : {
    "DedicatedBlockStorageCluster" : [ {
      "Status" : "Running",
      "Type" : "Standard",
      "Category" : "cloud_essd",
      "Description" : "This is description.",
      "ZoneId" : "cn-heyuan-b",
      "DedicatedBlockStorageClusterId" : "dbsc-f8z4d3k4nsgg9okb****",
      "ExpiredTime" : "2022-03-09 00:00:00",
      "CreateTime" : "2021-09-08 16:45:45",
      "DedicatedBlockStorageClusterName" : "myDBSCCluster",
      "DedicatedBlockStorageClusterCapacity" : {
        "AvailableCapacity" : 61440,
        "TotalCapacity" : 61440
      }
    } ]
  },
  "NextToken" : "AAAAAdDWBF2",
  "RequestId" : "11B55F58-D3A4-4A9B-9596-342420D02FF8"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidStatus.ValueNotSupported	%s	The error message returned because the operation is not supported while the resource is in the current state.
404	InvalidRegionId.NotFound	The specified region does not exist.	The error message returned because the specified RegionId parameter does not exist. Check whether the service is available in the specified region.
404	InvalidZoneId.NotFound	The specified zone does not exist.	The error message returned because the specified ZoneId parameter does not exist.

For a list of error codes, visit the API Error Center.

12.Reserved Instances

12.1. PurchaseReservedInstancesOffering

Purchases a reserved instance. Reserved instances can be applied to automatically offset the bills of pay-as-you-go instances.

Description

- Before you call this operation, make sure that you fully understand the billing method of reserved instances. For more information, see Reserved instances.
- Before you purchase a reserved instance, you can call the DescribeAvailableResource operation to query available instance resources.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	PurchaseReservedInstancesOffering	The operation that you want to perform. Set the value to **PurchaseReservedInstancesOffering**.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
ResourceGroupId	String	No	rg-bp199lyny9b3****	The ID of the resource group.
ZoneId	String	No	cn-hangzhou-g	The zone ID of the instance. This parameter is required when `Scope` is set to `Zone`. You can call the DescribeZones operation to query the most recent zone list.
ReservedInstanceName	String	No	testReservedInstanceName	The name of the reserved instance. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
InstanceType	String	Yes	ecs.g5.large	The instance type of the instance. For more information, see Instance family.
Scope	String	No	Zone	The scope of the reserved instance. Valid values: • Region: regional • Zone: zonal Default value: Region.
InstanceAmount	Integer	No	3	The number of pay-as-you-go instances of the same instance type that the reserved instance can match. Valid values: 1 to 50. For example, if InstanceAmount is set to 3 when InstanceType is set to ecs.g5.large, the reserved instance can match three ecs.g5.large pay-as-you-go instances.

Parameter	Type	Required	Example	Description
OfferingType	String	No	All Upfront	The payment option of the reserved instance. Valid values: • No Upfront • Partial Upfront • All Upfront Default value: All Upfront.
Description	String	No	testDescription	The description of the reserved instance. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.
Platform	String	No	Linux	The operating system of the image used by the instance. Valid values: • Windows: Windows Server operating system • Linux: Linux and UNIX-like operating system Default value: Linux.
Period	Integer	No	1	The validity period of the reserved instance. Valid values: 1 and 3. Default value: 1.
PeriodUnit	String	No	Year	The unit of the validity period of the reserved instance. Valid value: Year. Default value: Year.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Tag.N.Key	String	No	TestKey	The key of tag N of the reserved instance. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain `http://` or `https://`. It cannot start with `acs:` or `aliyun`.
Tag.N.Value	String	No	TestValue	The value of tag N of the reserved instance. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain `http://` or `https://`. It cannot start with `acs:` or `aliyun`.

Response parameters

Parameter	Type	Example	Description
RequestId	String	8C314443-AF0D-4766-9562-C83B7F1A3C8B	The ID of the request.
ReservedInstanceIdSets	Array of String	ecsri-2ze53qonjqxg7r****	The IDs of the reserved instances.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=PurchaseReservedInstancesOffering
&RegionId=cn-hangzhou
&Scope=Zone
&ZoneId=cn-hangzhou-a
&ReservedInstanceName=test
&InstanceType=ecs.g5.2xlarge
&InstanceAmount=1
&OfferingType=AllUpfront
&Period=1
&PeriodUnit=Year
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<PurchaseReservedInstancesOfferingResponse>
    <RequestId>8C314443-AF0D-4766-9562-C83B7F1A3C8B</RequestId>
    <ReservedInstanceIdSets>
        <ReservedInstanceId>ecsri-2ze53qonjqxg7r****</ReservedInstanceId>
    </ReservedInstanceIdSets>
</PurchaseReservedInstancesOfferingResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "ReservedInstanceIdSets" : {
    "ReservedInstanceId" : [ "ecsri-2ze53qonjqxg7r****" ]
  },
  "RequestId" : "8C314443-AF0D-4766-9562-C83B7F1A3C8B"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidParameter.Conflict	The specified region and cluster do not match.	The error message returned because the specified region and cluster do not correspond to each other.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to perform the operation in the specified region. %s is a variable. An error message is dynamically returned based on call conditions.
400	Zone.NotOnSale	%s	The error message returned because the requested resources are unavailable in the specified zone. %s is a variable. An error message is dynamically returned based on call conditions.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	InvalidChargeType.ValueNotSupported	ChargeType is not valid	The error message returned because the specified ChargeType parameter is invalid.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType beyond the permitted range.	The error message returned because the specified InstanceType parameter is invalid.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or because you are not authorized to manage instances of this instance type.
403	OperationDenied	The creation of Host to the specified Zone is not allowed.	The error message returned because you are not authorized to create a dedicated host in the specified zone.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because requested resources are unavailable in the specified zone. Try another instance type or zone. You can call the DescribeZones operation to query available resources.
403	OperationDenied	Sales of this resource are temporarily suspended in the specified region; please try again later.	The error message returned because the requested resource is unavailable in the specified region. Try again later.
403	NodeControllerUnavailable	The Node Controller is temporarily unavailable.	The error message returned because the node controller is unavailable.
403	OperationDenied	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the specified operation is valid.
403	InvalidParameter.ResourceOwnerAccount	ResourceOwnerAccount is Invalid.	The error message returned because the specified ResourceOwnerAccount parameter is invalid.
403	Zone.NotOpen	The specified zone is not granted to you to buy resources yet.	The error message returned because you are not authorized to purchase resources in the specified zone.
403	Zone.NotOnSale	The specified zone is not available for purchase.	The error message returned because the requested resources are unavailable in the specified zone. Try other instance types or select other regions or zones.
403	InvalidParameter.NotMatch	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
403	Account.Arrearage	Your account has been in arrears.	The error message returned because your account balance is insufficient. Add funds to your Alibaba Cloud account and try again.
404	PaymentMethodNotFound	No payment method has been registered on the account.	The error message returned because you have not configured a payment method for your account.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	%s	The error message returned because an internal error has occurred.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

12.2. DescribeReservedInstances

You can call this operation to query purchased reserved instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer automatically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeReservedInstances	The operation that you want to perform. Set the value to DescribeReservedInstances.
RegionId	String	Yes	cn-hangzhou	The region ID of the reserved instance. You can call the DescribeRegions operation to query the most recent region list.
Tag.N.Key	String	No	TestKey	The key of tag N of the reserved instance. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length. It cannot start with aliyun or acs: or contain http:// or https://. If a single tag is specified to query resources, up to 1,000 resources that are bound with this tag can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources that are bound with all these tags can be displayed in the response. To query more than 1,000 resources that are bound with specified tags, call the ListTagResources operation.
Tag.N.Value	String	No	TestValue	The value of tag N of the reserved instance. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length. It cannot start with acs: or contain http:// or https://.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	50	The number of entries to return on each page. Maximum value: 100. Default value: 10.
ZoneId	String	No	cn-hangzhou-z	The zone ID of the reserved instance. This parameter is required when Scope is set to Zone. You can call the DescribeZones operation to query the most recent zone list.
ReservedInstanceId.N	RepeatList	No	ri-bpzhex2ulpzf53****	The ID of reserved instance N. Valid values of N: 1 to 100.
ReservedInstanceName	String	No	testReservedInstanceName	The name of the reserved instance.
Status.N	RepeatList	No	Active	The status of reserved instance N. Valid values of N: 1 to 100. Valid values: • Creating • Active • Expired • Updating

Parameter	Type	Required	Example	Description
LockReason	String	No	security	The reason why the reserved instance is locked. Valid values: • financial: You have an overdue payment in your account or the reserved instance has expired. • security: The reserved instance is locked for security reasons.
InstanceType	String	No	ecs.g5.large	The instance type of the reserved instance. For more information about the valid values, see Instance families.
InstanceTypeFamily	String	No	ecs.g5	The instance family of the reserved instance. For more information about the valid values, see Instance families.
Scope	String	No	Region	The scope of the reserved instance. Valid values: • Region: regional • Zone: zonal Default value: Region.
OfferingType	String	No	All Upfront	The payment option of the reserved instance. Valid values: • No Upfront • Partial Upfront • All Upfront
AllocationType	String	No	Normal	The allocation type. Valid values: • Normal: queries all reserved instances that belong to the current account. • Shared: queries reserved instances that are shared between the main account and linked accounts. Default value: Normal.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	E572643C-6A29-49D6-9D4E-6CFA4E063A3E	The ID of the request.
ReservedInstances	Array of ReservedInstance		Details about the reserved instances.
ReservedInstance			
AllocationStatus	String	allocated	Indicates the sharing status of the reserved instance when the AllocationType parameter is set to Shared. Valid values: • allocated: The reserved instance is allocated to another account. • beAllocated: The reserved instance is allocated by another account.
CreationTime	String	2018-12-10T12:07Z	The time when the reserved instance was created.

Parameter	Type	Example	Description
Description	String	testDescription	The description of the reserved instance.
ExpiredTime	String	2019-12-10T12:07Z	The time when the reserved instance expires.
InstanceAmount	Integer	10	The number of pay-as-you-go instances that are of the same instance type as the reserved instance and can be matched to the reserved instance.
InstanceType	String	ecs.g5.large	The instance type of the pay-as-you-go instances that can be matched to the reserved instance.
OfferingType	String	All Upfront	The payment option of the reserved instance.
OperationLocks	Array of OperationLock		Details about the lock status of the reserved instance.
OperationLock			
LockReason	String	security	The reason why the reserved instance was locked.
Platform	String	Linux	The operating system of the reserved instance. Valid values: • Windows: Windows Server operating systems • Linux: Linux and Unix-like operating systems
RegionId	String	cn-hangzhou	The region ID of the reserved instance.
ReservedInstanceId	String	ri-bpzhex2ulpzf53****	The ID of the reserved instance.
ReservedInstanceName	String	riZbpzhex2ulpzf53****	The name of the reserved instance.
ResourceGroupId	String	EcsDocTest	The ID of the resource group.
Scope	String	region	The scope of the reserved instance.
StartTime	String	2018-12-10T12:00Z	The time when the reserved instance took effect.
Status	String	Active	The status of the reserved instance.
Tags	Array of Tag		Details about the tags of the reserved instance.
Tag			
TagKey	String	TestKey	The tag key of the reserved instance.
TagValue	String	TestValue	The tag value of the reserved instance.
ZoneId	String	cn-hangzhou-z	The zone ID of the reserved instance.
TotalCount	Integer	1	The total number of reserved instances.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeReservedInstances
&RegionId=cn-hangzhou
&Scope=Region
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeReservedInstancesResponse>
      <ReservedInstances>
            <ReservedInstance>
                  <CreationTime>2018-12-10T12:07Z</CreationTime>
                  <ExpiredTime>2019-12-10T16:00Z</ExpiredTime>
                  <InstanceAmount>1</InstanceAmount>
                  <ReservedInstanceId>ri-0xzhex2ulpzf53****</ReservedInstanceId>
                  <InstanceType>ecs.g5.large</InstanceType>
                  <OfferingType>All Upfront</OfferingType>
                  <RegionId>cn-hangzhou-test-307</RegionId>
                  <ReservedInstanceName>riZ0xzhex2ulpzf53****</ReservedInstanceName>
                  <Scope>region</Scope>
                  <StartTime>2018-12-10T12:00Z</StartTime>
                  <Status>Active</Status>
                  <Tags>
                        <Tag>
                              <TagKey>TestKey</TagKey>
                              <TagValue>TestValue</TagValue>
                        </Tag>
                  </Tags>
            </ReservedInstance>
      </ReservedInstances>
      <RequestId>E572643C-6A29-49D6-9D4E-6CFA4E063A3E</RequestId>
      <PageNumber>1</PageNumber>
      <PageSize>50</PageSize>
      <Total>1</Total>
</DescribeReservedInstancesResponse>
```

`JSON` format

```
{
    "ReservedInstances":{
        "ReservedInstance":[
            {
                "CreationTime":"2018-12-10T12:07Z",
                "ExpiredTime":"2019-12-10T16:00Z",
                "InstanceAmount":1,
                "ReservedInstanceId":"ri-0xzhex2ulpzf53****",
                "InstanceType":"ecs.g5.large",
                "OfferingType":"All Upfront",
                "RegionId":"cn-hangzhou-test-307",
                "ReservedInstanceName":"riZ0xzhex2ulpzf53****",
                "Scope":"region",
                "StartTime":"2018-12-10T12:00Z",
                "Status":"Active",
                "Tags": {
                    "Tag": [
                        {
                            "TagKey": "TestKey",
                            "TagValue": "TestValue"
                        }
                    ]
                }
            }
        ]
    },
    "RequestId":"E572643C-6A29-49D6-9D4E-6CFA4E063A3E",
    "PageNumber":1,
    "PageSize":50,
    "Total":1
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.
400	InvalidRegion.NotFound	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.
400	InvalidZone.NotFound	The specified parameter ZoneId is not valid.	The error message returned because the specified ZoneId parameter is invalid.
400	InvalidEndTime.ValueNotSupported	The specified endTime is out of the permitted range.	The error message returned because the value of the specified EndTime parameter is out of range.
400	InvalidAllocationType.ValueNotSupported	The specified AllocationType is not supported.	The error message returned because the specified AllocationType parameter is invalid.
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified RegionId parameter does not exist. Check whether the reserved instance service is available in the region.

For a list of error codes, visit the API Error Center.

12.3. ModifyReservedInstances

You can call this operation to split, merge, or modify reserved instances.

Description

When you call this operation, take note of the following items:

- For information about limits on reserved instances, see the "Limits" section in Reserved instance overview.
- If you call this operation to split a reserved instance, make sure that you fully understand the limits on splitting a reserved instance. For more information, see Split a reserved instance.
- If you call this operation to merge reserved instances, make sure that you fully understand the limits on merging reserved instances. For more information, see Merge reserved instances.
- If you call this operation to modify a reserved instance, make sure that you fully understand the limits and methods of modifying a reserved instance. For more information, see Modify a reserved instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyReservedInstances	The operation that you want to perform. Set the value to ModifyReservedInstances.
RegionId	String	Yes	cn-hangzhou	The region ID of the reserved instance. You can call the DescribeRegions operation to query the most recent region list.
ReservedInstanceId.N	RepeatList	Yes	ReservedInstanceId.1="ecsri-bp1cx3****",ReservedInstanceId.2="ecsri-bp15xx2****".....	The ID of reserved instance N. Valid values of N: 1 to 20.

Parameter	Type	Required	Example	Description
Configuration.N.ZoneId	String	No	cn-hangzhou-i	The zone ID of reserved instance N. Valid values of N: 1 to 100. This parameter is required when `Scope` is set to `Zone`. You can call the DescribeZones operation to query the most recent zone list.
Configuration.N.ReservedInstanceName	String	No	testReservedInstanceName	The name of reserved instance N. Valid values of N: 1 to 100. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Configuration.N.InstanceType	String	No	ecs.c5.4xlarge	The number of instance types that reserved instance N can match. Valid values of N: 1 to 100. **Note** The applicable instance types are continuously updated. For more information, see the "Attributes" section in Reserved instance overview.
Configuration.N.Scope	String	No	Zone	The scope of reserved instance N. Valid values: • Region: regional • Zone: zonal Valid values of N: 1 to 100. Default value: Region.
Configuration.N.InstanceAmount	Integer	No	1	The number of pay-as-you-go instances that are of the instance type matched with reserved instance N. The value must be greater than or equal to 1. Valid values of N: 1 to 100.

Response parameters

Parameter	Type	Example	Description
RequestId	String	ED9E4A5F-FF4D-4C96-BE80-6B4227060DD7	The ID of the request.
ReservedInstanceIdSets	List	{"ReservedInstanceId":"ecsri-bp1cx3****","ecsri-bp15xx2****"]}	The list of reserved instance IDs.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyReservedInstances
&RegionId=cn-hangzhou
&ReservedInstanceId.1=ecsri-bp1cx3****
&ReservedInstanceId.2=ecsri-bp15xx2****
&Configuration.1.InstanceType=ecs.c5.4xlarge
&Configuration.1.Scope=Zone
&Configuration.2.InstanceType=ecs.g5.4xlarge
&Configuration.2.Scope=Region
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyReservedInstancesResponse>
      <ReservedInstanceIdSets>
            <ReservedInstanceId>ecsri-bp1cx3****</ReservedInstanceId>
            <ReservedInstanceId>ecsri-bp15xx2****</ReservedInstanceId>
      </ReservedInstanceIdSets>
      <RequestId>ED9E4A5F-FF4D-4C96-BE80-6B4227060DD7</RequestId>
</ModifyReservedInstancesResponse>
```

`JSON` format

```
{
    "ReservedInstanceIdSets": {
        "ReservedInstanceId": [
            "ecsri-bp1cx3****",
            "ecsri-bp15xx2****"
        ]
    },
    "RequestId": "ED9E4A5F-FF4D-4C96-BE80-6B4227060DD7"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because the requested resources are insufficient.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	OperationDenied	Sales of this resource are temporarily suspended in the specified region; please try again later.	The error message returned because the sales of the requested resource are suspended in the specified region. Try again later.
400	InvalidParameter.Conflict	The specified region and cluster do not match.	The error message returned because the specified region does not match the specified cluster.
403	NodeControllerUnavailable	The Node Controller is temporarily unavailable.	The error message returned because the node controller is unavailable.
403	OperationDenied	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the specified operation is valid.
403	InvalidParameter.ResourceOwnerAccount	ResourceOwnerAccount is Invalid.	The error message returned because the specified ResourceOwnerAccount parameter is invalid.
403	Zone.NotOpen	The specified zone is not granted to you to buy resources yet.	The error message returned because you are not authorized to purchase resources in the specified zone.
403	Zone.NotOnSale	The specified zone is not available for purchase.	The error message returned because the requested instance resources are unavailable in the specified zone. Change the instance type or select a different zone.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to perform the operation in the specified region.

HTTP status code	Error code	Error message	Description
500	InternalError	%s	The error message returned because an internal error has occurred.
400	Zone.NotOnSale	%s	The error message returned because the sales of the specified resources in the specified zone are suspended.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	InvalidParameter.NotMatch	%s	The error message returned because the specified parameter is invalid. Check whether the parameter conflicts with another parameter.
403	Account.Arrearage	Your account has been in arrears.	The error message returned because your account balance is insufficient. Add funds to your account before you proceed.
400	InvalidChargeType.ValueNotSupported	ChargeType is not valid	The error message returned because the billing method is invalid.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.

For a list of error codes, visit the API Error Center.

13.Storage Capacity Units

13.1. PurchaseStorageCapacityUnit

Purchases one or more storage capacity units (SCUs). SCUs are subscription storage resource plans that can be used to offset bills of pay-as-you-go disks located within the same regions as the SCUs.

Description

Before you call this operation, make sure that you understand the billing methods and pricing of SCUs. For more information, see Storage capacity units.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	PurchaseStorageCapacityUnit	The operation that you want to perform. Set the value to **PurchaseStorageCapacityUnit**.
RegionId	String	Yes	cn-hangzhou	The region ID of the SCU. After the region is specified, the purchased SCUs can offset bills only of pay-as-you-go disks located within this region. You can call the DescribeRegions operation to query the most recent region list.
Name	String	No	ScuPurchaseDemo	The name of the SCU. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Capacity	Integer	Yes	20	The capacity of the SCU. Unit: GiB. Valid values: 20, 40, 100, 200, 500, 1024, 2048, 5120, 10240, 20480, and 51200.
Description	String	No	ScuPurchaseDemo	The description of the SCU. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.
StartTime	String	No	2020-09-09T02:00:00Z	The time when the SCU takes effect. It cannot be earlier than or more than six months later than the time when the SCU is created. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. This parameter is empty by default. The SCU immediately takes effect after it is created.
Period	Integer	No	1	The validity period of the SCU. Valid values: • Valid values when PeriodUnit is set to Month: 1, 2, 3, and 6. • Valid values when PeriodUnit is set to Year: 1, 3, and 5. Default value: 1.

Parameter	Type	Required	Example	Description
PeriodUnit	String	No	Month	The unit of the validity period of the SCU. Valid values: • Month • Year Default value: Month.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate a value, but you must make sure that it is unique among different requests. The `ClientToken` value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Amount	Integer	No	1	The number of SCUs to be purchased. Valid values: 1 to 20. Default value: 1.
Tag.N.Key	String	No	TestKey	The key of tag N of the SCU. N indicates the number of tag keys that can be set. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.
Tag.N.Value	String	No	TestValue	The value of tag N of the SCU. N indicates the number of tag values that can be set and corresponds to the N of `Tag.N.Key`. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with `acs:` or contain `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
OrderId	String	204135153880****	The ID of the order.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
StorageCapacityUnitIds	Array of String	scu-bp67acfmxazb4p****	The ID of the SCU.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=PurchaseStorageCapacityUnit
&Capacity=20
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<PurchaseStorageCapacityUnitResponse>
    <OrderId>204135153880***</OrderId>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <StorageCapacityUnitIds>
        <StorageCapacityUnitId>scu-bp67acfmxazb4p****</StorageCapacityUnitId>
    </StorageCapacityUnitIds>
</PurchaseStorageCapacityUnitResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "OrderId" : "204135153880****",
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "StorageCapacityUnitIds" : {
    "StorageCapacityUnitId" : "scu-bp67acfmxazb4p****"
  }
}
```

Errors codes

HTTP status code	Error code	Error message	Description
400	InvalidParameter.Period	The specified Period is not valid.	The error message returned because the specified Period parameter is invalid.
400	MissingParameter.RegionId	The specified RegionId should not be null.	The error message returned because the required RegionId parameter is not specified.
400	InvalidParameter.Name	The specified Name is invalid.	The error message returned because the specified Name parameter is invalid.
400	InvalidParameter.Capacity	The specified Capacity is invalid.	The error message returned because the specified Capacity parameter is invalid.
400	MissingParameter.Capacity	The specified Capacity should be not null.	The error message returned because the required Capacity parameter is not specified.
400	InvalidParameter.PeriodUnit	The specified PeriodUnit is not supported.	The error message returned because the specified PeriodUnit parameter is invalid.
400	InvalidParameter.CapacityExceed	The specified Capacity exceeds the limitation of quota.	The error message returned because the specified Capacity parameter exceeds the upper limit.
400	InvalidStartTime.NotSupported	The specified StartTime should be within 180 calendar days from the current date, and you must specify a precision to hour.	The error message returned because the specified StartTime parameter is invalid.
400	InvalidStartTime.MalFormed	The specified StartTime is out of the permitted range.	The error message returned because the specified StartTime parameter exceeds the upper limit.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

13.2. DescribeStorageCapacityUnits

Queries the details of one or more storage capacity units (SCUs).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeStorageCapacityUnits	The operation that you want to perform. Set the value to **DescribeStorageCapacityUnits**.
RegionId	String	Yes	cn-hangzhou	The region ID of the SCU. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	1	The number of entries to return on each page. Maximum value: 100. Default value: 10.
Name	String	No	testScuName	The name of the SCU. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Capacity	Integer	No	20	The capacity of the SCU. Unit: GiB. Valid values: 20, 40, 100, 200, 500, 1024, 2048, 5120, 10240, 20480, and 51200.
AllocationType	String	No	Normal	The allocation type. Valid values: • Normal: queries SCUs within the current Alibaba Cloud account. • Shared: queries SCUs shared between the Alibaba Cloud account and RAM users. Default value: Normal.
StorageCapacityUnitId.N	String	No	scu-bp67acfmxazb4p****	The ID of SCU N. Valid values of N: 1 to 100.
Status.N	String	No	Active	The state of SCUs. Valid values of N: 1 to 4. Valid values: • Creating: The SCUs are being created. • Active: The SCUs are enabled. • Expired: The SCUs expired. • Pending: The SCUs are to take effect.
Tag.N.Key	String	No	TestKey	The key of tag N of the SCU. N indicates that you can set multiple tag keys to query. Valid values of N: 1 to 20.
Tag.N.Value	String	No	TestValue	The value of tag N of the SCU. N indicates that you can set multiple tag values to query and corresponds to N of `Tag.N.Key`. Valid values of N: 1 to 20.

Response parameters

Parameter	Type	Example	Description
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
TotalCount	Integer	1	The total number of SCUs.
StorageCapacityUnits	Array of StorageCapacityUnit		Details about the SCUs.
StorageCapacityUnit			
CreationTime	String	2021-08-17T02:55Z	The time when the SCU was created.
Status	String	Active	The state of the SCU.
StartTime	String	2021-08-17T02:55Z	The time when the SCU took effect.
Capacity	Integer	20	The capacity of the SCU.
Description	String	testScuDescription	The description of the SCU.
AllocationStatus	String	allocated	Indicates the allocation state of the SCU when the AllocationType parameter is set to Shared. Valid values: • allocated: The SCU is allocated to other accounts. • BeAllocated: The SCU is allocated from another account.
ExpiredTime	String	2021-09-17T16:00Z	The time when the SCU expires.
StorageCapacityUnitId	String	scu-bp67acfmxazb4p****	The ID of the SCU.
Name	String	testScuName	The name of the SCU.
RegionId	String	cn-hangzhou	The region ID of the SCU.
Tags	Array of Tag		The tag key-value pairs of the SCU.
Tag			
TagKey	String	TestKey	The tag key of the SCU.
TagValue	String	TestValue	The tag value of the SCU.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeStorageCapacityUnits
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeStorageCapacityUnitsResponse>
    <TotalCount>1</TotalCount>
    <PageSize>10</PageSize>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <PageNumber>1</PageNumber>
    <StorageCapacityUnits>
        <StorageCapacityUnit>
            <Status>Active</Status>
            <Description>testScuDescription</Description>
            <AllocationStatus/>
            <Capacity>20</Capacity>
            <StorageCapacityUnitId>scu-bp67acfmxazb4p****</StorageCapacityUnitId>
            <ExpiredTime>2021-09-17T16:00Z</ExpiredTime>
            <CreationTime>2021-08-17T02:55Z</CreationTime>
            <StartTime>2021-08-17T02:00Z</StartTime>
            <RegionId>cn-hangzhou</RegionId>
            <Tags>
                <Tag>
                    <TagKey>TestKey</TagKey>
                    <TagValue>TestValue</TagValue>
                </Tag>
            </Tags>
            <Name>testScuName</Name>
        </StorageCapacityUnit>
    </StorageCapacityUnits>
</DescribeStorageCapacityUnitsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalCount" : 1,
  "PageSize" : 10,
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "PageNumber" : 1,
  "StorageCapacityUnits" : {
    "StorageCapacityUnit" : [ {
      "Status" : "Active",
      "Description" : "testScuDescription",
      "AllocationStatus" : "",
      "Capacity" : 20,
      "StorageCapacityUnitId" : "scu-bp67acfmxazb4p****",
      "ExpiredTime" : "2021-09-17T16:00Z",
      "CreationTime" : "2021-08-17T02:55Z",
      "StartTime" : "2021-08-17T02:00Z",
      "RegionId" : "cn-hangzhou",
      "Tags" : {
        "Tag" : [ {
          "TagKey" : "TestKey",
          "TagValue" : "TestValue"
        } ]
      },
      "Name" : "testScuName"
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter.RegionId	The specified RegionId should not be null.	The error message returned because the required RegionId parameter is not specified.
400	InvalidParameter.Name	The specified Name is invalid.	The error message returned because the specified Name parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.CapacityExceed	The specified Capacity exceeds the limitation of quota.	The error message returned because the specified Capacity parameter exceeds the upper limit.
400	InvalidAllocationType.ValueNotSupported	The specified AllocationType is not supported.	The error message returned because the specified AllocationType parameter is invalid.

For a list of error codes, visit the API Error Center.

13.3. ModifyStorageCapacityUnitAttribute

You can call this operation to modify the name or description of a storage capacity unit (SCU).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyStorageCapacityUnitAttribute	The operation that you want to perform. Set the value to ModifyStorageCapacityUnitAttribute.
RegionId	String	Yes	cn-hangzhou	The region ID of the SCU. You can call the DescribeRegions operation to query the most recent region list.
StorageCapacityUnitId	String	Yes	scu-bp67acfmxazb4p****	The ID of the SCU.
Name	String	No	testNewScuName	The name of the SCU. It must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter but cannot start with http:// or https://.
Description	String	No	testNewScuDescription	The description of the SCU. It must be 2 to 256 characters in length and cannot start with http:// or https://.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyStorageCapacityUnitAttribute
&RegionId=cn-qingdao
&StorageCapacityUnitId=scu-bp67acfmxazb4p****
&Name=testNewScuName
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyStorageCapacityUnitAttributeResponse>
        <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyStorageCapacityUnitAttributeResponse>
```

`JSON` format

```
{
    "RequestId":"04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter.RegionId	The specified RegionId should not be null.	The error message returned because the RegionId parameter is not specified.
400	InvalidParameter.Name	The specified Name is invalid.	The error message returned because the specified Name parameter is invalid.

For a list of error codes, visit the API Error Center.

14.Images

14.1. CreateImage

Creates a custom image. The created custom image can be used to create Elastic Compute Service (ECS) instances (RunInstances) and replace system disks (ReplaceSystemDisk).

Description

When you call this operation, take note of the following items:

- The created custom image can be used only when it is in the Available (Available) state.
- If a response contains `{"OperationLocks": {"LockReason" : "security"}}` when you query instance information, the instance is locked for security reasons and all operations are prohibited on it.

You can call the CreateImage operation to create a custom image by using one of the following methods. The following request parameters are sorted by priority: `InstanceId` > `DiskDeviceMapping` > `SnapshotId`. If your request contains two or more parameters, the custom image is created based on the parameter that has a higher priority by default.

- **Method 1**: Create a custom image from an instance. You need to only specify the instance ID (`InstanceId`). The instance must be in the Running (`Running`) or Stopped (`Stopped`) state. After the CreateImage operation is called, a snapshot is created for each disk of the instance. When you create a custom image from a running instance, some cache data may not be written to the disks. As a result, the data of the created custom image may be slightly inconsistent with that of the instance. We recommend that you create custom images from instances after you stop the instances (StopInstances).
- **Method 2**: Create a custom image from the system disk snapshot of an instance. You need to only specify the ID of the system disk snapshot (`SnapshotId`). The specified snapshot cannot be created on or before July 15, 2013.
- **Method 3**: Create a custom image from multiple disk snapshots. You must specify the data mapping between the disks and the snapshots (`DiskDeviceMapping`).

When you use Method 3 to create a custom image, take note of the following items:

- You can specify only one system disk snapshot. The device name of the system disk must be /dev/xvda.
- You can specify multiple data disk snapshots. The device names of the data disks are unique and in alphabetical order from /dev/xvdb to /dev/xvdz.
- `SnapshotId` may not be specified. In this case, an empty data disk with a specified size is created.
- The specified snapshot cannot be created on or before July 15, 2013.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateImage	The operation that you want to perform. Set the value to **CreateImage**.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which to create the custom image. You can call the DescribeRegions operation to query the most recent region list.
SnapshotId	String	No	s-bp17441ohwkdca0****	The ID of the snapshot that is used to create the custom image.
InstanceId	String	No	i-bp1g6zv0ce8oghu7****	The ID of the instance.
ImageName	String	No	TestCentOS	The name of the image. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).

Parameter	Type	Required	Example	Description
ImageFamily	String	No	hangzhou-daily-update	The name of the image family of the custom image. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with acs: or aliyun. It cannot contain http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
ImageVersion	String	No	2017011017	The version of the image. **Note** If you specify an instance by setting `InstanceId` and the instance uses an Alibaba Cloud Marketplace image or a custom image derived from an Alibaba Cloud Marketplace image, this parameter must be left empty or set to the value of the ImageVersion parameter of the instance.
Description	String	No	ImageTestDescription	The description of the custom image. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
Platform	String	No	CentOS	The distribution of the operating system for the system disk in the custom image. If you specify a data disk snapshot to create the system disk of the custom image, you must use the Platform parameter to specify the distribution of the operating system for the system disk. Valid values: • CentOS • Ubuntu • SUSE • OpenSUSE • RedHat • Debian • CoreOS • Aliyun • Windows Server 2012 • Windows 7 • Customized Linux • Others Linux Default value: Others Linux.
Architecture	String	No	x86_64	The system architecture of the system disk. If you specify a data disk snapshot to create the system disk of the custom image, you must use the Architecture parameter to specify the system architecture of the system disk. Valid values: • i386 • x86_64 • arm64 Default value: x86_64.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Parameter	Type	Required	Example	Description
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the custom image. If you do not specify this parameter, the image is assigned to the default resource group. **Note** If you use a RAM user that is not authorized to manage the default resource group to call the CreateImage operation and do not specify the `ResourceGroupId` parameter, the `Forbbiden: User not authorized to operate on the specified resource` error message is returned. You must specify the ID of a resource group that the RAM user is authorized to manage or authorize the RAM user to manage the default resource group before you call the CreateImage operation again.
DiskDeviceMapping.N.SnapshotId	String	No	s-bp17441ohwkdca0****	The ID of the snapshot that is used to create the custom image.

DiskDeviceMapping.N.Size	Integer	No	2000	The size of disk N in the custom image. Unit: GiB. The valid values and default value of DiskDeviceMapping.N.Size depend on DiskDeviceMapping.N.SnapshotId.
				• If no corresponding snapshot IDs are specified in the DiskDeviceMapping.N.SnapshotId value, the following valid values and default values are available for DiskDeviceMapping.N.Size:
				  ○ For basic disks, the valid values are 5 to 2000, and the default value is 5.
				  ○ For other disk categories, the valid values are 20 to 32768, and the default value is 20.
				• If a corresponding snapshot ID is specified in the DiskDeviceMapping.N.SnapshotId value, the value of DiskDeviceMapping.N.Size must be greater than or equal to the size of the specified snapshot. The default value of DiskDeviceMapping.N.Size is the size of the specified snapshot.

DiskDeviceMapping.N.Device	String	No	/dev/vdb	The device name of disk N in the custom image. Valid values: • For disk categories other than basic disks, such as standard SSDs, ultra disks, and enhanced SSDs (ESSDs), the valid values are in alphabetical order from /dev/vda to /dev/vdz. • For basic disks, the valid values are in alphabetical order from /dev/xvda to /dev/xvdz.
DiskDeviceMapping.N.DiskType	String	No	system	The type of disk N in the custom image. You can set this parameter to create the system disk of the custom image from a data disk snapshot. If you do not set this parameter, the disk type is determined by the corresponding snapshot. Valid values: • system: system disk • data: data disk
Tag.N.key	String	No	null	The key of tag N of the custom image. **Note** This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	KeyTest	The key of tag N of the custom image. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain `http://` or `https://`. It cannot start with `aliyun` or `acs:`.
Tag.N.Value	String	No	ValueTest	The value of tag N of the custom image. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with `acs:`. It cannot contain `http://` or `https://`.
Tag.N.value	String	No	null	The value of tag N of the custom image. **Note** This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.

Response parameters

Parameter	Type	Example	Description
ImageId	String	m-bp146shijn7hujku****	The ID of the image.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateImage
&RegionId=cn-hangzhou
&DiskDeviceMapping.1.Size=2000
&DiskDeviceMapping.1.SnapshotId=s-bp17441ohwkdca0****
&DiskDeviceMapping.1.DiskType=system
&SnapshotId=s-bp17441ohwkdca0****
&InstanceId=i-bp1g6zv0ce8oghu7****
&ImageName=TestCentOS
&ImageVersion=2017011017
&Description=ImageTestDescription
&Platform=CentOS
&Architecture=x86_64
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&Tag.1.Key=KeyTest
&Tag.1.Value=ValueTest
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateImageResponse>
    <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
    <ImageId>m-bp146shijn7hujku****</ImageId>
</CreateImageResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "C8B26B44-0189-443E-9816-D951F59623A9",
  "ImageId" : "m-bp146shijn7hujku****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The error message returned because the specified ImageName parameter is invalid. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with acs: or aliyun. It cannot contain http:// or https://. It can contain letters, digits, periods (.), colons (:), underscores (_), and hyphens (-).
400	InvalidImageName.Duplicated	The specified Image name has already bean used.	The error message returned because the specified image name already exists.
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidImageVersion.Malformed	The specified ImageVersion is wrongly formed.	The error message returned because the specified image version is invalid or you are not authorized to use the snapshot.
400	IncorrectInstanceStatus	The current status of the instance does not support this operation.	The error message returned because this operation is not supported while the instance is in the current state.
400	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
400	InvalidDevice.Malformed	The specified parameter DiskDeviceMapping.n.Device is not valid.	The error message returned because the specified DiskDeviceMapping.N.Device parameter is invalid.
400	MissingParameter	The input parameter SnapshotId or InstanceId or DiskDeviceMapping that is mandatory for processing this request is not supplied.	The error message returned because SnapshotId, InstanceId, and parameters that start with DiskDeviceMapping are not specified.
400	InvalidSize.ValueNotSupported	The specified parameter DiskDeviceMapping.n.Size beyond the permitted range.	The error message returned because the specified DiskDeviceMapping.N.Size parameter is not within the permitted range.
400	InvalidDevice.InUse	The specified parameter DiskDeviceMapping.n.Device has been occupied.	The error message returned because device names specified in the DiskDeviceMapping.N.Device value already exist.
400	OperationDenied	The specified parameter DiskDeviceMapping.n.SnapshotId does not contain system disk snapshot.	The error message returned because the specified DiskDeviceMapping.N.SnapshotId parameter does not contain a system disk snapshot ID.
400	OperationDenied	The specified parameter DiskDeviceMapping.n.SnapshotId contains two or more system disk snapshots.	The error message returned because the specified DiskDeviceMapping.N.SnapshotId parameter already contains a system disk snapshot ID.
400	InvalidDiskCategory.CreateImage	The specified diskCategory is not allowed to create image.	The error message returned because the operation is not supported by the specified disk category.
400	InvalidArchitecture.Malformed	The specified Architecture is wrongly formed.	The error message returned because the specified Architecture parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidPlatform.Malformed	The specified Platform is wrongly formed.	The error message returned because the specified Platform parameter is invalid.
400	OperationDenied	Not support creating system image from an encrypted snapshot/disk.	The error message returned because an encrypted disk or snapshot cannot be used to create custom images.
400	InvalidParameter.AllEmpty	%s	The error message returned because the required parameters are not specified.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	InvalidDiskType.ValueNotSupported	The specified disk type is not supported.	The error message returned because the specified DiskType parameter is invalid.
400	IdempotenceParamNotMatch	Request uses a client token in a previous request but is not identical to that request.	The error message returned because the ClientToken value in this request is identical to that in the previous request but some other parameters in this request are different from those in the previous request.
403	InvalidSnapshotId.NotReady	The current status of the DiskDeviceMapping.n.SnapshotId or SnapshotId does not support this operation.	The error message returned because the operation is not supported while the specified snapshot is in the current state.
403	InvalidSnapshot.TooOld	This operation is denied because the specified snapshot by DiskDeviceMapping.n.SnapshotId or SnapshotId is created before 2013-07-15.	The error message returned because this operation is denied. The snapshot specified by the DiskDeviceMapping.N.SnapshotId or SnapshotId parameter was created before July 15, 2013.
403	OperationDenied	The specified snapshot is not allowed to create image.	The error message returned because the specified snapshot cannot be used to create images.
403	QuotaExceed.Image	The Image Quota exceeds.	The error message returned because the custom image quota has been used up.
403	OperationDenied	The specified snapshot is not from system disk.	The error message returned because the specified snapshot was not created from a system disk.
403	InvalidParamter.Conflict	The specified same token is trying to make requests with different parameters.	The error message returned because the same token is used to make requests that have different parameters.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.
403	UserNotInTheWhiteList	The user is not in the white list of create image by data disk snapshot.	The error message returned because you are not authorized to create an image from data disk snapshots. Try again when you are authorized to do so.
403	IncorrectDiskStatus.Invalid	Device status is invalid, please restart instance and try again.	The error message returned because the device status is invalid. Restart the instance and try again.

HTTP status code	Error code	Error message	Description
403	OperationDenied.InvalidSnapshotCategory	%s	The error message returned because the operation is not supported by the snapshot type.
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The error message returned because the maximum number of snapshots has been reached. To create new snapshots, delete snapshots that are no longer needed.
403	IncorrectDiskStatus.Transferring	The specified device is transferring, you can retry after the process is finished.	The error message returned because the specified disk is being migrated. Wait until the disk is migrated and try again.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is usable and you have no overdue payments for it.
403	InvalidSystemSnapshot.Missing	?s	The error message returned because the specified SnapshotId parameter is invalid. Check whether the snapshot exists.
403	IncorrectDiskStatus.CreatingSnapshot	A previous snapshot creation is in process.	The error message returned because another snapshot is being created for the disk. Wait until the snapshot is created and try again.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a KMS key ID is specified for a disk. You can call the DescribeKey operation of KMS to query information about the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access KMS resources.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit. %s is a variable. An error message is dynamically returned based on call conditions.
403	SnapshotNotReady	The specified snapshot is not ready.	The error message returned because the specified snapshot is being created and cannot be used to create images.
403	IncorrectInstanceStatus.NeedRestart	The instance needs to be restarted after adding a disk in a shutdown status.	The error message returned because the instance is not restarted. If you attach disks to an instance that is in the Stopped state, you must restart the instance before you can create custom images from the instance.
404	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The error message returned because the specified snapshot does not exist. Check whether the snapshot ID is correct.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance ID does not exist. Check whether the instance ID is correct.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified resource group does not exist.
500	InternalError	The process of creating snapshot has failed due to some unknown error.	The error message returned because the snapshot fails to be created.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

14.2. ImportImage

Imports an image to Elastic Compute Service (ECS). The imported image appears as a custom image in the destination region. You can use the imported image to create ECS instances (RunInstances) or replace the system disks of ECS instances (ReplaceSystemDisk).

Description

When you call this operation, take note of the following items:

- You must upload an image to an Object Storage Service (OSS) bucket before you can import the image. For more information, see Upload objects.
- In some scenarios, you may want to create a custom image based on the operating system data of a source server, import the image to Alibaba Cloud, and then create an Elastic Compute Service (ECS) instance from the image. The source server can be a physical server, a virtual machine, or a cloud host. If the source server is not installed with the virtio driver, the created ECS instance may not be able to start. To prevent this issue, you must check whether the virtio driver is installed on the source server before you import a custom image to Alibaba Cloud. For more information, see Install the virtio driver.
- The first time you import an image, you must use Resource Access Management (RAM) to authorize ECS to access your OSS buckets. If ECS is not authorized to access your OSS buckets, the `NoSetRoletoECSServiceAcount` error code is returned when you call the ImportImage operation. You can perform one-click authorization on the Cloud Resource Access Authorization page in the RAM console. You can also manually complete the authorization. The following examples show the policies and permissions required for some operations: For more information, see Control access to resources by using RAM users.

  1. Create a role named `AliyunECSImageImportDefaultRole`. You must use this exact role name. Otherwise, the image cannot be imported. Configure the following trust policy for the role:

```
      {
"Statement": [
{
 "Action": "sts:AssumeRole",
 "Effect": "Allow",
 "Principal": {
 "Service": [
  "ecs.aliyuncs.com"
 ]
 }
}
      ],
"Version": "1"
      }
```

  2. Attach the `AliyunECSImageImportRolePolicy` system policy to the role. You can also create a custom policy that contains the following content and attach the policy to the role:

```
      {
"Version": "1",
"Statement": [
{
 "Action": [
         "oss:GetObject",
         "oss:GetBucketLocation",
         "oss:GetBucketInfo"
],
        "Resource": "*",
        "Effect": "Allow"
        }
]
      }
```

- You cannot delete an image that is being imported. However, you can call the CancelTask operation to cancel the image import task.
- You can import an image only to the same region as the OSS bucket to which the image was uploaded.
- The valid values of N in the `DiskDeviceMapping.N` parameter ranges from 1 to 17. When N is set to 1, the disk is a system disk. When N is set to a value from 2 to 17, the disk is a data disk.
- When the `Architecture` parameter is set to `arm64`, or when the `Platform` parameter is set to `CentOS Stream`, `Anolis`, `AlmaLinux`, or `Rocky Linux`, take note of the following items:

- To ensure that the password can be set or the key pair can be modified for an imported image, the image must meet the following requirements:
  - The kernel of the operating system must support the `CONFIG_FW_CFG_SYSFS` feature. By default, the Linux community kernel 4.6 and later and CentOS kernel 3.10.0-826.el7 and later support this feature. You can run the `grep -nr CONFIG_FW_CFG_SYSFS /boot/config-$(uname -r)` command in the server corresponding to the image. If the command output contains `CONFIG_FW_CFG_SYSFS=y`, the kernel of this image supports the `CONFIG_FW_CFG_SYSFS` feature.
  - The operating system is installed with the latest version of Alibaba Cloud cloud-init. The version of cloud-init 19.1 must be 19.1.3 or later. The version of cloud-init 0.7.6a in some early versions of operating systems must be 0.7.6a15 or later. For more information, see Install cloud-init.
  - The operating system must support the SHA-512 encryption algorithm.
- To ensure that the imported image supports resizing of disks and file systems, the image must meet the following requirements:
  - The kernel version of the operating system must be later than 3.6.
  - The image must support the growpart command. To support this command, you must install the `cloud-utils-growpart` package. The methods of installing the package vary based on the operating systems. For more information, see Resize partitions and file systems of Linux system disks.
  - The image must support the resize2fs command. To support this command, you must install the `e2fsprogs` package. The package is installed in the operating system by default. If the package is not installed, install it on your own.
  - The operating system is installed with the latest version of Alibaba Cloud cloud-init. The version of cloud-init 19.1 must be 19.1.3 or later. The version of cloud-init 0.7.6a in some early versions of operating systems must be 0.7.6a15 or later. For more information, see Install cloud-init.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ImportImage	The operation that you want to perform. Set the value to **ImportImage**.
RegionId	String	Yes	cn-hangzhou	The region ID of the OSS bucket to which the image to be imported was uploaded. You can call the DescribeRegions operation to query the most recent region list.
ImageName	String	No	ImageTestName	The name of the custom image. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`. It can contain letters, digits, periods (.), colons (:), underscores (_), and hyphens (-).
Description	String	No	TestDescription	The description of the custom image. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.
Architecture	String	No	x86_64	The system architecture. Valid values: • i386 • x86_64 • arm64 Default value: x86_64.
OSType	String	No	linux	The operating system type. Valid values: • windows • linux Default value: linux.

Parameter	Type	Required	Example	Description
Platform	String	No	Aliyun	The distribution of the operating system. Valid values: • CentOS • CentOS Stream • Ubuntu • SUSE • OpenSUSE • Debian • CoreOS • Aliyun • Anolis • AlmaLinux • Rocky Linux • Others Linux • Customized Linux • Windows Server 2022 • Windows Server 2019 • Windows Server 2016 • Windows Server 2012 • Windows Server 2008 • Windows Server 2003 Default value: Others Linux.
BootMode	String	No	BIOS	The boot mode of the custom image. Valid values: • BIOS • UEFI Default value: BIOS. If the `Architecture` parameter is set to arm64, set this parameter to UEFI. **Note** You must know which boot modes the specified image supports. When you use this parameter to change the boot mode of the image, specify a boot mode supported by the image to ensure that instances which use this image can be started normally.
RoleName	String	No	AliyunECSImageImportDefaultRole	The name of the RAM role used to import the source image.
LicenseType	String	No	Auto	The type of the license used to activate the operating system after the source image is imported. Valid values: • Auto: ECS checks the operating system of the source image and allocates a license to the operating system. ECS first checks whether the operating system distribution specified by `Platform` has a license allocated by an official Alibaba Cloud channel. If yes, the allocated license is used. If no, the license that comes with the source operating system is used. • Aliyun: The license allocated through an official Alibaba Cloud channel is used for the operating system distribution specified by `Platform`. • BYOL: The license that comes with the source operating system is used. In this case, make sure that your license key can be used in Alibaba Cloud. Default value: Auto.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the custom image.

Parameter	Type	Required	Example	Description
DiskDeviceMapping.N.DiskImSize	Integer	No	80	The size of the custom image. **Note** This parameter will be removed in the future. We recommend that you use the `DiskDeviceMapping.N.DiskImageSize` parameter to ensure future compatibility.
DiskDeviceMapping.N.Device	String	No	null	The device name of disk N in the custom image. **Note** This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
DiskDeviceMapping.N.OSSBucket	String	No	ecsimageos	The OSS bucket where the source image is stored. **Note** The first time you import an image, you must use RAM to authorize ECS to access your OSS buckets. If ECS is not authorized to access your OSS buckets, the `NoSetRoletoECSServiceAcount` error code is returned when you call the ImportImage operation.
DiskDeviceMapping.N.Format	String	No	QCOW2	The format of the source image. Valid values: • RAW • VHD • QCOW2 This parameter is empty by default, which indicates that the system checks the format of the custom image and uses the check result as the value of this parameter.
DiskDeviceMapping.N.OSSObject	String	No	CentOS_5.4_32.raw	The name (key) of the object that the uploaded source image is stored as in the OSS bucket.
DiskDeviceMapping.N.DiskImageSize	Integer	No	80	The size of disk N in the custom image after the image is imported. The value may be the size of the system disk or that of the data disk. When N is 1, the disk is a system disk. When N is a value in the range of 2 to 17, the disk is a data disk. The size of the system disk must be greater than or equal to the size of the imported image. Valid values: • Valid values when the N value is 1: 5 GiB to 500 GiB. • Valid values when the N value ranges from 2 to 17: 5 GiB to 1000 GiB. After the source image is uploaded to an OSS bucket, you can view the size of the image in the OSS bucket.
Tag.N.Key	String	No	TestKey	The key of tag N of the custom image. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain `http://` or `https://`. It must not start with `acs:` or `aliyun`.

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	TestValue	The value of tag N of the custom image. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with `acs:` . It cannot contain `http://` or `https://` .

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
ImageId	String	m-bp67acfmxazb4p****	The ID of the image.
TaskId	String	t-bp67acfmxazb4p****	The ID of the image import task.
RegionId	String	cn-hangzhou	The region ID of the image.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ImportImage
&RegionId=cn-hangzhou
&DiskDeviceMapping.1.Format=QCOW2
&DiskDeviceMapping.1.OSSBucket=ecsimageos
&DiskDeviceMapping.1.OSSObject=CentOS_5.4_32.raw
&DiskDeviceMapping.1.DiskImageSize=80
&ImageName=Test
&Description=Test
&Architecture=x86_64
&OSType=linux
&Platform=Aliyun
&LicenseType=Aliyun
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ImportImageResponse>
    <TaskId>t-bp67acfmxazb4p****</TaskId>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <ImageId>m-bp67acfmxazb4p****</ImageId>
    <RegionId>cn-hangzhou</RegionId>
</ImportImageResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TaskId" : "t-bp67acfmxazb4p****",
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "ImageId" : "m-bp67acfmxazb4p****",
  "RegionId" : "cn-hangzhou"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied.	The error message returned because the RegionId parameter is not specified.
400	MissingParameter	An input parameter "DiskDeviceMapping.1.OSSBucket" that is mandatory for processing the request is not supplied.	The error message returned because the DiskDeviceMapping.N.OSSBucket parameter is not specified.
400	MissingParameter	An input parameter "DiskDeviceMapping.1.OSSObject" that is mandatory for processing the request is not supplied.	The error message returned because the DiskDeviceMapping.N.OSSBucket parameter is not specified.
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The error message returned because the specified ImageName parameter is invalid. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with acs: or aliyun. It cannot contain http:// or https://. It can contain letters, digits, periods (.), colons (:), underscores (_), and hyphens (-).
400	InvalidOSSObject.Malformed	The specified OSS object is wrongly formed.	The error message returned because the specified DiskDeviceMapping.N.OSSObject parameter is invalid.
400	InvalidDescription.Malformed	The specified Image description is wrongly formed.	The error message returned because the specified Description parameter is invalid.
400	InvalidArchitecture.Malformed	The specified Architecture is wrongly formed.	The error message returned because the specified Architecture parameter is invalid.
400	InvalidPlatform.Malformed	The specified Platform is wrongly formed.	The error message returned because the specified Platform parameter is invalid.
400	InvalidOSType.Malformed	The specified OSType is wrongly formed.	The error message returned because the specified OSType parameter is invalid.
400	InvalidImageName.Duplicated	The destination image is exist.	The error message returned because the specified image name already exists.
400	InvalidImageSize	%s	The error message returned because the specified image size is invalid.
400	InvalidDataDiskSize	The specified DiskDeviceMapping.N.DiskImSize should be in the specified range.	The error message returned because the specified DiskDeviceMapping.N.DiskImSize parameter is invalid.
400	InvalidImageFormat.Malformed	The specified Image Format is wrongly formed.	The error message returned because the specified ImageFormat parameter is invalid.
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	InvalidRegion.NotSupport	The specified region does not support image import or export.	The error message returned because the specified region does not support the operation.
400	InvalidOSSBucket.NotFound	The specified OSS bucket does not exist in this region.	The error message returned because the specified OSS bucket does not exist.
400	InvalidOSSObject.NotFound	The specified OSS object does not exist in this region.	The error message returned because the specified OSS object does not exist.
400	InvalidOSSObject.NotFound	The specified OSS object cannot be retrieved.	The error message returned because the specified OSS object cannot be found.
400	InvalidOSSBucket.NotMatched	The specified OSS bucket is incorrect, %s.	The error message returned because the specified DiskDeviceMapping.N.OSSBucket parameter is invalid. For more information, see the return value of the %s placeholder in the error message.

HTTP status code	Error code	Error message	Description
400	InvalidLicenseType.NotSupported	The specified LicenseType is not supported	The error message returned because the specified LicenseType parameter is invalid.
400	InvalidLicenseType.BYOLOnly	Only BYOL LicenseType is supported for the current platform provided	The error message returned because the current platform supports only BYOL licenses.
403	ImageIsImporting	The specified Image is importing.	The error message returned because the specified image is being imported and cannot be managed.
403	QuotaExceed.Image	The Image Quota exceeds.	The error message returned because the custom image quota has been used up.
403	ImportImageFailed	Importing image is failed, Please contact the administrator.	The error message returned because the image cannot be imported. Contact a system administrator.
403	UserNotInTheWhiteList	The user is not in the white list of importing image.	The error message returned because you are not authorized to import images.
403	NoSetRoletoECSServiceAcount	ECS service account Have no right to access your OSS.please attach a role of access your oss to ECS service account.	The error message returned because ECS is not authorized to access the specified OSS bucket or object.
403	InvalidParameter.Malformed	The specified parameter "DiskDeviceMapping.n.Device " is not valid.	The error message returned because the specified DiskDeviceMapping.N.Device parameter is invalid.
403	MissingParameter.DiskDeviceMapping	The specified parameter DiskDeviceMapping is not supplied.	The error message returned because a parameter that starts with DiskDeviceMapping is not specified.
403	InvalidOSS.NotAuthorized	The specified OSS bucket or object is not allowed to access	The error message returned because you do not have the permissions to access the specified OSS bucket or object.

For a list of error codes, visit the API Error Center.

14.3. CopyImage

Copies a custom image from one region to another. You can deploy or copy instances across regions by copying images.

Description

After you copy a custom image to the destination region, you can use the image copy to create Elastic Compute Service (ECS) instances by calling the RunInstances operation or replace the system disks of instances by calling the ReplaceSystemDisk operation in the destination region.

When you call this operation, take note of the following items:

- Only custom images that are in the `Available` state can be copied.
- You can only copy images within your own Alibaba Cloud account. Images cannot be copied from one account to another.
- When an image is being copied, you cannot delete the image copy by calling the DeleteImage operation, but you can cancel the running copy task by calling the CancelCopyImage operation.
- A single region can have only one image copy task running at a time. Other image copy tasks queue up for the current task to complete before they run in sequence.
- You can set the `ResourceGroupId` parameter to specify the resource group to which the image copy belongs. If you do not set the `ResourceGroupId` parameter, the image copy belongs to the default resource group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CopyImage	The operation that you want to perform. Set the value to **CopyImage**.

Parameter	Type	Required	Example	Description
DestinationImageName	String	No	YourImageName	The name of the image copy. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`. It can contain letters, digits, periods (.), colons (:), underscores (_), and hyphens (-).
DestinationDescription	String	No	This is a description example.	The description of the image copy. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.
ImageId	String	Yes	m-bp1h46wfpjsjastc****	The ID of the source custom image.
RegionId	String	Yes	cn-hangzhou	The region ID of the source custom image. You can call the DescribeRegions operation to query the most recent region list.
DestinationRegionId	String	No	cn-shanghai	The ID of the destination region to which to copy the source custom image.
Encrypted	Boolean	No	false	Specifies whether to encrypt the image copy. Default value: false.
KMSKeyId	String	No	e522b26d-abf6-4e0d-b5da-04b7******3c	The ID of the key used to encrypt the image copy.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the image copy belongs. If you do not specify this parameter, the image copy belongs to the default resource group. **Note** If you use a RAM user that is not authorized to manage the default resource group to call the CopyImage operation and do not specify the `ResourceGroupId` parameter, the `Forbbiden: User not authorized to operate on the specified resource` error message is returned. You must specify the ID of a resource group that the RAM user is authorized to manage or authorize the RAM user to manage the default resource group before you call the CopyImage operation again.
Tag.N.Key	String	No	TestKey	The key of tag N of the image copy. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	TestValue	The value of tag N of the image copy. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with `acs:` . It cannot contain `http://` or `https://` .

Response parameters

Parameter	Type	Example	Description
ImageId	String	m-bp1h46wfpjsjastd****	The ID of the image copy.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CopyImage
&ImageId=m-bp1h46wfpjsjastc****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CopyImageResponse>
    <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
    <ImageId>m-bp1h46wfpjsjastd****</ImageId>
</CopyImageResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "C8B26B44-0189-443E-9816-D951F59623A9",
  "ImageId" : "m-bp1h46wfpjsjastd****"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The error message returned because the specified image name is invalid. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with acs: or aliyun. It cannot contain http:// or https://. It can contain letters, digits, periods (.), colons (:), underscores (_), and hyphens (-).
400	InvalidImageName.Malformed	The specified destination Image name is wrongly formed.	The error message returned because the specified destination image name is invalid. For more information, see the description of the DestinationImageName parameter.
400	InvalidDescription.Malformed	The specified destination description is wrongly formed.	The error message returned because the specified description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.

HttpCode	Error code	Error message	Description
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	SourceRegion.NotFound	The source region not found	The error message returned because the specified source region does not exist.
400	DestinationRegion.NotFound	The destination region not found	The error message returned because the specified destination region does not exist.
400	IncorrectImageStatus	The image not available.	The error message returned because the specified image is unavailable.
400	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The error message returned because the specified snapshot does not exist.
400	InvalidImageName.Duplicated	The destination image is exist.	The error message returned because the specified image name already exists.
400	InvalidParameter.EncryptedIllegal	The specified parameter Encrypted must be true when kmsKeyId is not empty.	The error message returned because the encryption feature is not enabled after a Key Management Service (KMS) key ID is specified.
401	InvalidAliUid.IsNull	The aliUid must not be null	The error message returned because the required aliUid parameter is not specified.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	Forbbiden	User not authorized to operate on the specified resource.	The error message returned because you are not authorized to perform operations on the specified resource.
403	QuotaExceed.Image	The Image Quota exceeds.	The error message returned because the custom image quota has been used up.
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The error message returned because the maximum number of snapshots has been reached. To store new snapshots, delete snapshots that are no longer needed.
403	OperationDenied.ImageCopying	The Image are coping.	The error message returned because the source image is being copied. Try again later.
403	RegionNotSupportCopy	The region not support copy.	The error message returned because the specified source or destination region does not support image copying.
403	InvalidSnapshot.TooOld	This operation is denied because the specified snapshot is created before 2013-07-15.	The error message returned because the operation is rejected when the specified snapshot was created before July 15, 2013.
403	OperationDenied	The specified snapshot is not allowed to create image.	The error message returned because the specified snapshot cannot be used to create images.
403	IncorrectDestinationRegion	The destination region is not equal the target region.	The error message returned because the source region is the same as the destination region.
403	SizeExceed.Image	The image exceeds the maximum size. Please open a ticket to add the account to the white list.	The error message returned because the size of the image exceeds the upper limit.
403	OperationDeined.EncryptedSnapshot	The image contains encrypted snapshots, which do not support copying.	The error message returned because the specified image contains encrypted snapshots and cannot be copied.
403	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

HttpCode	Error code	Error message	Description
403	OperationDenied.SameRegionOnly	The image shared from others can not be copied to another region directly.	The error message returned because you cannot copy images shared by other Alibaba Cloud accounts to another region.
403	OperationDenied.NotPublished	The operation is denied because corresponding marketplace image is not published in destination region.	The error message returned because the image type is not supported in the destination region and the operation is rejected.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a KMS key ID is specified for a disk. You can call the DescribeKey operation of KMS to query information about the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access KMS resources.
403	InvalidRegion.NotSupport	The specified region does not support byok.	The error message returned because the bring your own key (BYOK) feature is not supported in the region.
403	UserNotInTheWhiteList	The user is not in byok white list.	The error message returned because you are not in the BYOK whitelist. Try again when you are in the whitelist.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist within this account. Check whether the image ID is correct.
404	InvalidParameter.KMSKeyId.NotFound	The specified KMSKeyId does not exist.	The error message returned because the specified KMSKeyId parameter does not exist.

For a list of error codes, visit the API Error Center.

14.4. CancelCopyImage

You can call this operation to cancel an ongoing image copy (CopyImage) task.

Description

When you call this operation, take note of the following items:

- After you cancel the image copy task, the image copy created in the destination region is deleted, and the source image remains unchanged.
- If the image copy task is complete, the CancelCopyImage operation fails and an error is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CancelCopyImage	The operation that you want to perform. Set the value to CancelCopyImage.
ImageId	String	Yes	m-bp1caf3yicx5jlfl****	The ID of the image being copied.
RegionId	String	Yes	cn-hangzhou	The region ID of the image copy. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CancelCopyImage
&ImageId=m-bp1caf3yicx5jlfl****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CancelCopyImageResponse>
      <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
</CancelCopyImageResponse>
```

`JSON` format

```
{
    "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account.
400	ImageCreatedNotFromCopy	The specified image is not the target image of a copy action.	The error message returned because the specified image ID is not the ID of the image that is being copied.
400	IncorrectImageStatus	The image is copied finished.	The error message returned because the image copy task is complete.
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	IncorrectImageStatus	The specified snapshot is not coping.	The error message returned because the specified snapshot is not being copied.
400	IncorrectImageStatus	The specified image is not coping.	The error message returned because the specified image is not being copied.
400	IncorrectImageStatus	The image has completed copy.	The error message returned because the image copy task is complete.
400	IncorrectImageStatus	The Image copy has been failed.	The error message returned because the specified image failed to be copied.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	CancelNotSupported	The specified image coping can not be cancelled.	The error message returned because the specified image copy task cannot be canceled.

For a list of error codes, visit the API Error Center.

14.5. ExportImage

You can call this operation to export a custom image to an Object Storage Service (OSS) bucket in the same region.

Description

Before you export images:

- You must first understand the prerequisites and precautions. For more information, see Export images.
- You must use Resource Access Management (RAM) to create a RAM role for ECS and authorize ECS to write data to OSS. Perform the following operations:

  1. Create a role named `AliyunECSImageExportDefaultRole`. All other role names are invalid. Configure the following trust policy for the role:

```
{
  "Statement": [
    {
      "Action": "sts:AssumeRole",
      "Effect": "Allow",
      "Principal": {
        "Service": [
          "ecs.aliyuncs.com"
        ]
      }
    }
  ],
  "Version": "1"
}
```

  2. Attach the `AliyunECSImageExportRolePolicy` system policy to the `AliyunECSImageExportDefaultRole` role. This policy is the default policy used for ECS to export images. For more information, go to the Cloud Resource Access Authorization page. Alternatively, you can create a custom policy that contains the following content and attach the policy to the role:

```
{
  "Version": "1",
  "Statement": [
    {
      "Action": [
        "oss:GetObject",
        "oss:PutObject",
        "oss:DeleteObject",
        "oss:GetBucketLocation",
        "oss:GetBucketInfo",
        "oss:AbortMultipartUpload",
        "oss:ListMultipartUploads",
        "oss:ListParts"
      ],
      "Resource": "*",
      "Effect": "Allow"
    }
  ]
}
```

After you export the images:

The custom image is saved in the specified OSS bucket. You can download the custom image. For more information, see Download objects.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ExportImage	The operation that you want to perform. Set the value to ExportImage.
ImageId	String	Yes	m-bp67acfmxazb4p****	The ID of the custom image.
OSSBucket	String	Yes	testexportImage	The OSS bucket to which to export the custom image.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the custom image. You can call the DescribeRegions operation to query the most recent region list.
OSSPrefix	String	No	EcsExport	The prefix of the object as which to store the custom image in the OSS bucket. It must be 1 to 30 characters in length and can contain digits and letters.
ImageFormat	String	No	raw	The format in which to export the custom image. Valid values: • raw • vhd • qcow2 • vmdk • vdi Default value: raw.
RoleName	String	No	AliyunECSImageExportDefaultRole	The name of the RAM role used to export the custom image.

Response parameters

Parameter	Type	Example	Description
RegionId	String	cn-hangzhou	The region ID of the task.
RequestId	String	C8B26B44-0189-443E-9816-D951F59623A9	The ID of the request.
TaskId	String	tsk-bp67acfmxazb4p****	The ID of the image export task.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ExportImage
&ImageId=m-bp67acfmxazb4p****
&OSSBucket=testexportImage
&RegionId=cn-hangzhou
&OSSPrefix=EcsExport
&ImageFormat=raw
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ExportImageResponse>
      <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
      <ExportTaskId>tsk-bp67acfmxazb4p****</ExportTaskId>
      <RegionId>cn-hangzhou</RegionId>
</ExportImageResponse>
```

`JSON` format

```
{
    "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
    "ExportTaskId": "tsk-bp67acfmxazb4p****",
    "RegionId": "cn-hangzhou"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied.	The error message returned because the RegionId parameter is not specified.
400	MissingParameter	An input parameter "ImageId" that is mandatory for processing the request is not supplied.	The error message returned because the ImageId parameter is not specified.
400	MissingParameter	An input parameter "OSSBucket" that is mandatory for processing the request is not supplied.	The error message returned because the OSSBucket parameter is not specified.
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The error message returned because the specified DestinationImageName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	InvalidOSSPrefix.Malformed	The specified OSSPrefix format is wrongly formed.	The error message returned because the specified OSSPrefix parameter is invalid.
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	InvalidRegion.NotSupport	The specified region does not support image import or export.	The error message returned because the specified region does not support the operation.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account. Check whether the image ID is correct.
400	IncorrectImageStatus	The specified Image is not available.	The error message returned because the status of the specified image is invalid.
403	ImageNotSupported	The specified image from the image market, do not support export image.	The error message returned because the specified image is an Alibaba Cloud Marketplace image and cannot be exported.
400	InvalidImageFormat.Malformed	The specified Image Format is wrongly formed.	The error message returned because the specified ImageFormat parameter is invalid.
403	ImageIsExporting	The specified Image is exporting.	The error message returned because the specified image is being exported.
403	ExportImageFailed	Exporting image is failed, Please contact the administrator.	The error message returned because the image failed to be exported. Contact a system administrator.
403	UserNotInTheWhiteList	The user is not in the white list of exporting image.	The error message returned because you are not authorized to export images.
403	NoSetRoletoECSServiceAcount	ECS service account Have no right to access your OSS.please attach a role of access your oss to ECS service account.	The error message returned because ECS is not authorized to access the specified OSS bucket and object.
400	InvalidOSSBucket.NotFound	The specified OSS bucket does not exist in this region.	The error message returned because the specified OSSBucket parameter does not exist.
400	OperationDenied	The specified image contains the snapshot of the data disk,does not support this operation.	The error message returned because the operation is not supported while the image contains data disk snapshots.
400	InvalidImage.DiskAmountOrSize	%s	The error message returned because the image contains more than four data disk snapshots or one of the data disk snapshot exceeds 500 GiB in size.

HttpCode	Error code	Error message	Description
400	ImageNotSupported	The specified Image contains encrypted snapshots, do not support export.	The error message returned because the specified image contains encrypted snapshots and cannot be exported.
400	ImageNotSupported	Image from image market does not support exporting.	The error message returned because the specified image is an Alibaba Cloud Marketplace image and cannot be exported.
400	InvalidOSSBucket.NotMatched	The specified OSS bucket is incorrect, %s.	The error message returned because the OSSBucket parameter is invalid. For more information, see the returned result of the %s placeholder in the error message.
403	ConcurrentQuotaExceed.ExportImage	%s	The error message returned because the maximum number of concurrent ongoing tasks has been reached. Try again later.
403	WeeklyQuotaExceed.ExportImage	%s	The error message returned because the weekly quota for exported images of this week has been used up. Retry when the quota becomes available again.
403	InvalidImageLicense.NotSupported	%s	The error message returned because the specified image cannot be exported. For more information, see the returned result of the %s placeholder in the error message.

For a list of error codes, visit the API Error Center.

14.6. DescribeImages

Queries available images.

Description

- You can query your custom images, public images provided by Alibaba Cloud, Alibaba Cloud Marketplace images, and shared images from other Alibaba Cloud accounts.
- This operation supports paged query. The response contains the total number of available images and the images on the returned page. By default, ten entries are displayed on each page.
- When you call an API operation by using Alibaba Cloud CLI, you must specify request parameter values of different data types in the required formats. For more information, see Parameter format overview.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeImages	The operation that you want to perform. Set the value to **DescribeImages**.
RegionId	String	Yes	cn-hangzhou	The region ID of the image. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
Status	String	No	Available	The state of the image. Default value: Available. Valid values: • Creating: The image is being created. • Waiting: The image is waiting to be processed. • Available: The image is available. • UnAvailable: The image is unavailable. • CreateFailed: The image cannot be created. • Deprecated: The image is discontinued. You can specify multiple values. Separate the values with commas (,).
ImageId	String	No	m-bp1g7004ksh0oeuc****	The ID of the image.
ShowExpired	Boolean	No	false	Specifies whether the subscription image has expired. Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
SnapshotId	String	No	s-bp17ot2q7x72ggtw****	The ID of the snapshot used to create the custom image.
ImageName	String	No	testImageName	The name of the image.
ImageFamily	String	No	hangzhou-daily-update	The name of the image family. You can set this parameter to query images of the specified image family. This parameter is empty by default.

ImageOwnerAlias	String	No	self	The source of the image. Valid values:
				• system: public images provided by Alibaba Cloud.
				• self: custom images that you create.
				• others: shared images from other Alibaba Cloud accounts, or community images published by other Alibaba Cloud accounts. Take note of the following items:
				  ○ To query community images, you must set IsPublic to true.
				  ○ To query shared images, you must set IsPublic to false or leave the IsPublic parameter empty.
				• marketplace: Alibaba Cloud Marketplace images. If Alibaba Cloud Marketplace images are returned in the response, you can use the images without subscription. You must pay attention to the billing details of Alibaba Cloud Marketplace images.
				This parameter is empty by default, which indicates that the results that match system, self, and others are returned.

InstanceType	String	No	ecs.g5.large	The instance type for which the image can be used.
IsSupportIoOptimized	Boolean	No	true	Specifies whether the image can be used on I/O optimized instances.

Parameter	Type	Required	Example	Description
IsSupportCloudinit	Boolean	No	true	Specifies whether the image supports cloud-init.
OSType	String	No	linux	The operating system type of the image. Valid values: • windows • linux
Architecture	String	No	i386	The image architecture. Valid values: • i386 • x86_64 • arm64
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	1	The number of entries to return on each page. Maximum value: 100. Default value: 10.
Usage	String	No	instance	Specifies whether the image is running on an Elastic Compute Service (ECS) instance. Valid values: • instance: The image is already in use and running on an ECS instance. • none: The image is not in use.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are granted required permissions, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the DryRunOperation error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned, and the request is made. Default value: false.
ActionType	String	No	CreateEcs	The scenario in which the image is used. Default value: CreateEcs. Valid values: • CreateEcs: instance creation • ChangeOS: replacement of the system disk or operating system
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the custom image belongs. If this parameter is specified to query resources, up to 1,000 resources that belong to the specified resource group can be displayed in the response.

Parameter	Type	Required	Example	Description
IsPublic	Boolean	No	false	Specifies whether to query published community images. Valid values: • true: queries published community images. When you set this parameter to true, you must set ImageOwnerAlias to others. • false: queries other image types than community images. The specific image types to be queried are determined by the ImageOwnerAlias value. Default value: false.
ImageOwnerId	Long	No	1234567890	The ID of the Alibaba Cloud account to which the image belongs. This parameter takes effect only when you query shared images or community images.
Tag.N.key	String	No	null	The key of tag N of the image. **Note** This parameter will be removed in the future. We recommend that you use the `Tag.N.Key` parameter to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N of the image. Valid values of N: 1 to 20. If a single tag is specified to query resources, up to 1,000 resources that have this tag added can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources that have all these tags added can be displayed in the response. To query more than 1,000 resources that have specified tags added, call the ListTagResources operation.
Tag.N.Value	String	No	TestValue	The value of tag N of the image. Valid values of N: 1 to 20.
Tag.N.value	String	No	null	The value of tag N of the image. **Note** This parameter will be removed in the future. We recommend that you use the `Tag.N.Value` parameter to ensure future compatibility.
Filter.N.Key	String	No	CreationStartTime	The key of filter N used to query resources. Valid values: • If you set this parameter to `CreationStartTime`, you can query the resources that were created after the point in time specified by the `Filter.N.Value` value. • If you set this parameter to `CreationEndTime`, you can query the resources that were created before the point in time specified by the `Filter.N.Value` value.

Parameter	Type	Required	Example	Description
Filter.N.Value	String	No	2017-12-05T22:40Z	The value of filter N used to query resources. When you specify this parameter, you must also specify the `Filter.N.Key` parameter. Specify the time in the `yyyy-MM-ddTHH:mmZ` format. The time must be in UTC.

Response parameters

Parameter	Type	Example	Description
PageSize	Integer	1	The number of entries returned per page.
PageNumber	Integer	1	The page number of the returned page.
RequestId	String	66189103-EDB2-43E2-BB60-BFF2B62F4EB8	The ID of the request.
TotalCount	Integer	1	The total number of images.
RegionId	String	cn-hangzhou	The region ID of the image.
Images	Array of Image		Details about the images.
Image			
CreationTime	String	2019-11-15T06:07:05Z	The time when the image was created.
Status	String	Available	The state of the image. Valid values: • UnAvailable: The image is unavailable. • Available: The image is available. • Creating: The image is being created. • CreateFailed: The image cannot be created.
ImageFamily	String	hangzhou-daily-update	The name of the image family.
Progress	String	100%	The image creation progress. Unit: percent (%).
IsCopied	Boolean	false	Indicates whether the image is a copy of another image.
IsSupportIoOptimized	Boolean	true	Indicates whether the image can be used on I/O optimized instances.
ImageOwnerAlias	String	self	The source of the image. Valid values: • system: public images provided by Alibaba Cloud. • self: custom images that you create. • others: shared images from other Alibaba Cloud accounts, or community images published by other Alibaba Cloud accounts. • marketplace: Alibaba Cloud Marketplace images.
IsSupportCloudinit	Boolean	true	Indicates whether the image supports cloud-init.
ImageVersion	String	2	The version of the image.

Parameter	Type	Example	Description
Usage	String	none	Indicates whether the image has been used to create ECS instances. Valid values: • instance: The image has been used to create one or more ECS instances. • none: The image has not been used to create ECS instances.
IsSelfShared	String	true	Indicates whether the custom image was shared to other Alibaba Cloud accounts.
Description	String	Archive log for Oracle	The description of the image.
Size	Integer	60	The size of the image. Unit: GiB.
ResourceGroupId	String	rg-bp67acfmxazb4p****	The ID of the resource group to which the image belongs.
Platform	String	Windows Server 2016	The operating system.
OSNameEn	String	Windows Server 2016 Data Center Edition 64bit Chinese Edition	The English name of the operating system.
ImageName	String	testImageName	The name of the image.
OSName	String	Windows Server 2016 Datacenter 64-bit (Simplified Chinese)	The Chinese name of the operating system.
ImageId	String	m-bp1g7004ksh0oeuc****	The ID of the image.
OSType	String	windows	The type of the operating system. Valid values: • windows • linux
IsSubscribed	Boolean	false	Indicates whether you have subscribed to the image that corresponds to the specified product code.
ProductCode	String	test000****	The product code of the Alibaba Cloud Marketplace image.
Architecture	String	x86_64	The image architecture. Valid values: • i386 • x86_64 • arm64
DiskDeviceMappings	Array of DiskDeviceMapping		The mappings between disks and snapshots in the image.
DiskDeviceMapping			
Type	String	system	The type of the image.
ImportOSSBucket	String	testEcsImport	The Object Storage Service (OSS) bucket that contains the imported image file.
Progress	String	32%	The progress of an image copy task.

Parameter	Type	Example	Description
SnapshotId	String	s-bp17ot2q7x72ggtw****	The ID of the snapshot.
ImportOSSObject	String	imageImport	The OSS object that corresponds to the imported image file.
Device	String	/dev/xvda	The device name of the disk. Example: /dev/xvdb. **Note** This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
Size	String	60	The size of the disk.
RemainTime	Integer	233	The remaining time for an image copy task. Unit: seconds.
Format	String	qcow2	The format of the image.
Tags	Array of Tag		The tags of the image.
Tag			
TagValue	String	Oracle	The tag value of the image.
TagKey	String	DTS	The tag key of the image.
IsPublic	Boolean	false	Indicates whether the image is a public image. Public images include public images provided by Alibaba Cloud and custom images published as community images. Valid values: • true: The image is a public image. • false: The image is not a public image.
ImageOwnerId	Long	1234567890	The ID of the Alibaba Cloud account to which the image belongs. This parameter takes effect only when you query shared images or community images.
LoginAsNonRootSupported	Boolean	false	Indicates whether the image supports logons of non-root users. Valid values: • true: The image supports logons of non-root users. • false: The image does not support logons of non-root users.
SupplierName	String	TestName	The name of the supplier that publishes the community image.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=DescribeImages
&RegionId=cn-hangzhou
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeImagesResponse>
    <PageSize>1</PageSize>
    <PageNumber>1</PageNumber>
    <RequestId>66189103-EDB2-43E2-BB60-BFF2B62F4EB8</RequestId>
    <TotalCount>1</TotalCount>
    <RegionId>cn-hangzhou</RegionId>
    <Images>
        <CreationTime>2019-11-15T06:07:05Z</CreationTime>
        <Status>Available</Status>
        <ImageFamily>hangzhou-daily-update</ImageFamily>
        <Progress>100%</Progress>
        <IsCopied>false</IsCopied>
        <IsSupportIoOptimized>true</IsSupportIoOptimized>
        <ImageOwnerAlias>self</ImageOwnerAlias>
        <IsSupportCloudinit>true</IsSupportCloudinit>
        <ImageVersion>2</ImageVersion>
        <Usage>none</Usage>
        <IsSelfShared>true</IsSelfShared>
        <Description>Archive log for Oracle</Description>
        <Size>60</Size>
        <ResourceGroupId>rg-bp67acfmxazb4p****</ResourceGroupId>
        <Platform>Windows Server 2016</Platform>
        <OSNameEn>Windows Server  2016 Data Center Edition 64bit Chinese Edition</OSNameEn>
        <ImageName>testImageName</ImageName>
        <OSName>Windows Server  2016 Datacenter 64-bit (Simplified Chinese)</OSName>
        <ImageId>m-bp1g7004ksh0oeuc****</ImageId>
        <OSType>windows</OSType>
        <IsSubscribed>false</IsSubscribed>
        <ProductCode>test000****</ProductCode>
        <Architecture>x86_64</Architecture>
        <DiskDeviceMappings>
            <Type>system</Type>
            <ImportOSSBucket>testEcsImport</ImportOSSBucket>
            <Progress>32%</Progress>
            <SnapshotId>s-bp17ot2q7x72ggtw****</SnapshotId>
            <ImportOSSObject>imageImport</ImportOSSObject>
            <Device>/dev/xvda</Device>
            <Size>60</Size>
            <RemainTime>233</RemainTime>
            <Format>qcow2</Format>
        </DiskDeviceMappings>
        <Tags>
            <TagValue>Oracle</TagValue>
            <TagKey>DTS</TagKey>
        </Tags>
        <IsPublic>false</IsPublic>
        <ImageOwnerId>1234567890</ImageOwnerId>
        <LoginAsNonRootSupported>false</LoginAsNonRootSupported>
        <SupplierName>TestName</SupplierName>
    </Images>
</DescribeImagesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "PageSize": 1,
  "PageNumber": 1,
  "RequestId": "66189103-EDB2-43E2-BB60-BFF2B62F4EB8",
  "TotalCount": 1,
  "RegionId": "cn-hangzhou",
  "Images": {
    "Images": [
      {
        "CreationTime": "2019-11-15T06:07:05Z",
        "Status": "Available",
        "ImageFamily": "hangzhou-daily-update",
        "Progress": "100%",
        "IsCopied": false,
        "IsSupportIoOptimized": true,
        "ImageOwnerAlias": "self",
        "IsSupportCloudinit": true,
        "ImageVersion": "2",
        "Usage": "none",
        "IsSelfShared": "true",
        "Description": "Archive log for Oracle",
        "Size": 60,
        "ResourceGroupId": "rg-bp67acfmxazb4p****",
        "Platform": "Windows Server 2016",
        "OSNameEn": "Windows Server  2016 Data Center Edition 64bit Chinese Edition",
        "ImageName": "testImageName",
        "OSName": "Windows Server 2016 Datacenter Edition 64-bit (Chinese)",
        "ImageId": "m-bp1g7004ksh0oeuc****",
        "OSType": "windows",
        "IsSubscribed": false,
        "ProductCode": "test000****",
        "Architecture": "x86_64",
        "DiskDeviceMappings": {
          "DiskDeviceMappings": [
            {
              "Type": "system",
              "ImportOSSBucket": "testEcsImport",
              "Progress": "32%",
              "SnapshotId": "s-bp17ot2q7x72ggtw****",
              "ImportOSSObject": "imageImport",
              "Device": "/dev/xvda",
              "Size": "60",
              "RemainTime": 233,
              "Format": "qcow2"
            }
          ]
        },
        "Tags": {
          "Tag": [
            {
              "TagValue": "Oracle",
              "TagKey": "DTS"
            }
          ]
        },
        "IsPublic": false,
        "ImageOwnerId": 1234567890,
        "LoginAsNonRootSupported": false,
        "SupplierName": "TestName"
      },
    ]
  },
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	InvalidImageOwnerAlias.ValueNotSupported	The specified ImageOwnerAlias value is not supported.	The error message returned because the specified ImageOwnerAlias parameter is invalid.
400	InvalidParamter	Invalid Parameter	The error message returned because a specified parameter is invalid.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not correspond to each other.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags has exceeded the upper limit.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or because you are not authorized to manage instances of the specified instance type.
404	InvalidUsage	The specifed Usage is not valid	The error message returned because the specified Usage parameter is invalid.
404	InvalidOSType	The specifed OSType is not valid	The error message returned because the specified OSType parameter is invalid.
404	InvalidArchitecture	The specifed Architecture is not valid	The error message returned because the specified Architecture parameter does not exist.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

14.7. DescribeImageSharePermission

You can call this operation to query the accounts to which a custom image is shared. The response can be displayed by page. By default, ten entries are displayed on each page.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeImageSharePermission	The operation that you want to perform. Set the value to DescribeImageSharePermission.
ImageId	String	Yes	m-bp1caf3yicx5jlfl****	The ID of the custom image.
RegionId	String	Yes	cn-hangzhou	The region ID of the custom image. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10

Response parameters

Parameter	Type	Example	Description
Accounts	Array of Account		The Alibaba Cloud accounts.
Account			
AliyunId	String	1234567890	The ID of the Alibaba Cloud account.
ImageId	String	m-bp1caf3yicx5jlfl****	The ID of the custom image.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RegionId	String	cn-hangzhou	The region ID of the image.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
ShareGroups	Array of ShareGroup		The shared groups.
ShareGroup			
Group	String	all	The shared group.
TotalCount	Integer	1	The total number of entries returned.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeImageSharePermission
&ImageId=m-bp1caf3yicx5jlfl****
&RegionId=cn-hangzhou
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeImageSharePermissionResponse>
      <ImageId>m-bp1caf3yicx5jlfl****</ImageId>
      <PageNumber>1</PageNumber>
      <PageSize>10</PageSize>
      <RegionId>cn-qingdao</RegionId>
      <TotalCount>1</TotalCount>
      <RequestId>441CF898-42FF-47CF-9348-3C3BFF557278</RequestId>
      <ShareGroups>
            <ShareGroup>
                  <Group>all</Group>
            </ShareGroup>
      </ShareGroups>
      <Accounts>
            <Account>
                  <AliyunId>1234567890</AliyunId>
            </Account>
      </Accounts>
</DescribeImageSharePermissionResponse>
```

`JSON` format

```
{
    "ShareGroups": {
        "ShareGroup": [
            {
                "Group": "all"
            }
        ]
    },
    "Accounts": {
        "Account": [
            {
                "AliyunId": "1234567890"
            }
        ]
    },
    "ImageId": "m-bp1caf3yicx5jlfl****",
    "PageNumber": 1,
    "PageSize": 10,
    "RegionId": "cn-qingdao",
    "TotalCount": 1,
    "RequestId": "9AD96F49-0BE5-4868-A66A-224352549CEC"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter "RegionId "that is mandatory for processing this request is not supplied.	The error message returned because the required RegionId parameter is not specified.
400	MissingParameter	The input parameter "ImageId "that is mandatory for processing this request is not supplied.	The error message returned because the required ImageId parameter is not specified.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account.

For a list of error codes, visit the API Error Center.

14.8. DescribeImageSupportInstanceTypes

You can call this operation to query the instance types supported by an image.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeImageSupportInstanceTypes	The operation that you want to perform. Set the value to DescribeImageSupportInstanceTypes.
RegionId	String	Yes	cn-hangzhou	The region ID of the image. You can call the DescribeRegions operation to query the most recent region list.
ImageId	String	No	m-o6w3gy99qf89rkga****	The ID of the image.

Parameter	Type	Required	Example	Description
ActionType	String	No	CreateEcs	The scenario in which the instance type is used. Default value: CreateEcs. Valid values: • CreateEcs: instance creation • Upgrade: instance type upgrade • Downgrade: instance type downgrade • RenewDowngrade: renewal and configuration downgrade
Filter.N.Key	String	No	imageId	The key of filter N. Only the image ID can be used to filter instance types. Valid values: • imagId: image ID • filter: image ID
Filter.N.Value	String	No	m-o6w3gy99qf89rkga****	The value of filter N.

Response parameters

Parameter	Type	Example	Description
ImageId	String	m-o6w3gy99qf89rkga****	The ID of the image.
InstanceTypes	Array of InstanceType		Details about the instance types that are supported by the image.
InstanceType			
CpuCoreCount	Integer	1	The number of vCPUs of the instance type.
InstanceTypeFamily	String	ecs.t1	The instance family.
InstanceTypeId	String	ecs.t1.xsmall	The ID of the instance type.
MemorySize	Float	1024	The memory size of the instance type. Unit: GiB.
RegionId	String	cn-hangzhou	The region ID of the image.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeImageSupportInstanceTypes
&RegionId=cn-hangzhou
&ImageId=m-o6w3gy99qf89rkga****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeImageSupportInstanceTypesResponse>
      <RequestId>CF661E2D-4AFE-4BCD-959A-A65E14416B44</RequestId>
      <RegionId>cn-hangzhou</RegionId>
      <ImageId>ubuntu_16_0402_64_20G_alibase_20180409.vhd</ImageId>
      <InstanceTypes>
            <InstanceType>
                  <InstanceTypeId>ecs.t1.xsmall</InstanceTypeId>
                  <CpuCoreCount>1</CpuCoreCount>
                  <MemorySize>0.5</MemorySize>
                  <InstanceTypeFamily>ecs.t1</InstanceTypeFamily>
            </InstanceType>
            <InstanceType>
                  <InstanceTypeId>ecs.t1.small</InstanceTypeId>
                  <CpuCoreCount>1</CpuCoreCount>
                  <MemorySize>1</MemorySize>
                  <InstanceTypeFamily>ecs.t1</InstanceTypeFamily>
            </InstanceType>
      </InstanceTypes>
</DescribeImageSupportInstanceTypesResponse>
```

`JSON` format

```
{
    "RequestId": "CF661E2D-4AFE-4BCD-959A-A65E14416B44",
    "RegionId": "cn-hangzhou",
    "ImageId": "ubuntu_16_0402_64_20G_alibase_20180409.vhd",
    "InstanceTypes": {
        "InstanceType": [{
            "InstanceTypeId": "ecs.t1.xsmall",
            "CpuCoreCount": 1,
            "MemorySize": 0.5,
            "InstanceTypeFamily": "ecs.t1"
        },
        {
            "InstanceTypeId": "ecs.t1.small",
            "CpuCoreCount": 1,
            "MemorySize": 1,
            "InstanceTypeFamily": "ecs.t1"
        }]
    }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidParamter	Invalid Parameter	The error message returned because a specified parameter is invalid.
404	InvalidUsage	The specifed Usage is not valid	The error message returned because the specified referenced resource type (image, disk, image_disk, or none) is invalid.
400	InvalidInstanceType.ValueNot Supported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or you are not authorized to manage instances of this instance type.

For a list of error codes, visit the API Error Center.

14.9. DescribeImageFromFamily

You can call this operation to query available custom images that are newly created in a specific image family.

Description

- This API operation only returns the available custom images that are newly created in the specified image family. Public images, Alibaba Cloud Marketplace images, community images, or shared images are not queried.
- If no available custom images exist in the specified image family, the response is empty.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeImageFromFamily	The operation that you want to perform. Set the value to DescribeImageFromFamily.
ImageFamily	String	Yes	hangzhou-daily-update	The name of the image family. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http://, https://, acs:, or aliyun.
RegionId	String	Yes	cn-hangzhou	The region ID of the image. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
Image	Struct		The image information.
Architecture	String	x86_64	The image architecture. Valid values: • i386 • x86_64
CreationTime	String	2018-01-10T01:01:10Z	The time when the image was created.
Description	String	testDescription	The description of the image.
DiskDeviceMappings	Array of DiskDeviceMapping		The mappings between the disks and snapshots under the image.
DiskDeviceMapping			
Device	String	/dev/xvdb	The device name of the disk. Example: /dev/xvdb. **Note** This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
Format	String	qcow2	The format of the image.
ImportOSSBucket	String	testEcsImport	The OSS bucket that contains the imported image file.
ImportOSSObject	String	imageImport	The OSS object corresponding to the imported image file.
Size	String	80	The size of the disk. Unit: GiB.
SnapshotId	String	s-bp17ot2q7x72ggtw****	The ID of the snapshot.
Type	String	custom	The type of the image.
ImageFamily	String	testImageFamily	The name of the image family.

Parameter	Type	Example	Description
ImageId	String	m-bp1g7004ksh0oeuc****	The ID of the image.
ImageName	String	testImageName	The name of the image.
ImageOwnerAlias	String	self	The alias of the image owner. Valid values: • system: public images provided by Alibaba Cloud • self: your custom images • others: shared images from other Alibaba Cloud accounts • marketplace: Alibaba Cloud Marketplace images
ImageVersion	String	2	The version of the image.
IsCopied	Boolean	false	Indicates whether the image is a copy of another image.
IsSelfShared	String	true	Indicates whether the image has been shared to other Alibaba Cloud accounts.
IsSubscribed	Boolean	false	Indicates whether you have subscribed to the image corresponding to the specified product code.
IsSupportCloudinit	Boolean	true	Indicates whether the image supports cloud-init.
IsSupportIoOptimized	Boolean	true	Indicates whether the image can be used on I/O optimized instances.
OSName	String	Alibaba Cloud Linux 2.1903	The name of the operating system.
OSType	String	linux	The type of the operating system. Valid values: • windows • linux
Platform	String	Aliyun	The platform of the operating system.
ProductCode	String	jxsc00****	The product code of the Alibaba Cloud Marketplace image.
Progress	String	100	The image creation progress. Unit: percent (%).
Size	Integer	80	The size of the image. Unit: GiB.
Status	String	Available	The status of the image. Valid values: • UnAvailable: The image is unavailable. • Available: The image is available. • Creating: The image is being created. • CreateFailed: The image failed to be created.
Tags	Array of Tag		An array that consists of Tag data.
Tag			
TagKey	String	TestKey	The tag key of the image.

Parameter	Type	Example	Description
TagValue	String	TestValue	The tag value of the image.
Usage	String	none	Indicates whether the image has been used to create ECS instances. Valid values: • instance: The image has been used to create one or more ECS instances. • none: The image has not been used to create ECS instances.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeImageFromFamily
&RegionId=cn-hangzhou
&ImageFamily=as-hangzhou-game-01
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeImageFromFamilyResponse>
      <RequestId>E39053A7-C3E6-41FA-8F8D-F5BD8063E61C</RequestId>
      <Image>
            <ImageOwnerAlias>self</ImageOwnerAlias>
            <Status>Available</Status>
            <Progress></Progress>
            <Usage></Usage>
            <Description>testDescription</Description>
            <IsSelfShared></IsSelfShared>
            <Architecture>x86_64</Architecture>
            <Platform>CentOS</Platform>
            <ProductCode></ProductCode>
            <Size>40</Size>
            <IsSubscribed>false</IsSubscribed>
            <IsCopied>false</IsCopied>
            <ImageFamily>testImageFamily</ImageFamily>
            <OSName>CentOS 8.0 64-bit</OSName>
            <IsSupportIoOptimized>true</IsSupportIoOptimized>
            <IsSupportCloudinit>true</IsSupportCloudinit>
            <ImageName>testImageName</ImageName>
            <DiskDeviceMappings>
                  <DiskDeviceMapping>
                        <SnapshotId>s-bp1ejhb4r1lyu55t****</SnapshotId>
                        <Type>system</Type>
                        <Format></Format>
                        <Size>40</Size>
                        <Device>/dev/xvda</Device>
                        <ImportOSSBucket></ImportOSSBucket>
                        <ImportOSSObject></ImportOSSObject>
                  </DiskDeviceMapping>
            </DiskDeviceMappings>
            <ImageVersion></ImageVersion>
            <OSType>linux</OSType>
            <ImageId>m-bp1ejhb4r1lyu55t****</ImageId>
            <CreationTime>2020-03-17T06:19:19Z</CreationTime>
            <Tags>
        </Tags>
      </Image>
</DescribeImageFromFamilyResponse>
```

`JSON` format

```
{
    "RequestId": "E39053A7-C3E6-41FA-8F8D-F5BD8063E61C",
    "Image": {
        "ImageOwnerAlias": "self",
        "Status": "Available",
        "Progress": "",
        "Usage": "",
        "Description": "testDescription",
        "IsSelfShared": "",
        "Architecture": "x86_64",
        "Platform": "CentOS",
        "ProductCode": "",
        "Size": 40,
        "IsSubscribed": false,
        "IsCopied": false,
        "ImageFamily": "testImageFamily",
        "OSName": "CentOS 8.0 64-bit",
        "IsSupportIoOptimized": true,
        "IsSupportCloudinit": true,
        "ImageName": "testImageName",
        "DiskDeviceMappings": {
            "DiskDeviceMapping": [
                {
                    "SnapshotId": "s-bp1ejhb4r1lyu55t****",
                    "Type": "system",
                    "Format": "",
                    "Size": "40",
                    "Device": "/dev/xvda",
                    "ImportOSSBucket": "",
                    "ImportOSSObject": ""
                }
            ]
        },
        "ImageVersion": "",
        "OSType": "linux",
        "ImageId": "m-bp1ejhb4r1lyu55t****",
        "CreationTime": "2020-03-17T06:19:19Z",
        "Tags": {
            "Tag": []
        }
    }
}
```


Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The RegionId provided does not exist.	The error message returned because the specified RegionId parameter does not exist. Check whether the region ID is correct.

For a list of error codes, visit the API Error Center.

14.10. ModifyImageAttribute

You can call this operation to modify the name, description, status, or image family of a custom image.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyImageAttribute	The operation that you want to perform. Set the value to ModifyImageAttribute.

Parameter	Type	Required	Example	Description
ImageId	String	Yes	m-bp18ygjuqnwhechc****	The ID of the custom image.
RegionId	String	Yes	cn-hangzhou	The region ID of the custom image. You can call the DescribeRegions operation to query the most recent region list.
ImageName	String	No	testImageName	The new name of the custom image. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`. This parameter is empty by default, which indicates that the original name is retained.
Status	String	No	Deprecated	The new status of the custom image. Valid values: • Deprecated: puts the custom image into the Deprecated state. If the custom image is shared, you must unshare the image before you can put it into the Deprecated state. Images in the Deprecated state cannot be shared or copied, but can be used to create instances or replace system disks. • Available: puts the image into the Available state. You can restore an image from the Deprecated state to the Available state. **Note** If you want to roll back a custom image in the image family to a previous version, you can put the latest available custom image into the Deprecated state. You are unable to create instances if no custom images are in the Available state within the instance family. Proceed with caution if only one custom image is in the Available state within the image family.
ImageFamily	String	No	hangzhou-daily-update	The new image family name. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`. This parameter is empty by default.
BootMode	String	No	BIOS	The new boot mode of the custom image. Valid values: • BIOS • UEFI **Note** You must know which boot modes the custom image supports. When you use this parameter to change the boot mode of the image, specify a boot mode supported by the image to ensure that instances based on this image can start normally.
Description	String	No	testDescription	The new description of the custom image. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`. This parameter is empty by default, which indicates that the original description is retained.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyImageAttribute
&ImageId=m-bp18ygjuqnwhechc****
&RegionId=cn-hangzhou
&ImageName=testImageName
&Description=testDescription
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyImageAttributeResponse>
      <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
</ModifyImageAttributeResponse>
```

`JSON` format

```
{
    "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The error message returned because the specified ImageName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start acs: or aliyun. It cannot contain http:// or https://.
400	MissingParameter	The input parameter "RegionId" that is mandatory for processing this request is not supplied.	The error message returned because the required RegionId parameter is not specified.
400	InvalidImageName.Duplicated	The specified Image name has already bean used.	The error message returned because the specified image name already exists.
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist within this account.

For a list of error codes, visit the API Error Center.

14.11. ModifyImageSharePermission

You can call this operation to manage the share permission on a custom image. You can share your custom images to other Alibaba Cloud accounts or publish the images as community images.

Description

To manage shared images, take note of the following items:

- You can share only your own custom images to other Alibaba Cloud accounts.
- A custom image can be shared to a maximum of 10 Alibaba Cloud accounts at a time. You can specify up to 10 Alibaba Cloud account IDs in

the `AddAccount.n` or `RemoveAccount.n` parameter. If you specify more than 10 account IDs, the parameter is ignored.

- A single custom image can be shared to a maximum of 50 Alibaba Cloud accounts. You can submit a ticket to share a custom image to more accounts.
- If an instance was created (RunInstances) from a shared image, the instance cannot be re-initialized (ReInitDisk) after the image owner unshares or deletes the image (DeleteImage).

To publish or unpublish a community image, take note of the following items:

- The owner of a community image is responsible for the quality and updates of the image. Alibaba Clouds provides only the platform where the community images can be published and managed. Make sure that you are aware of the content of the Community Image Agreement and have signed the agreement. Otherwise, you are not allowed to publish community images. For more information, see Unpublish a community image.
- Encrypted images cannot be published as community images.
- Community images are completely available. A community image is available to all Alibaba Cloud accounts in the region where the image is located.
- Community images cannot be shared, exported, or copied.
- After a community image is unpublished, it is not available to other Alibaba Cloud accounts. If a custom image is shared to other Alibaba cloud accounts before it is published as a community image, the image is still shared to the accounts after it is unpublished.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyImageSharePermission	The operation that you want to perform. Set the value to ModifyImageSharePermission.
ImageId	String	Yes	m-bp18ygjuqnwhechc****	The ID of the custom image.
RegionId	String	Yes	cn-hangzhou	The region ID of the custom image. You can call the DescribeRegions operation to query the most recent region list.
AddAccount.N	RepeatList	No	1234567890	The ID of Alibaba Cloud account N to which to share the custom image. Valid values of N: 1 to 10. If the value of N is greater than 10, this parameter is ignored.
RemoveAccount.N	RepeatList	No	1234567890	The ID of Alibaba Cloud account N from which to unshare the custom image. Valid values of N: 1 to 10. If the value of N is greater than 10, this parameter is ignored.
IsPublic	Boolean	No	false	Specifies whether to publish the specified custom image as a community image. Valid values: • true: publishes the image as a community image. When the image is published, it enters the public state • false: unpublishes the community image. When the image is unpublished, it enters the private state. **Note** If the parameter value is set to `true`, other optional parameters are not allowed to be specified.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyImageSharePermission
&ImageId=m-bp18ygjuqnwhechc****
&RegionId=cn-hangzhou
&AddAccount.1=1234567890
&RemoveAccount.1=1234567890
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyImageSharePermissionResponse>
      <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
</ModifyImageSharePermissionResponse>
```

`JSON` format

```
{
    "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	MissingParameter	The input parameter "RegionId" that is mandatory for processing this request is not supplied.	The error message returned because the required RegionId parameter is not specified.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist within this account. Check whether the image ID is correct.
404	InvalidAccount.NotFound	The specified parameter "AddAccount.n" or "RemoveAccount.n" does not exist.	The error message returned because the specified AddAccount.N or RemoveAccount.N parameter does not exist.
404	InvalidAccount.Forbbiden	The specified Account does not yourself.	The error message returned because you are attempting to share the image to your own account.
403	QuotaExceed.ShareImage	The shared Image Quota exceeds.	The error message returned because the maximum number of custom images that can be shared has been reached.
403	QuotaExceed.ShareImageUser	The shared Image user Quota exceeds.	The error message returned because the maximum number of Alibaba Cloud accounts to which a single image can be shared has been reached.
400	InvalidGroup.Malformed	The specified Group is wrongly formed.	The error message returned because the specified group does not exist.
403	InvalidImageId.BidMismatch	Cannot share image with other bid user.	The error message returned because images cannot be shared among users of different carriers.
403	OperationDeined.EncryptedSnapshot	The image contains encrypted snapshots, which do not support share.	The error message returned because the specified image contains encrypted snapshots and cannot be shared.
400	PublicImageAgreement.NotSigned	Current account not sign public image agreement.	The error message returned because the current you have not signed the community image agreement. Therefore, the specified image cannot be published as a community image. You can call the ModifyUserBusinessBehavior operation to sign the community image agreement.

HttpCode	Error code	Error message	Description
400	ImageIsPrivate	The specified image is private.	The error message returned because the specified image is already in the private state.
400	ImageIsPublic	The specified image is public.	The error message returned because the specified image is already in public state.
400	EncryptedImage.NotSupportPublic	Encrypted image is not supported to be public.	The error message returned because the specified image is an encrypted image and cannot be published as a community image.
400	InvalidImageStatus.NotAvailable	Public image status must be available.	The error message returned because the specified image is not in the Available state.

For a list of error codes, visit the API Error Center.

14.12. DeleteImage

You can call this operation to delete a custom image.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteImage	The operation that you want to perform. Set the value to DeleteImage.
ImageId	String	Yes	m-bp67acfmxazb4p****	The ID of the image. If the specified custom image does not exist, the request will be ignored.
RegionId	String	Yes	cn-hangzhou	The region ID of the custom image. You can call the DescribeRegions operation to query the most recent region list.
Force	Boolean	No	false	Specifies whether to forcibly delete the custom image. Valid values: • true: forcibly deletes the custom image, regardless of whether the image is being used by other instances. • false: verifies that the image is not being used by other instances and then deletes the image. Default value: false

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteImage
&ImageId=m-bp67acfmxazb4p****
&RegionId=cn-hangzhou
&Force=false
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteImageResponse>
       <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</DeleteImageResponse>
```

`JSON` format

```
{
    "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	ImageUsingByInstance	The specified image has been used to create instances.	The error message returned because the specified image is being used for instance creation and cannot be deleted.
403	ImageUseShared	The specified image has been shared to others.	The error message returned because the specified image is already shared with other accounts.
403	OperationDenied.ImageCopying	The Image is coping.	The error message returned because the source image is being copied. Try again later.
403	ImageIsImporting	The specified Image is importing.	The error message returned because the specified image is being imported and cannot be managed.
403	ImageIsExporting	The specified Image is exporting. Please cancel task first.	The error message returned because the specified image is being exported. Cancel the export task first.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account. Check whether the image ID is correct.

For a list of error codes, visit the API Error Center.

15.Image builder

15.1. CreateImageComponent

Creates an image component. Image components are used to store the builder template commands that are commonly used when you create images.

Description

When you call this operation, take note of the following items:

- Only custom image components can be created.
- Image components can be used to create only Linux images, so you must set the `SystemType` parameter to Linux.
- You must configure the image component type to image building component by setting the `ComponentType` parameter to Build.
- You can use Dockerfile to edit the content of image components and then pass the edited content into the `Content` parameter. The content cannot be greater than 16 KB in size and can contain up to 127 commands. `FROM` commands cannot be used in image components. For information about the commands that are supported, see Commands supported by Image Builder.

You can use image components to create image templates in the Elastic Compute Service (ECS) console, but cannot call API operations to use image components to create image templates. For more information, see Overview.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateImageComponent	The operation that you want to perform. Set the value to **CreateImageComponent**.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which to create the image component. You can call the DescribeRegions operation to query the most recent region list.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the image component.
Name	String	No	testComponent	The name of the image component. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), periods (.), and hyphens (-). **Note** If you do not specify the `Name` parameter, the return value of `ImageComponentId` is used by default.
Description	String	No	This is description.	The description of the image component. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
SystemType	String	No	Linux	The operating system type supported by the image component. Only Linux is supported. Set the value to Linux. Default value: Linux.
ComponentType	String	No	Build	The type of the image component. Only image building components are supported. Set the value to Build. Default value: Build.

Parameter	Type	Required	Example	Description
Content	String	No	RUN yum update -y	The content of the image component. The content can consist of up to 127 commands.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Tag.N.Key	String	No	TestKey	The key of tag N. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	TestValue	The value of tag N. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with acs: or contain http:// or https://.

Response parameters

Parameter	Type	Example	Description
ImageComponentId	String	ic-bp67acfmxazb4p****	The ID of the image component.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateImageComponent
&RegionId=cn-hangzhou
&Name=testComponent
&Description=This is description.
&SystemType=Linux
&ComponentType=Build
&Content=RUN yum update -y
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateImageComponentResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <ImageComponentId>ic-bp67acfmxazb4p****</ImageComponentId>
</CreateImageComponentResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "ImageComponentId" : "ic-bp67acfmxazb4p****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.

For a list of error codes, visit the API Error Center.

15.2. CreateImagePipeline

Creates an image template. Image templates can be used to create images.

Description

You can use image templates to customize image content and create images across regions and accounts. When you call this operation, take note of the following items:

- You can create only custom image templates.
- You can configure only public, custom, or shared Linux images or image families as the source images to create custom image templates.
- When you use an image template to create an image, you must create an intermediate Elastic Compute Service (ECS) instance to help create the image. The intermediate instance is billed on a pay-as-you-go basis. For more information, see Pay-as-you-go.

For the `BuildContent` parameter that specifies the content of image templates, take note of the following items:

- If the `BuildContent` value contains `FROM` commands, the values of `BaseImageType` that specifies the type of the source image and `BaseImage` that specifies the source image are overridden by the `FROM` commands.
- If the `BuildContent` value does not contain `FROM` commands, the system adds the `FROM` command that consists of the `BaseImageType` and `BaseImage` values to the first line of the template content in the format of `<BaseImageType>:<BaseImage>`.
- You can use Dockerfile to edit the content of image templates and then pass the edited content into the `BuildContent` parameter. The content cannot be greater than 16 KB in size, and can contain up to 127 commands. For information about the commands that are supported, see Commands supported by Image Builder.

You can use image components to create image templates in the ECS console, but cannot call API operations to use image components to create image templates. For more information, see Overview.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateImagePipeline	The operation that you want to perform. Set the value to **CreateImagePipeline**.
RegionId	String	Yes	cn-hangzhou	The region ID of the image template. You can call the DescribeRegions operation to query the most recent region list.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the image template.
BaseImageType	String	Yes	IMAGE	The type of the source image. Valid values: • IMAGE: custom image • IMAGE_FAMILY: image family
BaseImage	String	Yes	m-bp67acfmxazb4p****	The source image. • When you set `BaseImageType` to IMAGE, set BaseImage to the ID of a custom image. • When you set `BaseImageType` to IMAGE_FAMILY, set BaseImage to the name of an image family.

Parameter	Type	Required	Example	Description
Name	String	No	testImagePipeline	The name of the image template. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), periods (.),and hyphens (-). **Note** If you do not specify the `Name` parameter, the return value of `ImagePipelineId` is used by default.
Description	String	No	This is description.	The description of the image template. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.
ImageName	String	No	testImageName	The name prefix of the image to be created. The prefix must be 2 to 64 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), periods (.),and hyphens (-). The system generates the final complete image name that consists of the prefix and the ID of the image build task (`ExecutionId`) in the format of `{ImageName}_{ExecutionId}`.
VSwitchId	String	No	vsw-bp67acfmxazb4p****	The ID of the vSwitch. If you do not specify this parameter, a virtual private cloud (VPC) and a vSwitch are created by default. Make sure that the VPC quota in your account is sufficient. For more information, see Limits.
InstanceType	String	No	ecs.g6.large	The instance type of the instance. You can call the DescribeInstanceTypes operation to query instance types. If you do not specify this parameter, an instance type that provides the fewest vCPUs and memory resources is automatically selected. This configuration is subject to resource availability of instance types. For example, the ecs.g6.large instance type is selected by default. If available ecs.g6.large resources are insufficient, the ecs.g6.xlarge instance type is selected.
SystemDiskSize	Integer	No	40	The size of the system disk of the intermediate instance. Unit: GiB. Valid values: 20 to 500. Default value: 40.
InternetMaxBandwidthOut	Integer	No	0	The size of the outbound public bandwidth for the intermediate instance. Unit: Mbit/s. Valid values: 0 to 100. Default value: 0.

Parameter	Type	Required	Example	Description
DeleteInstanceOnFailure	Boolean	No	true	Specifies whether to release the intermediate instance if the image cannot be created. Valid values: • true: releases the intermediate instance if the image cannot be created. • false: does not release the intermediate instance if the image cannot be created. Default value: true. **Note** If the intermediate instance cannot be started, the instance is released by default.
BuildContent	String	No	FROM IMAGE:m-bp67acfmxazb4p****	The content of the image template. The content cannot be greater than 16 KB in size, and can contain up to 127 commands. For more information about the commands that are supported, see the "Description" section in this topic.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Tag.N.Key	String	No	TestKey	The key of tag N. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.
Tag.N.Value	String	No	TestValue	The value of tag N. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length. It cannot start with `acs:` or contain `http://` or `https://`.
AddAccount.N	Long	No	1234567890	The ID of Alibaba Cloud account N to which to share the created image. Valid values of N: 1 to 20.
ToRegionId.N	String	No	cn-hangzhou	The ID of region N to which to distribute the created image. Valid values of N: 1 to 20. If you do not specify this parameter, the image is created only in the current region by default.

Response parameters

Parameter	Type	Example	Description
ImagePipelineId	String	ip-2ze5tsl5bp6nf2b3****	The ID of the image template.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateImagePipeline
&BaseImage=m-bp67acfmxazb4p****
&BaseImageType=IMAGE
&RegionId=cn-hangzhou
&Name=testImagePipeline
&BuildContent=FROM IMAGE:m-bp67acfmxazb4p****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateImagePipelineResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <ImagePipelineId>ip-2ze5tsl5bp6nf2b3****</ImagePipelineId>
</CreateImagePipelineResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "ImagePipelineId" : "ip-2ze5tsl5bp6nf2b3****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidImage.NotFound	%s	The error message returned because the specified parameter is invalid. For more information, see the return value of the %s placeholder in the error message.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.

For a list of error codes, visit the API Error Center.

15.3. DescribeImageComponents

Queries the details of one or more image components.

Description

You can use `NextToken` to configure the query token. Set the value to the `NextToken` value that is returned in the last call to the DescribeImageComponents operation. Then, use `MaxResults` to specify the maximum number of entries to return on each page.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeImageComponents	The operation that you want to perform. Set the value to **DescribeImageComponents**.
RegionId	String	Yes	cn-hangzhou	The region ID of the image component. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group.
Name	String	No	testComponent	The name of the image component. You must specify an exact name to search for the image component.
NextToken	String	No	AAAAAdDWBF2****	The query token. Set the value to the `NextToken` value returned in the last call to the DescribeImageComponents operation. Leave this parameter empty the first time you call this operation.
MaxResults	Integer	No	50	The maximum number of entries to return on each page. Valid values: 1 to 500. Default value: 50.
Owner	String	No	SELF	The type of the image component. Valid values: • SELF: the custom component that you created. • ALIYUN: the system component provided by Alibaba Cloud.
Tag.N.Key	String	No	TestKey	The key of tag N. Valid values of N: 1 to 20.
Tag.N.Value	String	No	TestValue	The value of tag N. Valid values of N: 1 to 20.
ImageComponentId.N	String	No	ic-bp67acfmxazb4p****	The ID of image component N. Valid values of N: 1 to 20.

Response parameters

Parameter	Type	Example	Description
NextToken	String	AAAAAdDWBF2****	The query token returned in this call. For information about how to use this return value, see the "Description" section in this topic.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of returned image components.
MaxResults	Integer	50	The maximum number of entries returned per page.
ImageComponent	Array of ImageComponentSet		Details about the image components.
ImageComponentSet			
CreationTime	String	2020-11-24T06:00:00Z	The time when the image component was created.
Description	String	This is description.	The description of the image component.
SystemType	String	Linux	The operating system type supported by the image component.
ImageComponentId	String	ic-bp67acfmxazb4p****	The ID of the image component.
ComponentType	String	Build	The type of the image component.

Parameter	Type	Example	Description
ResourceGroupId	String	rg-bp67acfmxazb4p****	The ID of the resource group.
Name	String	testComponent	The name of the image component.
Content	String	RESTART	The content of the image component.
Owner	String	SELF	The type of the image component. Valid values: • SELF: the custom component that you created. • ALIYUN: the system component provided by Alibaba Cloud.
Tags	Array of Tag		The tag key-value pairs of the image component.
Tag			
TagValue	String	TestValue	The value of the tag.
TagKey	String	TestKey	The key of the tag.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeImageComponents
&RegionId=cn-hangzhou
&ImageComponentId.1=ic-bp67acfmxazb4p****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeImageComponentsResponse>
    <TotalCount>1</TotalCount>
    <NextToken>AAAAAdDWBF2****</NextToken>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <ImageComponent>
        <ImageComponentSet>
            <ComponentType>Build</ComponentType>
            <Description>This is description.</Description>
            <ResourceGroupId>rg-bp67acfmxazb4p****</ResourceGroupId>
            <Owner>SELF</Owner>
            <Content>RESTART</Content>
            <CreationTime>2020-11-24T06:00:00Z</CreationTime>
            <SystemType>Linux</SystemType>
            <ImageComponentId>ic-bp67acfmxazb4p****</ImageComponentId>
            <Name>testComponent</Name>
        </ImageComponentSet>
        <ImageComponentSet>
            <Tags>
                <Tag>
                    <TagKey>TestKey</TagKey>
                    <TagValue>TestValue</TagValue>
                </Tag>
            </Tags>
        </ImageComponentSet>
    </ImageComponent>
    <MaxResults>50</MaxResults>
</DescribeImageComponentsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalCount" : 1,
  "NextToken" : "AAAAAdDWBF2****",
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "ImageComponent" : {
    "ImageComponentSet" : [ {
      "ComponentType" : "Build",
      "Description" : "This is description.",
      "ResourceGroupId" : "rg-bp67acfmxazb4p****",
      "Owner" : "SELF",
      "Content" : "RESTART",
      "CreationTime" : "2020-11-24T06:00:00Z",
      "SystemType" : "Linux",
      "ImageComponentId" : "ic-bp67acfmxazb4p****",
      "Name" : "testComponent"
    }, {
      "Tags" : {
        "Tag" : [ {
          "TagKey" : "TestKey",
          "TagValue" : "TestValue"
        } ]
      }
    } ]
  },
  "MaxResults" : 50
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidImageComponentIdSize.ExceededMaxNumber	%s	The error message returned because the specified parameter is invalid. For more information, see the return value of the %s placeholder in the error message.

For a list of error codes, visit the API Error Center.

15.4. DescribeImagePipelines

Queries the details of one or more image templates.

Description

You can use `NextToken` to specify a query token. Set the NextToken value to the `NextToken` value returned in a previous call to the `DescribeImagePipelines` operation. Then, use `MaxResults` to specify the maximum number of entries to return on each page.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeImagePipelines	The operation that you want to perform. Set the value to DescribeImagePipelines.
RegionId	String	Yes	cn-hangzhou	The region ID of the image template. You can call the DescribeRegions operation to query the most recent region list.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the image template belongs.

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	TestKey	The key of tag N of the image template. Valid values of N: 1 to 20.
Tag.N.Value	String	No	TestValue	The value of tag N of the image template. Valid values of N: 1 to 20.
Name	String	No	testImagePipeline	The name of the image template.
NextToken	String	No	AAAAAdDWBF2****	The query token. Set the value to the `NextToken` value returned in a previous call to the DescribeImagePipelines operation. Leave this parameter empty the first time you call this operation.
MaxResults	Integer	No	50	The maximum number of entries to return on each page. Valid values: 1 to 500. Default value: 50.
ImagePipelineId.N	RepeatList	No	ip-2ze5tsl5bp6nf2b3****	The ID of image template N. Valid values of N: 1 to 20.

Response parameters

Parameter	Type	Example	Description
ImagePipeline	Array of ImagePipelineSet		Details about the image templates.
ImagePipelineSet			
AddAccounts	List	["1234567890"]	The IDs of Alibaba Cloud accounts to which the image was shared.
BaseImage	String	m-bp67acfmxazb4p****	The source image. • When `BaseImageType` is set to IMAGE, the value of this parameter is the ID of a custom image. • When `BaseImageType` is set to IMAGE_FAMILY, the value of this parameter is the name of an image family.
BaseImageType	String	IMAGE	The type of the source image. Valid values: • IMAGE: custom image • IMAGE_FAMILY: image family
BuildContent	String	FROM IMAGE:m-bp67acfmxazb4p****	The content of the image template.
CreationTime	String	2020-11-24T06:00:00Z	The time when the image template was created.
DeleteInstanceOnFailure	Boolean	true	Indicates whether the intermediate instance was released when the image failed to be created.
Description	String	This is description.	The description of the image template.
ImageName	String	testImageName	The name prefix of the created image.
ImagePipelineId	String	ip-2ze5tsl5bp6nf2b3****	The ID of the image template.
InstanceType	String	ecs.g6.large	The instance type of the intermediate instance.

Parameter	Type	Example	Description
InternetMaxBandwidthOut	Integer	0	The size of the outbound public bandwidth for the intermediate instance. Unit: Mbit/s.
Name	String	testImagePipeline	The name of the image template.
ResourceGroupId	String	rg-bp67acfmxazb4p****	The ID of the resource group to which the image template belongs.
SystemDiskSize	Integer	40	The system disk size of the intermediate instance. Unit: GiB.
Tags	Array of Tag		The list of tag key-value pairs.
Tag			
TagKey	String	TestKey	The tag key of the image template.
TagValue	String	TestValue	The tag value of the image template.
ToRegionIds	List	["cn-hangzhou"]	The IDs of regions to which to distribute the created image.
VSwitchId	String	vsw-bp67acfmxazb4p****	The ID of the vSwitch.
MaxResults	Integer	50	The maximum number of entries returned per page.
NextToken	String	AAAAAdDWBF2****	The query token returned in this call. For information about how to use this return value, see the "Description" section in this topic.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of returned image templates.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeImagePipelines
&RegionId=cn-hangzhou
&ImagePipelineId.1=ip-2ze5tsl5bp6nf2b3****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateDiskResponse>
      <TotalCount>1</TotalCount>
      <NextToken>AAAAAdDWBF2****</NextToken>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
      <MaxResults>50</MaxResults>
      <ImagePipeline>
            <ImagePipelineSet>
                  <BaseImageType>IMAGE</BaseImageType>
                  <Description>This is description.</Description>
                  <ResourceGroupId>rg-bp67acfmxazb4p****</ResourceGroupId>
                  <SystemDiskSize>40</SystemDiskSize>
                  <ImagePipelineId>ip-2ze5tsl5bp6nf2b3****</ImagePipelineId>
                  <VSwitchId>vsw-bp67acfmxazb4p****</VSwitchId>
                  <Name>testImagePipeline</Name>
                  <DeleteInstanceOnFailure>true</DeleteInstanceOnFailure>
                  <ImageName>testImageName</ImageName>
                  <InternetMaxBandwidthOut>0</InternetMaxBandwidthOut>
                  <CreationTime>2020-11-24T06:00:00Z</CreationTime>
                  <InstanceType>ecs.g6.large</InstanceType>
                  <BuildContent>FROM IMAGE:m-bp67acfmxazb4p****</BuildContent>
                  <BaseImage>m-bp67acfmxazb4p****</BaseImage>
            </ImagePipelineSet>
            <ImagePipelineSet>
                  <Tags>
                        <Tag>
                              <TagKey>TestKey</TagKey>
                              <TagValue>TestValue</TagValue>
                        </Tag>
                  </Tags>
            </ImagePipelineSet>
            <ImagePipelineSet>
                  <AddAccounts>
                        <AddAccount>["1234567890"]</AddAccount>
                  </AddAccounts>
                  <ToRegionIds>
                        <ToRegionId>["cn-hangzhou"]</ToRegionId>
                  </ToRegionIds>
            </ImagePipelineSet>
      </ImagePipeline>
</CreateDiskResponse>
```

`JSON` format

```
{
    "TotalCount": "1",
    "NextToken": "AAAAAdDWBF2****",
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
    "MaxResults": "50",
    "ImagePipeline": {
        "ImagePipelineSet": [
            {
                "BaseImageType": "IMAGE",
                "Description": "This is description.",
                "ResourceGroupId": "rg-bp67acfmxazb4p****",
                "SystemDiskSize": "40",
                "ImagePipelineId": "ip-2ze5tsl5bp6nf2b3****",
                "VSwitchId": "vsw-bp67acfmxazb4p****",
                "Name": "testImagePipeline",
                "DeleteInstanceOnFailure": "true",
                "ImageName": "testImageName",
                "InternetMaxBandwidthOut": "0",
                "CreationTime": "2020-11-24T06:00:00Z",
                "InstanceType": "ecs.g6.large",
                "BuildContent": "FROM IMAGE:m-bp67acfmxazb4p****",
                "BaseImage": "m-bp67acfmxazb4p****"
            },
            {
                "Tags": {
                    "Tag": [
                        {
                            "TagKey": "TestKey",
                            "TagValue": "TestValue"
                        }
                    ]
                }
            },
            {
                "AddAccounts": {
                    "AddAccount": "[\"1234567890\"]"
                },
                "ToRegionIds": {
                    "ToRegionId": "[\"cn-hangzhou\"]"
                }
            }
        ]
    }
}
```


Error codes

HTTP status code	Error code	Error message	Description
400	InvalidImagePipelineIdSize.ExceededMaxNumber	%s	The error message returned because the specified ImagePipelineId.N parameter is invalid. Valid values of N: 1 to 20.

For a list of error codes, visit the API Error Center.

15.5. DeleteImageComponent

You can call this operation to delete an image component.

Description

Only custom image components that you created can be deleted.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteImageComponent	The operation that you want to perform. Set the value to DeleteImageComponent.
ImageComponentId	String	Yes	ic-bp67acfmxazb4p****	The ID of the image component to be deleted.
RegionId	String	Yes	cn-hangzhou	The region ID of the image component. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteImageComponent
&ImageComponentId=ic-bp67acfmxazb4p****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteImageComponentResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DeleteImageComponentResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

For a list of error codes, visit the API Error Center.

15.6. DeleteImagePipeline

You can call this operation to delete an image template.

Description

If an image build task based on the image template is in the BUILDING, DISTRIBUTING, RELEASING, or CANCELLING state, you cannot delete the template. You can delete the template only when the image build task is in the SUCCESS, FAILED, or CANCELLED state. You can call the DescribeImagePipelineExecutions operation to query the details of an image build task.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteImagePipeline	The operation that you want to perform. Set the value to DeleteImagePipeline.

Parameter	Type	Required	Example	Description
ImagePipelineId	String	Yes	ip-2ze5tsl5bp6nf2b3****	The ID of the image template.
RegionId	String	Yes	cn-hangzhou	The region ID of the image template. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteImagePipeline
&ImagePipelineId=ip-2ze5tsl5bp6nf2b3****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteImagePipelineResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DeleteImagePipelineResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

For a list of error codes, visit the API Error Center.

15.7. StartImagePipelineExecution

You can call this operation to perform an image build task based on an image template.

Description

- After an image template is created, you need to call the StartImagePipelineExecution operation to perform an image build task. The system builds, distributes, and shares an image based on the parameters configured in the image template.
- You can perform only one image build task at a time based on a single image template. You can call the CancelImagePipelineExecution operation multiple times to cancel multiple image build tasks at the same time. If you cancel some image build tasks, the other image build tasks are not affected.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	StartImagePipelineExecution	The operation that you want to perform. Set the value to StartImagePipelineExecution.
ImagePipelineId	String	Yes	ip-2ze5tsl5bp6nf2b3****	The ID of the image template.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the image build task. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How can I ensure idempotence?

Response parameters

Parameter	Type	Example	Description
ExecutionId	String	exec-5fb8facb8ed7427c****	The ID of the image build task.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=StartImagePipelineExecution
&ImagePipelineId=ip-2ze5tsl5bp6nf2b3****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<StartImagePipelineExecutionResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
      <ExecutionId>exec-5fb8facb8ed7427c****</ExecutionId>
</StartImagePipelineExecutionResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
    "ExecutionId": "exec-5fb8facb8ed7427c****"
}
```

Error codes

For a list of error codes, visit the API Error Center.

15.8. DescribeImagePipelineExecutions

You can call this operation to query the details of an image build task.

Description

- The image template specified by the `ImagePipelineId` parameter cannot be a deleted image template. The corresponding build task is deleted when an image template is deleted.
- You must set the `ImagePipelineId` parameter to specify the ID of an image template or the `ExecutionId` parameter to specify the ID of a build task.
- You can configure the query token by using the `NextToken` parameter. Set the value of NextToken to the `NextToken` value that was returned when you last called the `DescribeImagePipelineExecutions` operation. Then, use the `MaxResults` parameter to configure the maximum number of entries to return on each page to query the details of the image build task.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeImagePipelineExecutions	The operation that you want to perform. Set the value to DescribeImagePipelineExecutions.
RegionId	String	Yes	cn-hangzhou	The region ID of the image build task. You can call the DescribeRegions operation to query the most recent region list.
ImagePipelineId	String	No	ip-2ze5tsl5bp6nf2b3****	The ID of the image template.
ExecutionId	String	No	exec-5fb8facb8ed7427c****	The ID of the image build task.
Status	String	No	BUILDING	The status of the image build task. You can specify multiple values at the same time. Separate the values with commas (,). Example format: `BUILDING,DISTRIBUTING`. Valid values: • BUILDING: The image is being built. • DISTRIBUTING: The image is being distributed. • RELEASING: The image is being recycled. • SUCCESS: The image is built. • FAILED: The image fails to be built. • CANCELLING: The image build task is being canceled. • CANCELLED: The image build task is canceled. **Note** You cannot query the image build tasks in all status by leaving this parameter empty.
NextToken	String	No	AAAAAdDWBF2****	The query token. Set the value to the `NextToken` value that was returned when you last called the DescribeImagePipelineExecutions operation. Leave this parameter empty when you call this operation for the first time.
MaxResults	Integer	No	50	The maximum number of entries to return on each page. Valid values: 1 to 500. Default value: 50.

Response parameters

Parameter	Type	Example	Description
ImagePipelineExecution	Array of ImagePipelineExecutionSet		Details of the image build task.
ImagePipelineExecutionSet			
CreationTime	String	2020-11-24T06:00:00Z	The time when the image build task was created.
ExecutionId	String	exec-5fb8facb8ed7427c****	The ID of the image build task.
ImageId	String	m-bp67acfmxazb4p****	The ID of the image to be created by using the image build task.

Parameter	Type	Example	Description
ImagePipelineId	String	ip-2ze5tsl5bp6nf2b3****	The ID of the image template.
Message	String	Create transition vpc "vpc-2ze70rc7093j9idu6****" success!	The execution result of the image build task.
ModifiedTime	String	2020-11-25T06:00:00Z	The last time when the image build task was updated.
ResourceGroupId	String	rg-bp67acfmxazb4p****	The ID of the resource group.
Status	String	BUILDING	The status of the image build task. Valid values: • BUILDING: The image was being built. • DISTRIBUTING: The image was being distributed. • RELEASING: The image was being recycled. • SUCCESS: The image was built. • FAILED: The image failed to be built. • CANCELLING: The image build task was being canceled. • CANCELLED: The image build task was cancelled.
Tags	Array of Tag		The list of tag key-value pairs.
Tag			
TagKey	String	TestKey	The key of the tag.
TagValue	String	TestValue	The value of the tag.
MaxResults	Integer	50	The maximum number of entries returned per page.
NextToken	String	AAAAAdDWBF2****	The query token returned in this call. For information about how to use this return value, see the Description section in this topic.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of returned image components.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeImagePipelineExecutions
&RegionId=cn-hangzhou
&ExecutionId=exec-5fb8facb8ed7427c****
&Status=BUILDING
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeImagePipelineExecutionsResponse>
      <TotalCount>1</TotalCount>
      <NextToken>AAAAAdDWBF2****</NextToken>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
      <MaxResults>50</MaxResults>
      <ImagePipelineExecution>
            <ImagePipelineExecutionSet>
                  <Status>BUILDING</Status>
                  <ResourceGroupId>rg-bp67acfmxazb4p****</ResourceGroupId>
                  <Message>Create transition vpc "vpc-2ze70rc7093j9idu6****" success!</Message>
                  <ModifiedTime>2020-11-25T06:00:00Z</ModifiedTime>
                  <ImagePipelineId>ip-2ze5tsl5bp6nf2b3****</ImagePipelineId>
                  <ImageId>m-bp67acfmxazb4p****</ImageId>
                  <CreationTime>2020-11-24T06:00:00Z</CreationTime>
                  <ExecutionId>exec-5fb8facb8ed7427c****</ExecutionId>
            </ImagePipelineExecutionSet>
            <ImagePipelineExecutionSet>
                  <Tags>
                        <Tag>
                              <TagKey>TestKey</TagKey>
                              <TagValue>TestValue</TagValue>
                        </Tag>
                  </Tags>
            </ImagePipelineExecutionSet>
      </ImagePipelineExecution>
</DescribeImagePipelineExecutionsResponse>
```

`JSON` format

```
{
    "TotalCount": "1",
    "NextToken": "AAAAAdDWBF2****",
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
    "MaxResults": "50",
    "ImagePipelineExecution": {
        "ImagePipelineExecutionSet": [
            {
                "Status": "BUILDING",
                "ResourceGroupId": "rg-bp67acfmxazb4p****",
                "Message": "Create transition vpc \"vpc-2ze70rc7093j9idu6****\" success!",
                "ModifiedTime": "2020-11-25T06:00:00Z",
                "ImagePipelineId": "ip-2ze5tsl5bp6nf2b3****",
                "ImageId": "m-bp67acfmxazb4p****",
                "CreationTime": "2020-11-24T06:00:00Z",
                "ExecutionId": "exec-5fb8facb8ed7427c****"
            },
            {
                "Tags": {
                    "Tag": [
                        {
                            "TagKey": "TestKey",
                            "TagValue": "TestValue"
                        }
                    ]
                }
            }
        ]
    }
}
```

Error codes

For a list of error codes, visit the API Error Center.

15.9. CancelImagePipelineExecution

You can call this operation to cancel an image build task.

Description

Before you call this operation, make sure that the image build task to be canceled is in the BUILDING, DISTRIBUTING, or RELEASING state.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CancelImagePipelineExecution	The operation that you want to perform. Set the value to CancelImagePipelineExecution.
ExecutionId	String	Yes	exec-5fb8facb8ed7427c****	The ID of the image build task.
RegionId	String	Yes	cn-hangzhou	The region ID of the image build task. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CancelImagePipelineExecution
&ExecutionId=exec-5fb8facb8ed7427c****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CancelImagePipelineExecutionResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</CancelImagePipelineExecutionResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

For a list of error codes, visit the API Error Center.

16.Snapshots

16.1. CreateSnapshot

Creates a snapshot for a disk.

Description

The local snapshot feature is replaced by the instant access feature.

- If you have used the local snapshot feature before December 14, 2020, you can use the `Category` or `InstantAccess` parameter normally. Take note of the following items:
  - The `Category` and `InstantAccess` parameters cannot be specified at the same time.
  - If neither of the `Category` and `InstantAccess` parameters is specified, normal snapshots are created.
- If you have not used the local snapshot feature before December 14, 2020, you can use the `InstantAccess` parameter and cannot use the `Category` parameter.

In the following scenarios, you cannot create snapshots for a disk:

- The number of manual snapshots of the disk has reached 256.
- A snapshot is being created for the disk.
- The Elastic Compute Service (ECS) instance to which the disk is attached has never been started.
- The instance to which the disk is attached is not in the **Stopped** (`Stopped`) or **Running** (`Running`) state.
- If the response contains `{"OperationLocks": {"LockReason" : "security"}}` when you query the information of the instance, the instance is locked for security reasons and all operations are prohibited on it.

When you create a snapshot, take note of the following items:

- If a snapshot is being created, you cannot use this snapshot to create a custom image by calling the CreateImage operation.
- When a snapshot is being created for a disk that is attached to an instance, do not change the instance state.
- You can create snapshots for a disk that is in the **Expired** (`Expired`) state. If the release time scheduled for a disk arrives when a snapshot is being created for the disk, the snapshot is in the **Creating** (`Creating`) state and is deleted when the disk is released.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateSnapshot	The operation that you want to perform. Set the value to **CreateSnapshot**.
DiskId	String	Yes	d-bp1s5fnvk4gn2tws0****	The ID of the disk.
SnapshotName	String	No	testSnapshotName	The name of the snapshot. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://` . It can contain letters, digits, colons (:), underscores (_), and hyphens (-). It cannot start with `auto` because snapshots whose names start with auto are recognized as automatic snapshots.
Description	String	No	testDescription	The description of the snapshot. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://` . This parameter is empty by default.

Parameter	Type	Required	Example	Description
RetentionDays	Integer	No	30	The retention period of the snapshot. Valid values: 1 to 65536. Unit: days. The snapshot is automatically released when the retention period expires. This parameter is empty by default, which indicates that the snapshot is not automatically released.
Category	String	No	Standard	The type of the snapshot. Valid values: • Standard: normal snapshot • Flash: local snapshot **Note** This parameter will be removed in the future. We recommend that you use the `InstantAccess` parameter to ensure future compatibility. This parameter and the `InstantAccess` parameter cannot be specified at the same time. For more information, see the "Description" section in this topic.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the snapshot.
InstantAccess	Boolean	No	false	Specifies whether to enable the instant access feature. Valid values: • true: enables the instant access feature. This feature can be enabled only for enhanced SSDs (ESSDs). **Note** After the instant access feature is enabled, the snapshot can be used to roll back disks or create disks across zones even when the snapshot is being created. This feature ensures instant access to a new snapshot for an ESSD regardless of the ESSD size. • false: does not enable the instant access feature. If InstantAccess is set to false, a normal snapshot is created. Default value: false. **Note** This parameter and the `Category` parameter cannot be specified at the same time. For more information, see the "Description" section in this topic.
InstantAccessRetentionDays	Integer	No	1	The validity period of the instant access feature. When the validity period ends, the feature is disabled and the instant access (IA) snapshot is automatically released. This parameter takes effect only when `InstantAccess` is set to true. Unit: days. Valid values: 1 to 65535. By default, the value of this parameter is the same as that of `RetentionDays`.

Parameter	Type	Required	Example	Description
Tag.N.key	String	No	null	The key of tag N to add to the snapshot. **Note** This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N to add to the snapshot. Valid values of N: 1 to 20. The tag key cannot be an empty string. The tag key can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	TestValue	The value of tag N to add to the snapshot. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with acs: or contain http:// or https://.
Tag.N.value	String	No	null	The value of tag N to add to the snapshot. **Note** This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.

Response parameters

Parameter	Type	Example	Description
SnapshotId	String	s-bp17441ohwka0yuh****	The ID of the snapshot.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateSnapshot
&DiskId=d-bp1s5fnvk4gn2tws0****
&SnapshotName=testSnapshotName
&Description=testDescription
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&Tag.1.Key=TestKey
&Tag.1.Value=TestValue
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateSnapshotResponse>
        <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
        <SnapshotId>s-bp17441ohwka0yuh****</SnapshotId>
</CreateSnapshotResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "C8B26B44-0189-443E-9816-D951F59623A9",
  "SnapshotId" : "s-bp17441ohwka0yuh****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidParameter.KMSKeyId.NotFound	The specified KMSKeyId does not exist.	The error message returned because the specified KMSKeyId parameter does not exist.
400	InvalidSnapshotName.Malformed	The specified SnapshotName is wrongly formed.	The error message returned because the specified SnapshotName parameter is invalid.
400	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	DiskCategory.OperationNotSupported	The operation is not supported to the specified disk due to its disk category	The error message returned because the specified disk category does not support this operation.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	InvalidRetentionDays.Malformed	The specified RetentionDays is not valid.	The error message returned because the specified RetentionDays parameter is invalid.
403	Throttling	Request was denied due to user flow control.	The error message returned because your request is throttled. Try again later.
403	IncorrectDiskStatus.CreatingSnapshot	A previous snapshot creation is in process.	The error message returned because another snapshot is being created for the disk. Wait until the snapshot is created and try again.
403	InstanceLockedForSecurity	The disk attached instance is locked due to security.	The error message returned because the instance to which the disk is attached is locked for security reasons.
403	IncorrectDiskStatus.NeverAttached	The specified disk has never been attached to any instance.	The error message returned because the removable disk has never been attached to instances and its data remains unchanged.
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The error message returned because the maximum number of snapshots has been reached. To create new snapshots, delete snapshots that are no longer needed.
403	IncorrectDiskStatus.NeverUsed	The specified disk has never been used after creating.	The error message returned because the specified disk has never been used and its data remains unchanged.
403	CreateSnapshot.Failed	The process of creating snapshot is failed.	The error message returned because the snapshot cannot be created.
403	DiskInArrears	The specified operation is denied as your disk has expired.	The error message returned because the disk has expired due to an overdue payment.
403	DiskId.ValueNotSupported	The specified parameter diskid is not supported.	The error message returned because the category of the specified Elastic Block Storage (EBS) device does not support this operation.

HTTP status code	Error code	Error message	Description
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is usable and you have no overdue payments for it.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.
403	IncorrectVolumeStatus	The current volume status does not support this operation.	The error message returned because the operation is not supported while the Shared Block Storage device is in the current state.
403	IdempotentParameterMismatch	The specified clientToken is used.	The error message returned because the specified client token is already in use.
403	IncorrectDiskType.NotSupport	The specified device type is not supported.	The error message returned because the specified disk type does not support the operation.
403	IncorrectDiskStatus.Transferring	The specified device is transferring, you can retry after the process is finished.	The error message returned because the specified disk is being migrated. Wait until the disk is migrated and try again.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a Key Management Service (KMS) key ID is specified for a disk. You can call the DescribeKey operation of KMS to query the information of the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access KMS resources.
403	IdempotentProcessing	The previous idempotent request(s) is still processing.	The error message returned because a previous idempotent request is being processed. Try again later.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit. %s is a variable. An error message is dynamically returned based on call conditions.
403	InvalidSnapshotCategory.Malformed	The specified Category is not valid.	The error message returned because the specified Category parameter is invalid.
403	IncorrectDiskStatus.Invalid	The specified disk status invalid, restart instance and try again.	The error message returned because the state of the specified disk is invalid. Restart the instance and try again.
404	InvalidDiskId.NotFound	The specified DiskId does not exist.	The error message returned because the specified disk does not exist. Check whether the disk ID is correct.
404	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance ID does not exist. Check whether the instance ID is correct.
404	InvalidVolumeId.NotFound	The specified volume does not exist.	The error message returned because the specified Shared Block Storage device does not exist. Check whether the Shared Block Storage device ID is correct.

HTTP status code	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

16.2. CopySnapshot

You can call this operation to copy a normal snapshot from one region to another.

Description

When you call this operation, take note of the following items:

- New snapshots, which are the copies of source snapshots, cannot be used to roll back the disks for which the source snapshots were created.
- Encrypted snapshots cannot be copied.
- Local snapshots cannot be copied.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CopySnapshot	The operation that you want to perform. Set the value to CopySnapshot.
SnapshotId	String	Yes	s-bp67acfmxazb4p****	The ID of the source snapshot.
RegionId	String	Yes	cn-chengdu	The region ID of the source snapshot. You can call the DescribeRegions operation to query the most recent region list.
DestinationRegionId	String	Yes	us-east-1	The region ID of the new snapshot.
DestinationSnapshotName	String	Yes	CopySnapshotDemo	The name of the new snapshot. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), periods (.), and hyphens (-). It must start with a letter and cannot start with http:// or https://. This parameter is empty by default.
DestinationSnapshotDescription	String	Yes	CopySnapshotDemo	The description of the new snapshot. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.
RetentionDays	Integer	No	60	The retention period of the new snapshot. Unit: days. The new snapshot will be automatically released when it expires. Valid values: 1 to 65536. This parameter is empty by default, which indicates that the snapshot will not be automatically released.

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	TestKey	The key of tag N to be bound to the new snapshot. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.
Tag.N.Value	String	No	TestValue	The value of tag N to be bound to the new snapshot. The tag value can be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.

Response parameters

Parameter	Type	Example	Description
RequestId	String	C8B26B44-0189-443E-9816-D951F59623A9	The ID of the request.
SnapshotId	String	s-bp17441ohwka0yui****	The ID of the new snapshot.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CopySnapshot
&DestinationRegionId=us-east-1
&RegionId=cn-chengdu
&SnapshotId=s-bp67acfmxazb4p****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CopySnapshotResponse>
            <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
            <SnapshotId>s-bp17441ohwka0yuhi****</SnapshotId>
</CopySnapshotResponse>
```

`JSON` format

```
{
        "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
        "SnapshotId": "s-bp17441ohwka0yui****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidSnapshotId.NotFound	The specified snapshot is not exists.	The error message returned because the specified SnapshotId parameter does not exist.
403	InvalidUser.NotInWhiteList	The user is not in the white list of copying snapshot.	The error message returned because you are not authorized to perform this operation.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.

HTTP status code	Error code	Error message	Description
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	InvalidSnapshotId.NotReady	The specified snapshot has not completed yet.	The error message returned because the specified snapshot is being created.

For a list of error codes, visit the API Error Center.

16.3. DescribeSnapshots

Queries the details of one or more snapshots of an Elastic Compute Service (ECS) instance or a disk.

Description

You can specify multiple request parameters such as `InstanceId`, `DiskId`, and `SnapshotIds` to be queried. Specified parameters have logical AND relations. Only the specified parameters are included in the filter conditions.

When you use Alibaba Cloud CLI to call an API operation, you must specify request parameter values of different data types in the required formats. For more information, see CLI parameter formats.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSnapshots	The operation that you want to perform. Set the value to **DescribeSnapshots**.
InstanceId	String	No	i-bp67acfmxazb4p****	The ID of the instance.
DiskId	String	No	d-bp67acfmxazb4p****	The ID of the disk.
SnapshotLinkId	String	No	sp-bp67acfmxazb4p****	The ID of the snapshot chain.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
SnapshotIds	String	No	["s-bp67acfmxazb4p****", "s-bp67acfmxazb5p****", ... "s-bp67acfmxazb6p****"]	The IDs of snapshots. The value can be a JSON array that consists of up to 100 snapshot IDs. Separate multiple snapshot IDs with commas (,).
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.

Parameter	Type	Required	Example	Description
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the query. Obtain the NextToken value from the response of the previous request.
MaxResults	Integer	No	10	The maximum number of entries to return on each page. Maximum value: 100. Default value: 10.
SnapshotName	String	No	testSnapshotName	The name of the snapshot.
Status	String	No	all	The status of the snapshot. Default value: all. Valid values: • progressing: The snapshot is being created. • accomplished: The snapshot is created. • failed: The snapshot fails to be created. • all: all snapshot statuses.
SnapshotType	String	No	all	The type of the snapshot. Default value: all. Valid values: • auto: automatic snapshot • user: manual snapshot • all: all snapshot types
Filter.1.Key	String	No	CreationStartTime	The key of filter 1 used to query resources. Set the value to `CreationStartTime`. You can set both `Filter.1.Key` and `Filter.1.Value` to specify the beginning of the time range in which to query the created resources.
Filter.2.Key	String	No	CreationEndTime	The key of filter 2 to query resources. Set the value to `CreationEndTime`. You can set both `Filter.2.Key` and `Filter.2.Value` to specify the end of the time range in which to query the created resources.
Filter.1.Value	String	No	2019-12-13T17:00Z	The value of filter 1 used to query resources. When you specify this parameter, you must also specify `Filter.1.Key`. Specify the time in the `yyyy-MM-ddTHH:mmZ` format. The time must be in UTC.
Filter.2.Value	String	No	2019-12-13T22:00Z	The value of filter 2 used to query resources. When you specify this parameter, you must also specify `Filter.2.Key`. Specify the time in the `yyyy-MM-ddTHH:mmZ` format. The time must be in UTC.
Usage	String	No	none	Specifies whether the snapshot has been used to create images or disks. Valid values: • image: The snapshot has been used to create custom images. • disk: The snapshot has been used to create disks. • image_disk: The snapshot has been used to create custom images and data disks. • none: The snapshot has not been used to create custom images or disks.

Parameter	Type	Required	Example	Description
SourceDiskType	String	No	Data	The type of the source disk for which the snapshot was created. Valid values: • System: system disk • Data: data disk Note These values are case-insensitive.
Encrypted	Boolean	No	false	Specifies whether the snapshot is encrypted. Default value: false.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the snapshot belongs. If this parameter is specified to query resources, up to 1,000 resources that belong to the specified resource group can be displayed in the response.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether Resource Access Management (RAM) users are authorized, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the DryRunOperation error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned, and the request is made.
KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d3fb40****	The ID of the Key Management Service (KMS) key used by the data disk.
Category	String	No	Standard	The category of the snapshot. Valid values: • Standard: normal snapshot • Flash: local snapshot The local snapshot feature is replaced by the instant access feature. When you specify this parameter, take note of the following items: • If you have used local snapshots before December 14, 2020, you can use this parameter. • If you have not used local snapshots before December 14, 2020, you cannot use this parameter. Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N of the snapshot. Valid values of N: 1 to 20. If a single tag is specified to query resources, up to 1,000 resources to which this tag is added can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources to which all these tags are added can be displayed in the response. To query more than 1,000 resources to which specified tags are added, call the ListTagResources operation.
Tag.N.Value	String	No	TestValue	The value of tag N of the snapshot. Valid values of N: 1 to 20.

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query.
PageSize	Integer	10	The number of entries returned per page.
PageNumber	Integer	1	The page number of the returned page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of snapshots.
Snapshots	Array of Snapshot		Details about the snapshots.
Snapshot			
Status	String	accomplished	The status of the snapshot. Valid values: • progressing • accomplished • failed
CreationTime	String	2020-08-20T14:52:28Z	The time when the snapshot was created. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
Progress	String	100%	The progress of the snapshot creation task. Unit: percent (%).
InstantAccess	Boolean	false	Indicates whether the instant access feature was enabled. Valid values: • true: The instant access feature was enabled. This feature can be enabled only for enhanced SSDs (ESSDs). • false: The instant access feature was disabled. The snapshot is a normal snapshot for which the instant access feature was disabled.
RemainTime	Integer	38	The remaining time required to create the snapshot. Unit: seconds.
SourceDiskSize	String	40	The capacity of the source disk. Unit: GiB.
RetentionDays	Integer	30	The number of days that an automatic snapshot can be retained.
SourceDiskType	String	system	The type of the source disk. Valid values: • system • data
SourceStorageType	String	disk	The type of the source disk for which the snapshot was created. **Note** This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.

Parameter	Type	Example	Description
Usage	String	image	Indicates whether the snapshot has been used to create images or disks. Valid values: • image • disk • image_disk • none
LastModifiedTime	String	2020-08-25T14:18:09Z	The time when the snapshot was last changed. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
Encrypted	Boolean	false	Indicates whether the snapshot was encrypted.
SnapshotType	String	all	The type of the snapshot. Valid values: • auto or timer: automatic snapshot • user: manual snapshot • all: all snapshot types
SourceDiskId	String	d-bp67acfmxazb4ph****	The ID of the source disk. This parameter is retained even after the source disk of the snapshot is released.
SnapshotName	String	testSnapshotName	The name of the snapshot. This parameter is returned only if a snapshot name was specified when the snapshot was created.
InstantAccessRetentionDays	Integer	30	Indicates the duration of the instant access feature. The instant access feature is automatically disabled when the specified duration expires. By default, the value of this parameter is the same as that of `RetentionDays`.
Description	String	testDescription	The description of the snapshot.
SnapshotId	String	s-bp67acfmxazb4p****	The ID of the snapshot.
ResourceGroupId	String	rg-bp67acfmxazb4p****	The ID of the resource group to which the snapshot belongs.
Category	String	standard	The category of the snapshot. **Note** This parameter will be removed in the future. We recommend that you use the `InstantAccess` parameter to ensure future compatibility.
KMSKeyId	String	0e478b7a-4262-4802-b8cb-00d3fb40****	The ID of the KMS key used by the data disk.
SnapshotSN	String	64472-116742336-61976****	The serial number of the snapshot.
ProductCode	String	jxsc000****	The product code of the Alibaba Cloud Marketplace image.
Tags	Array of Tag		The tags of the snapshot.
Tag			

Parameter	Type	Example	Description
TagValue	String	TestValue	The tag value of the snapshot.
TagKey	String	TestKey	The tag key of the snapshot.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSnapshots
&RegionId=cn-hangzhou
&InstanceId=i-bp67acfmxazb4p****
&DiskId=d-bp67acfmxazb4p****
&SnapshotIds=["s-bp67acfmxazb4p****", "s-bp67acfmxazb5p****", ... "s-bp67acfmxazb6p****"]
&PageNumber=1
&PageSize=10
&SnapshotName=testSnapshotName
&Status=all
&SnapshotType=all
&Usage=none
&SourceDiskType=Data
&Tag.1.Key=TestKey
&Tag.1.Value=TestValue
&Encrypted=false
&DryRun=false
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeSnapshotsResponse>
    <TotalCount>1</TotalCount>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <PageSize>10</PageSize>
    <NextToken>caeba0bbb2be03f84eb48b699f0a4883</NextToken>
    <PageNumber>1</PageNumber>
    <Snapshots>
        <Snapshot>
            <Status>accomplished</Status>
            <InstantAccess>false</InstantAccess>
            <Progress>100%</Progress>
            <Usage>image</Usage>
            <Description>testDescription</Description>
            <Category>standard</Category>
            <KMSKeyId>0e478b7a-4262-4802-b8cb-00d3fb40****</KMSKeyId>
            <ProductCode>jxsc000****</ProductCode>
            <Encrypted>false</Encrypted>
            <SnapshotName>testSnapshotName</SnapshotName>
            <SourceDiskId>d-bp67acfmxazb4ph****</SourceDiskId>
            <SourceStorageType>disk</SourceStorageType>
            <SnapshotId>s-bp67acfmxazb4p****</SnapshotId>
            <SnapshotSN>64472-116742336-61976****</SnapshotSN>
            <SourceDiskSize>40</SourceDiskSize>
            <CreationTime>2020-08-20T14:52:28Z</CreationTime>
            <LastModifiedTime>2020-08-25T14:18:09Z</LastModifiedTime>
            <SnapshotType>all</SnapshotType>
            <SourceDiskType>system</SourceDiskType>
            <Tags>
            </Tags>
        </Snapshot>
    </Snapshots>
</DescribeSnapshotsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalCount" : 1,
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "PageSize" : 10,
  "NextToken" : "caeba0bbb2be03f84eb48b699f0a4883",
  "PageNumber" : 1,
  "Snapshots" : {
    "Snapshot" : [ {
      "Status" : "accomplished",
      "InstantAccess" : false,
      "Progress" : "100%",
      "Usage" : "image",
      "Description" : "testDescription",
      "Category" : "standard",
      "KMSKeyId" : "0e478b7a-4262-4802-b8cb-00d3fb40****",
      "ProductCode" : "jxsc000****",
      "Encrypted" : false,
      "SnapshotName" : "testSnapshotName",
      "SourceDiskId" : "d-bp67acfmxazb4ph****",
      "SourceStorageType" : "disk",
      "SnapshotId" : "s-bp67acfmxazb4p****",
      "SnapshotSN" : "64472-116742336-61976****",
      "SourceDiskSize" : 40,
      "CreationTime" : "2020-08-20T14:52:28Z",
      "LastModifiedTime" : "2020-08-25T14:18:09Z",
      "SnapshotType" : "all",
      "SourceDiskType" : "system",
      "Tags" : {
        "Tag" : [ ]
      }
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags exceeds the upper limit.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	InvalidSnapshotIds.Malformed	The amount of specified specified snapshot Ids exceeds the limit.	The error message returned because the specified SnapshotIds parameter is invalid.
403	InvalidSnapshotIds.Malformed	The amount of specified specified snapshot Ids exceeds the limit.	The error message returned because the specified SnapshotIds parameter is invalid.
403	InvalidSnapshotCategory.Malformed	The specified Category is not valid.	The error message returned because the specified snapshot category is invalid. Check whether the specified Category parameter is valid.
404	InvalidFilterKey.NotFound		The error message returned because the specified start time or end time is invalid.
404	InvalidUsage	The specifed Usage is not valid	The error message returned because the specified Usage parameter is invalid. The valid values are image, disk, image_disk, and none.
404	InvalidSourceDiskType	The specifed SourceDiskType is not valid	The error message returned because the specified SourceDiskType parameter is invalid.

HTTP status code	Error code	Error message	Description
404	InvalidStatus.NotFound	The specified Status is not found	The error message returned because the specified Status parameter does not exist.
404	InvalidSnapshotType.NotFound	The specfied SnapshotType is not found	The error message returned because the specified SnapshotType parameter does not exist.
404	InvalidSnapshotLinkId.NotFound	The specified snapshot link is not found.	The error message returned because the specified SnapshotLinkId parameter does not exist.

For a list of error codes, visit the API Error Center.

16.4. DescribeSnapshotsUsage

You can call this operation to query the number of snapshots stored in a region and the total size of the snapshots.

If you want to view the snapshot usage information about each disk in the current region, we recommend that you call the DescribeSnapshotLinks operation to query snapshot chain information.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSnapshotsUsage	The operation that you want to perform. Set the value to DescribeSnapshotsUsage.
RegionId	String	Yes	cn-hangzhou	The region ID of the snapshot. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SnapshotCount	Integer	5	The number of snapshots stored in the current region.
SnapshotSize	Long	122	The total size of snapshots stored in the current region. Unit: byte.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSnapshotsUsage
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeSnapshotsUsageResponse>
      <SnapshotCount>5</SnapshotCount>
      <SnapshotSize>122</SnapshotSize>
      <RequestId>ED5CF6DD-71CA-462C-9C94-A61A78A01479</RequestId>
</DescribeSnapshotsUsageResponse>
```

`JSON` format

```
{
    "SnapshotCount": "5",
    "SnapshotSize": "122",
    "RequestId": "ACD9BBB0-A9D1-46D7-9630-B7A69889E110"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidParam.RegionId	The specified region is not exist.	The error message returned because the specified RegionId parameter does not exist.

For a list of error codes, visit the API Error Center.

16.5. DescribeSnapshotLinks

You can call this operation to query the snapshot chains of one or more disks. A snapshot chain is a chain of all the snapshots created for a disk. A disk corresponds to a chain of snapshots.

Description

When you call this operation, take note of the following items:

- You can specify multiple request parameters such as `RegionId`, `DiskIds`, and `InstanceId` to be queried. Specified parameters have logical AND relations.
- Only the specified parameters are used as filter conditions. If both `DiskIds` and `SnapshotLinkIds` are set to empty JSON arrays, they are regarded as valid filter conditions and an empty response is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSnapshotLinks	The operation that you want to perform. Set the value to DescribeSnapshotLinks.
RegionId	String	Yes	cn-hangzhou	The region ID of the disk. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	No	i-bp1h6jmbefj2cyqs****	The ID of the instance.
DiskIds	String	No	["d-bp1d6tsvznfghy7y****", "d-bp1ippxbaql9zet7****", ... "d-bp1ib7bcz07lcxa9****"]	The IDs of the disks. The value is a JSON array that consists of up to 100 disk IDs. Separate multiple disk IDs with commas (,).
SnapshotLinkIds	String	No	["sl-bp1grgphbcc9brb5****", "sl-bp1c4izumvq0i5bs****", ... "sl-bp1akk7isz866dds****"]	The IDs of the snapshot chains. The value is a JSON array that consists of up to 100 snapshot chain IDs. Separate multiple snapshot chain IDs with commas (,).
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1

Parameter	Type	Required	Example	Description
PageSize	Integer	No	50	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	50	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SnapshotLinks	Array of SnapshotLink		Details about the snapshot chains.
SnapshotLink			
Category	String	standard	The category of the snapshot. **Note** This parameter will be removed in the future. We recommend that you use the `InstantAccess` parameter to ensure future compatibility.
InstanceId	String	i-bp1h6jmbefj2cyqs****	The ID of the instance.
InstanceName	String	testInstanceName	The name of the instance.
InstantAccess	Boolean	false	Indicates whether the instant access feature is enabled. Valid values: • true: The instant access feature is enabled. This feature can be enabled only for enhanced SSDs (ESSDs). • false: The instant access feature is disabled The snapshot is a normal snapshot for which the instant access feature is disabled.
RegionId	String	cn-hangzhou	The ID of the region in which the source disk of the snapshot chain is located.
SnapshotLinkId	String	sl-2ze0y1jwzpb1geqx****	The ID of the snapshot chain.
SourceDiskId	String	d-bp1d6tsvznfghy7y****	The ID of the source disk. This parameter is retained even if the source disk is deleted.
SourceDiskName	String	testSourceDiskName	The name of the source disk.
SourceDiskSize	Integer	40	The capacity of the source disk. Unit: GiB.
SourceDiskType	String	data	The category of the source disk. Valid values: • system: system disk • data: data disk
TotalCount	Integer	1	The total number of snapshots.

Parameter	Type	Example	Description
TotalSize	Long	2097152	The total capacity of all snapshots in the snapshot chain. Unit: byte.
TotalCount	Integer	9	The total number of snapshot chains.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSnapshotLinks
&RegionId=cn-hangzhou
&InstanceId=i-bp1h6jmbefj2cyqs****
&DiskIds=["d-bp1d6tsvznfghy7y****", "d-bp1ippxbaql9zet7****", ... "d-bp1ib7bcz07lcxa9****"]
&SnapshotLinkIds=["sl-bp1grgphbcc9brb5****", "sl-bp1c4izumvq0i5bs****", ... "sl-bp1akk7isz866dds****"]
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeSnapshotLinksResponse>
      <SnapshotLinks>
            <SnapshotLink>
                  <InstanceName>testInstanceName1</InstanceName>
                  <TotalCount>1</TotalCount>
                  <Category>standard</Category>
                  <SourceDiskSize>40</SourceDiskSize>
                  <InstanceId>i-bp1dh0xo8nucqe1o****</InstanceId>
                  <SnapshotLinkId>sl-bp1hgvjgqo3wn8u7****</SnapshotLinkId>
                  <SourceDiskName>testSourceDiskName1</SourceDiskName>
                  <RegionId></RegionId>
                  <SourceDiskType>system</SourceDiskType>
                  <TotalSize>3806330880</TotalSize>
                  <SourceDiskId>d-bp149tb0mqn0boy6****</SourceDiskId>
            </SnapshotLink>
            <SnapshotLink>
                  <InstanceName>testInstanceName2</InstanceName>
                  <TotalCount>1</TotalCount>
                  <Category>standard</Category>
                  <InstanceId>i-bp1c84ts5f4b6t6z****</InstanceId>
                  <SnapshotLinkId>sl-bp163h35n7endbpv****</SnapshotLinkId>
                  <SourceDiskName>testSourceDiskName2</SourceDiskName>
                  <RegionId></RegionId>
                  <TotalSize>2709520384</TotalSize>
                  <SourceDiskType>data</SourceDiskType>
                  <SourceDiskId>d-bp1cl4hqnh0i2u5h****</SourceDiskId>
            </SnapshotLink>
      </SnapshotLinks>
      <PageNumber>1</PageNumber>
      <PageSize>2</PageSize>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
      <TotalCount>9</TotalCount>
</DescribeSnapshotLinksResponse>
```

`JSON` format

```
{
    "SnapshotLinks": {
        "SnapshotLink": [
            {
                "InstanceName": "testInstanceName1",
                "TotalCount": 1,
                "Category": "standard",
                "SourceDiskSize": 40,
                "InstanceId": "i-bp1dh0xo8nucqe1o****",
                "SnapshotLinkId": "sl-bp1hgvjgqo3wn8u7****",
                "SourceDiskName": "testSourceDiskName1",
                "RegionId": "",
                "SourceDiskType": "system",
                "TotalSize": 3806330880,
                "SourceDiskId": "d-bp149tb0mqn0boy6****"
            },
            {
                "InstanceName": "testInstanceName2",
                "TotalCount": 1,
                "Category": "standard",
                "InstanceId": "i-bp1c84ts5f4b6t6z****",
                "SnapshotLinkId": "sl-bp163h35n7endbpv****",
                "SourceDiskName": "testSourceDiskName2",
                "RegionId": "",
                "TotalSize": 2709520384,
                "SourceDiskType": "data",
                "SourceDiskId": "d-bp1cl4hqnh0i2u5h****"
            }
        ]
    },
    "PageNumber": 1,
    "PageSize": 1,
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
    "TotalCount": 2
}
```


Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegionId	The specified regionId is invalid.	The error message returned because the specified RegionId parameter is invalid.
400	InvalidSnapshotLinkIds	The specified snapshotLinkIds is invalid.	The error message returned because the specified SnapshotLinkIds parameter is invalid.
400	InvalidDiskIds	The specified diskIds is invalid.	The error message returned because the specified DiskIds parameter is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

16.6. ModifySnapshotAttribute

You can call this operation to modify the name or description of a snapshot, or disable the instant access feature.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySnapshotAttribute	The operation that you want to perform. Set the value to ModifySnapshotAttribute.

Parameter	Type	Required	Example	Description
SnapshotId	String	Yes	s-bp199lyny9bb47pa****	The ID of the snapshot.
SnapshotName	String	No	testSnapshotName	The name of the snapshot. The name must be 2 to 128 characters in length, and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://. It cannot start with auto because snapshots whose names start with auto are recognized as automatic snapshots.
Description	String	No	testDescription	The description of the snapshot. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
DisableInstantAccess	Boolean	No	false	Specifies whether to disable the instant access feature. Valid values: • true: disables the instant access feature. • false: enables the instant access feature. Default value: false.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifySnapshotAttribute
&SnapshotId=s-bp199lyny9bb47pa****
&SnapshotName=testSnapshotName
&Description=testDescription
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifySnapshotAttributeResponse>
            <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
</ModifySnapshotAttributeResponse>
```

`JSON` format

```
{
    "RequestId":"C8B26B44-0189-443E-9816-D951F59623A9"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidSnapshotName.Malformed	The specified SnapshotName is wrongly formed.	The error message returned because the specified SnapshotName parameter is invalid.

HTTP status code	Error code	Error message	Description
400	NoAttributeToModify	No attribute to be modified in this request.	The error message returned because no properties of the specified snapshot are modified.
404	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The error message returned because the specified SnapshotId parameter does not exist.

For a list of error codes, visit the API Error Center.

16.7. DeleteSnapshot

You can call this operation to delete a snapshot. If you call this operation to delete a snapshot that is being created, the snapshot creation task is canceled.

Description

When you call this operation, take note of the following items:

- If the specified snapshot ID does not exist, the request is ignored.
- A snapshot that has been used to create custom images cannot be deleted. The snapshot can be deleted only after the created custom images are deleted (DeleteImage).
- A snapshot that has been used to create disks cannot be deleted. If you do want to delete the snapshot, set the `Force` parameter to true to force delete the snapshot. The disks created from the snapshot cannot be re-initialized after the snapshot is force deleted.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteSnapshot	The operation that you want to perform. Set the value to DeleteSnapshot.
SnapshotId	String	Yes	s-bp1c0doj0taqyzzl****	The ID of the snapshot.
Force	Boolean	No	false	Specifies whether to force delete the snapshot that has been used to create disks. Valid values: • true: force deletes the snapshot. After the snapshot is force deleted, the disks created from this snapshot cannot be re-initialized. • false: does not force delete the snapshot. Default value: false

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteSnapshot
&SnapshotId=s-bp1c0doj0taqyzzl****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteSnapshotResponse>
       <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</DeleteSnapshotResponse>
```

`JSON` format

```
{
    "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	SnapshotCreatedImage	The snapshot has been used to create user defined image(s).	The error message returned because the snapshot has been used to create custom images and cannot be deleted. The snapshot can be deleted only after the custom images created from the snapshot are deleted (DeleteImage).
403	SnapshotCreatedDisk	The snapshot has been used to create disk(s).	The error message returned because the snapshot has been used to create disks and cannot be deleted. If you do want to delete the snapshot, set the Force parameter to true to force delete the snapshot. The disks created from the snapshot cannot be re-initialized after the snapshot is force deleted.
400	MissingParameter	The input parameter SnapshotId that is mandatory for processing this request is not supplied.	The error message returned because the required SnapshotId parameter is not specified.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
404	InvalidSnapshotId.NotFound	The specified snapshot is not found	The error message returned because the specified SnapshotId parameter does not exist.
403	Operation.Conflict	The operation may conflicts with others, please retry later.	The error message returned because the operation conflicts with other operations. Try again later.

For a list of error codes, visit the API Error Center.

16.8. CreateAutoSnapshotPolicy

Creates an automatic snapshot policy within a specified region. Automatic snapshot policies allow Elastic Compute Service (ECS) to create snapshots and back up data for a disk on a regular basis. These policies can be applied to both system disks and data disks.

Description

When you call this operation to create an automatic snapshot policy, you can specify the days of the week on which to create automatic snapshots, the retention period of the automatic snapshots, and cross-region replication for snapshots in the policy to meet your diverse data backup requirements. After you create an automatic snapshot policy, you must call the ApplyAutoSnapshotPolicy operation to apply it to disks. If you want to modify the automatic snapshot policy, you must call the ModifyAutoSnapshotPolicyEx operation.

When you call this operation, take note of the following items:

- You can create a maximum of 100 automatic snapshot policies within each region for a single Alibaba Cloud account.
- If an automatic snapshot is being created when the time scheduled for creating another automatic snapshot is due, the new snapshot task is skipped. This may occur when a disk contains a large volume of data. For example, you have scheduled snapshots to be created at 09:00:00, 10:00:00, 11:00:00, and 12:00:00 for a disk. The system starts to create a snapshot for the disk at 09:00:00. The process takes 80 minutes because the disk contains a large volume of data and ends at 10:20:00. The system skips the automatic snapshot task scheduled for 10:00:00 and creates the next automatic snapshot for the disk at 11:00:00.
- For information about how to copy a snapshot from one region to another, see the "Background information" section in Copy a snapshot.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateAutoSnapshotPolicy	The operation that you want to perform. Set the value to **CreateAutoSnapshotPolicy**.
regionId	String	Yes	cn-hangzhou	The ID of the region in which to create the automatic snapshot policy. You can call the DescribeRegions operation to query the most recent region list.
autoSnapshotPolicyName	String	No	TestName	The name of the automatic snapshot policy. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
timePoints	String	Yes	["0", "1", ... "23"]	The points in time of the day at which to create automatic snapshots. The time must be in UTC+8. Unit: hours. Valid values are 0 to 23, which correspond to the 24 points in time on the hour from 00:00:00 to 23:00:00. 1 indicates 01:00:00. • You must set this parameter to a JSON-formatted array. For example, a value of ["1"] specifies automatic snapshots to be created at 01:00:00. • To schedule multiple automatic snapshots to be created in a day, you can specify multiple values. Separate the values with commas (,). You can specify a maximum of 24 points in time. For example, a value of ["1","3","5"] specifies automatic snapshots to be created at 01:00:00, 03:00:00, and 05:00:00.
repeatWeekdays	String	Yes	["1","2"]	The days of the week on which to create automatic snapshots. Valid values: 1 to 7, which correspond to Monday to Sunday. 1 indicates Monday. • Set this parameter to a JSON-formatted array. For example, a value of ["1"] specifies automatic snapshots to be created every Monday. • To schedule multiple automatic snapshots to be created in a week, you can specify multiple values. Separate the values with commas (,). You can specify a maximum of seven days. For example, a value of ["1","3","5"] specifies automatic snapshots to be created every Monday, Wednesday, and Friday.
retentionDays	Integer	Yes	30	The retention period of the automatic snapshot. Unit: days. Valid values: • -1: The snapshot is permanently retained. • 1 to 65535: The automatic snapshot is retained for the specified number of days. Default value: -1.
EnableCrossRegionCopy	Boolean	No	false	Specifies whether to enable cross-region replication for snapshots. • true: enables cross-region replication for snapshots. • false: disables cross-region replication for snapshots.
TargetCopyRegions	String	No	["cn-hangzhou"]	The destination region to which to copy snapshots. You can set only a single destination region.

Parameter	Type	Required	Example	Description
CopiedSnapshotsRetentionDays	Integer	No	30	The retention period of the snapshot copy in the destination region. Unit: days. Valid values: • -1: The snapshot copy is permanently retained. • 1 to 65535: The snapshot copy is retained for the specified number of days. Default value: -1.
ResourceGroupId	String	No	rg-aek2kkmhmhs****	The ID of the resource group to which the automatic snapshot policy belongs.
Tag.N.Key	String	No	TestKey	The key of tag N of the automatic snapshot policy. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	TestValue	The value of tag N of the automatic snapshot policy. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length. It cannot start with acs: or contain http:// or https://.

Response parameters

Parameter	Type	Example	Description
AutoSnapshotPolicyId	String	sp-bp12m37ccmxvbmi5****	The ID of the automatic snapshot policy.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateAutoSnapshotPolicy
&regionId=cn-hangzhou
&repeatWeekdays=["1"]
&retentionDays=30
&timePoints=["0", "19"]
&autoSnapshotPolicyName=TestName
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateAutoSnapshotPolicyResponse>
    <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
    <AutoSnapshotPolicyId>sp-bp12m37ccmxvbmi5****</AutoSnapshotPolicyId>
</CreateAutoSnapshotPolicyResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "F3CD6886-D8D0-4FEE-B93E-1B73239673DE",
  "AutoSnapshotPolicyId" : "sp-bp12m37ccmxvbmi5****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	DiskCategory.OperationNotSupported	The type of the specified disk does not support creating a snapshot.	The error message returned because the operation is not supported by the current disk category.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned because the specified regionId parameter is invalid.
403	ParameterInvalid	The specified RepeatWeekDays parameter is invalid.	The error message returned because the specified repeatWeekDays parameter is invalid.
403	ParameterInvalid	The specified TimePoints parameter is invalid.	The error message returned because the specified timePoints parameter is invalid.
403	ParameterInvalid	The specified RetentionDays parameter is invalid.	The error message returned because the specified retentionDays parameter is invalid.
403	AutoSnapshotPolicy.QuotaExceed	The maximum number of automatic snapshot policy has been reached.	The error message returned because the maximum number of automatic snapshot policies has been reached.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.

For a list of error codes, visit the API Error Center.

16.9. ApplyAutoSnapshotPolicy

You can call this operation to apply an automatic snapshot policy to one or more disks. If you apply an automatic snapshot policy to a disk that already has an automatic snapshot policy, the new policy replaces the original policy to take effect on the disk.

Description

- A disk can have only one automatic snapshot policy.
- A single automatic snapshot policy can be applied to multiple disks.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ApplyAutoSnapshotPolicy	The operation that you want to perform. Set the value to ApplyAutoSnapshotPolicy.
regionId	String	Yes	cn-hangzhou	The region ID of the automatic snapshot policy and the disks. You can call the DescribeRegions operation to query the most recent region list.
autoSnapshotPolicyId	String	Yes	sp-bp14yziiuvu3s6jn****	The ID of the automatic snapshot policy.

Parameter	Type	Required	Example	Description
diskIds	String	Yes	["d-bp14k9cxvr5uzy54****", "d-bp1dtj8v7x6u08iw****", "d-bp1c0tyj9tfli2r8****"]	The IDs of the disks. The value is a JSON array that consists of disk IDs. Separate multiple disk IDs with commas (,).

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ApplyAutoSnapshotPolicy
&autoSnapshotPolicyId=sp-bp14yziiuvu3s6jn****
&diskIds=["d-bp14k9cxvr5uzy54****", "d-bp1dtj8v7x6u08iw****", "d-bp1c0tyj9tfli2r8****"]
&regionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ApplyAutoSnapshotPolicyResponse>
      <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ApplyAutoSnapshotPolicyResponse>
```

`JSON` format

```
{
    "RequestId":"F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	ParameterInvalid	The specified automatic snapshot policy does not exist.	The error message returned because the specified autoSnapshotPolicyId parameter does not exist. Check whether the policy ID is correct.
404	ParameterInvalid	The specified automatic snapshot policy does not exist in the region.	The error message returned because the specified automatic snapshot policy does not exist in this region. Check whether the policy ID is correct.
404	InvalidDiskId.NotFound	The specified disk does not exist in the region.	The error message returned because the specified disk does not exist in the current region.
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned because the specified regionId parameter is invalid.
403	ParameterInvalid	The specified AutoSnapshotPolicyId parameter is invalid.	The error message returned because the specified autoSnapshotPolicyId parameter is invalid.
403	ParameterInvalid	The specified DiskIds are invalid.	The error message returned because the specified diskIds parameter is invalid.
400	DiskCategory.OperationNotSupported	The type of the specified disk does not support creating a snapshot.	The error message returned because the operation is not supported by the current disk category.

HTTP status code	Error code	Error message	Description
400	PartofDiskCategory.OperationNotSupported	The types of some disks in the disk list do not support creating snapshots.	The error message returned because some of the specified disks do not support this operation.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account before you proceed.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is disabled.

For a list of error codes, visit the API Error Center.

16.10. CancelAutoSnapshotPolicy

You can call this operation to disable the automatic snapshot policy for one or more disks.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CancelAutoSnapshotPolicy	The operation that you want to perform. Set the value to CancelAutoSnapshotPolicy.
diskIds	String	Yes	["d-bp14k9cxvr5uzy54****", "d-bp1dtj8v7x6u08iw****", "d-bp1c0tyj9tfli2r8****"]	The IDs of the disks for which you want to disable the automatic snapshot policy. To disable the automatic snapshot policy for multiple disks, you can set this parameter to a JSON array that consists of multiple disk IDs, such as ["dxxxxxxxxx", "dyyyyyyyyy", ... "dzzzzzzzzz"]. Separate the disk IDs with commas (,).
regionId	String	Yes	cn-hangzhou	The region ID of the automatic snapshot policy and the disks. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CancelAutoSnapshotPolicy
&diskIds=["d-bp14k9cxvr5uzy54****", "d-bp1dtj8v7x6u08iw****", "d-bp1c0tyj9tfli2r8****"]
&regionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CancelAutoSnapshotPolicyResponse>
      <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</CancelAutoSnapshotPolicyResponse>
```

`JSON` format

```
{
    "RequestId":"F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned because the specified regionId parameter is invalid.
403	ParameterInvalid	The specified DiskIds are invalid.	The error message returned because the specified diskIds parameter is invalid.
404	InvalidDiskId.NotFound	The specified DiskIds are not found.	The error message returned because the specified diskIds parameter does not exist.

For a list of error codes, visit the API Error Center.

16.11. DescribeAutoSnapshotPolicyEX

Queries the created automatic snapshot policies that meet the specified query conditions in a region.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeAutoSnapshotPolicyEx	The operation that you want to perform. Set the value to **DescribeAutoSnapshotPolicyEx**.
RegionId	String	Yes	cn-hangzhou	The region ID of the automatic snapshot policy. You can call the DescribeRegions operation to query the most recent region list.
AutoSnapshotPolicyId	String	No	sp-bp67acfmxazb4ph****	The ID of the automatic snapshot policy.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	1	The number of entries to return on each page. Maximum value: 100. Default value: 10.
ResourceGroupId	String	No	rg-aek2kkmhmhs****	The ID of the resource group to which the automatic snapshot policy belongs.
Tag.N.Key	String	No	TestKey	The key of tag N of the automatic snapshot policy. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	TestValue	The value of tag N of the automatic snapshot policy. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with acs: or contain http:// or https://.

Response parameters

Parameter	Type	Example	Description
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
PageNumber	Integer	1	The page number of the returned page.
TotalCount	Integer	1	The total number of automatic snapshot policies.
AutoSnapshotPolicies	Array of AutoSnapshotPolicy		Details about the automatic snapshot policies.
AutoSnapshotPolicy			
TimePoints	String	["1"]	The points in time of the day at which automatic snapshots are created. The time is displayed in UTC+8. Unit: hours. Valid values are 0 to 23, which correspond to the 24 points in time on the hour from 00:00:00 to 23:00:00. 1 indicates 01:00:00. Multiple points in time can be specified. The parameter value is a JSON-formatted array such as `["0", "1",... "23"]`. The array can contain a maximum of 24 points in time separated by commas (,).
CreationTime	String	2021-09-01 15:30:01	The time when the automatic snapshot policy was created. The time follows the ISO 8601 standard in the yyyy-MM-ddThh:mm:ssZ format. The time is displayed in UTC.
Status	String	Normal	The state of the automatic snapshot policy. Valid values: • Normal: The automatic snapshot policy is normal. • Expire: The automatic snapshot policy cannot be used because you have overdue payments in your account.
AutoSnapshotPolicyName	String	testAutoSnapshotPolicyName	The name of the automatic snapshot policy.
TargetCopyRegions	String	test	**Note** This parameter is in invitational preview and unavailable.
CopiedSnapshotsRetentionDays	Integer	0	**Note** This parameter is in invitational preview and unavailable.
AutoSnapshotPolicyId	String	sp-bp67acfmxazb4ph****	The ID of the automatic snapshot policy.
RetentionDays	Integer	7	The retention period of the automatic snapshot. Valid values: • -1: The automatic snapshot is permanently retained. • 1 to 65536: The automatic snapshot is retained for the specified number of days.
RegionId	String	cn-hangzhou	The region ID of the automatic snapshot policy.
DiskNums	Integer	1	The number of disks to which the automatic snapshot policy is applied.

Parameter	Type	Example	Description
EnableCrossRegionCopy	Boolean	false	**Note** This parameter is in invitational preview and unavailable.
RepeatWeekdays	String	["6"]	The days of the week on which automatic snapshots are created. Valid values are 1 to 7, which correspond to the days of the week. 1 indicates Monday. One or more days can be specified.
VolumeNums	Integer	2	The number of extended volumes on which the policy is applied.
ResourceGroupId	String	rg-aek2kkmhmhs****	The ID of the resource group to which the automatic snapshot policy belongs.
Tags	Array of Tag		Details about tags of the automatic snapshot policies.
Tag			
TagValue	String	TestValue	The tag value of the automatic snapshot policy.
TagKey	String	TestKey	The tag key of the automatic snapshot policy.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeAutoSnapshotPolicyEx
&RegionId=cn-hangzhou
&AutoSnapshotPolicyId=sp-bp67acfmxazb4ph****
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeAutoSnapshotPolicyExResponse>
    <TotalCount>1</TotalCount>
    <PageSize>10</PageSize>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <PageNumber>1</PageNumber>
    <AutoSnapshotPolicies>
        <AutoSnapshotPolicy>
            <Status>Normal</Status>
            <TimePoints>["1"]</TimePoints>
            <VolumeNums>2</VolumeNums>
            <ResourceGroupId>rg-aek2kkmhmhs****</ResourceGroupId>
            <AutoSnapshotPolicyId>sp-bp67acfmxazb4ph****</AutoSnapshotPolicyId>
            <RetentionDays>7</RetentionDays>
            <RepeatWeekdays>["6"]</RepeatWeekdays>
            <DiskNums>1</DiskNums>
            <CopiedSnapshotsRetentionDays>-1</CopiedSnapshotsRetentionDays>
            <EnableCrossRegionCopy>false</EnableCrossRegionCopy>
            <CreationTime>2021-09-01 15:30:01</CreationTime>
            <RegionId>cn-hangzhou</RegionId>
            <AutoSnapshotPolicyName>testAutoSnapshotPolicyName</AutoSnapshotPolicyName>
            <Tags>
                <Tag>
                    <TagKey>TestKey</TagKey>
                    <TagValue>TestValue</TagValue>
                </Tag>
            </Tags>
        </AutoSnapshotPolicy>
    </AutoSnapshotPolicies>
</DescribeAutoSnapshotPolicyExResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalCount" : 1,
  "PageSize" : 10,
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "PageNumber" : 1,
  "AutoSnapshotPolicies" : {
    "AutoSnapshotPolicy" : [ {
      "Status" : "Normal",
      "TimePoints" : "[\"1\"]",
      "VolumeNums" : 2,
      "ResourceGroupId" : "rg-aek2kkmhmhs****",
      "AutoSnapshotPolicyId" : "sp-bp67acfmxazb4ph****",
      "RetentionDays" : 7,
      "RepeatWeekdays" : "[\"6\"]",
      "DiskNums" : 1,
      "CopiedSnapshotsRetentionDays" : -1,
      "EnableCrossRegionCopy" : false,
      "CreationTime" : "2021-09-01 15:30:01",
      "RegionId" : "cn-hangzhou",
      "AutoSnapshotPolicyName" : "testAutoSnapshotPolicyName",
      "Tags" : {
        "Tag" : [ {
          "TagKey" : "TestKey",
          "TagValue" : "TestValue"
        } ]
      }
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not correspond to each other.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags has reached the upper limit.

For a list of error codes, visit the API Error Center.

16.12. ModifyAutoSnapshotPolicyEx

Modifies an automatic snapshot policy. After you modify an automatic snapshot policy that is applied to specific disks, the modified policy immediately takes effect on the disks.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyAutoSnapshotPolicyEx	The operation that you want to perform. Set the value to **ModifyAutoSnapshotPolicyEx**.
regionId	String	Yes	cn-hangzhou	The region ID of the automatic snapshot policy to be modified. You can call the DescribeRegions operation to query the most recent region list.
autoSnapshotPolicyId	String	Yes	sp-bp12m37ccmxvbmi5****	The ID of the automatic snapshot policy. You can call the DescribeAutoSnapshotPolicyEx operation to query available automatic snapshot policies.
autoSnapshotPolicyName	String	No	SPTestName	The name of the automatic snapshot policy. If this parameter is not specified, the original name of the automatic snapshot policy is retained.
timePoints	String	No	["0", "1"]	The points in time of the day at which to create automatic snapshots. The time must be in UTC+8. Unit: hours. Valid values are 0 to 23, which correspond to the 24 points in time on the hour from 00:00:00 to 23:00:00. For example, a value of 1 indicates 01:00:00. To schedule multiple automatic snapshots to be created in a day, you can specify multiple hours. • You can specify up to 24 points in time. • You must set this parameter to a JSON array such as `["0", "1", ... "23"]`. Separate the points in time with commas (,).

Parameter	Type	Required	Example	Description
repeatWeekdays	String	No	["1", "7"]	The days of the week on which to create automatic snapshots. Valid values are 1 to 7, which correspond to the days of the week. For example, a value of 1 indicates Monday. To schedule multiple automatic snapshots to be created in a week, you can specify multiple days. • You can specify up to seven days over a one-week period. • You must set this parameter to a JSON array such as `["1", "2" ... "7"]`. Separate the values in the array with commas (,).
retentionDays	Integer	No	30	The retention period of the automatic snapshot. Unit: days. Valid values: • -1: The automatic snapshot is permanently retained. • 1 to 65536: The auto snapshot is retained for the specified number of days. Default value: -1.
EnableCrossRegionCopy	Boolean	No	false	Specifies whether to enable cross-region replication for the automatic snapshot. • true: enables cross-region replication for the automatic snapshot. • false: disables cross-region replication for the automatic snapshot.
TargetCopyRegions	String	No	["cn-hangzhou"]	The destination region to which to copy the snapshot. You can specify only a single destination region.
CopiedSnapshotsRetentionDays	Integer	No	30	The retention period of the snapshot copy in the destination region. Unit: days. Valid values: • -1: The snapshot is permanently retained. • 1 to 65535: The automatic snapshot is retained for the specified number of days. Default value: -1.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyAutoSnapshotPolicyEx
&autoSnapshotPolicyId=sp-bp12m37ccmxvbmi5****
&regionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyAutoSnapshotPolicyResponse>
    <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ModifyAutoSnapshotPolicyResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned because the specified regionId parameter is invalid.
403	ParameterInvalid	The specified RepeatWeekDays parameter is invalid.	The error message returned because the specified repeatWeekdays parameter is invalid.
403	ParameterInvalid	The specified TimePoints parameter is invalid.	The error message returned because the specified timePoints parameter is invalid.
403	ParameterInvalid	The specified AutoSnapshotPolicyId is invalid.	The error message returned because the specified autoSnapshotPolicyId parameter is invalid.
403	ParameterInvalid	The specified RetentionDays parameter is invalid.	The error message returned because the specified retentionDays parameter is invalid.
404	ParameterInvalid	The specified automatic snapshot policy does not exist.	The error message returned because the specified autoSnapshotPolicyId parameter does not exist.
404	ParameterInvalid	The specified automatic snapshot policy does not exist in the region.	The error message returned because the specified autoSnapshotPolicyId parameter does not exist.

For a list of error codes, visit the API Error Center.

16.13. DeleteAutoSnapshotPolicy

You can call this operation to delete an automatic snapshot policy. After you delete an automatic snapshot policy, the policy will no longer be applied to the disks that it previously took effect on.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteAutoSnapshotPolicy	The operation that you want to perform. Set the value to DeleteAutoSnapshotPolicy.
autoSnapshotPolicyId	String	Yes	sp-bp14yziiuvu3s6jn****	The ID of the automatic snapshot policy. You can call the DescribeAutoSnapshotPolicyEx operation to query the available automatic snapshot policies.
regionId	String	Yes	cn-hangzhou	The region ID of the automatic snapshot policy. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteAutoSnapshotPolicy
&autoSnapshotPolicyId=sp-bp14yziiuvu3s6jn****
&regionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteAutoSnapshotPolicyResponse>
      <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</DeleteAutoSnapshotPolicyResponse>
```

`JSON` format

```
{
    "RequestId":"F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	ParameterInvalid	The specified automatic snapshot policy does not exist.	The error message returned because the specified autoSnapshotPolicyId parameter does not exist. Check whether the policy ID is correct.
404	ParameterInvalid	The specified automatic snapshot policy does not exist in the region.	The error message returned because the specified automatic snapshot policy does not exist in this region. Check whether the policy ID is correct.

For a list of error codes, visit the API Error Center.

16.14. CreateSnapshotGroup

Creates a snapshot-consistent group for the disks in an Elastic Compute Service (ECS) instance. A snapshot-consistent group contains snapshots of one or more disks.

Description

You can specify `InstanceId` to create a snapshot-consistent group for the specified disks in an instance. You can also specify `DiskId.N` to create a snapshot-consistent group for multiple disks that are attached to multiple instances within the same zone.

> **Note** You cannot specify both `DiskId.N` and `ExcludeDiskId.N`. If `InstanceId` is set, you can use `DiskId.N` to specify only disks attached to the instance specified by InstanceId. You cannot use DiskId.N to specify disks attached to multiple instances.

When you call this operation, take note of the following items:

- The disk for which you want to create a snapshot must be in the **In Use** (`In_use`) or **Unattached** (`Available`) state.
  - If the disk is in the **In Use** (`In_use`) state, the instance to which the disk is attached must be in the **Running** (`Running`) or **Stopped** (`Stopped`) state.
  - If the disk is in the **Unattached** (`Available`) state, make sure that the disk has been attached to an ECS instance. Snapshots cannot be created for disks that have never been attached to ECS instances.
- The snapshot-consistent group feature can be used to create snapshots only for enhanced SSDs (ESSDs).
- A single snapshot-consistent group can contain snapshots of up to 16 disks including the system disk and data disks and cannot exceed 32 TiB in size.
- Snapshots that you created by using the snapshot-consistent group feature are retained until they are deleted. We recommend that you delete unnecessary snapshots on a regular basis to prevent them from incurring excessive fees.
- Snapshot-consistent groups cannot be created for disks that have the multi-attach feature enabled. If disks that have the multi-attach feature enabled are attached to an instance, you must set the `ExcludeDiskId.N` parameter to exclude these disks.

For information about the snapshot-consistent group feature and its billing, see Create a snapshot-consistent group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateSnapshotGroup	The operation that you want to perform. Set the value to **CreateSnapshotGroup**.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	No	i-j6ca469urv8ei629****	The ID of the instance.
InstantAccess	Boolean	No	false	Specifies whether to enable the instant access feature. Valid values: • true: enables the instance access feature. • false: disables the instance access feature. Default value: false.
InstantAccessRetentionDays	Integer	No	1	Specify the number of days for which the instant access feature is available. Unit: days. Valid values: 1 to 65535. This parameter takes effect only when `InstantAccess` is set to true. The instant access feature is automatically disabled when the specified duration of instant access expires. This parameter is empty by default, which indicates that the expiration time of the instant access feature is determined by the time when snapshots are released.
Name	String	No	testName	The name of the snapshot-consistent group. The name must be 2 to 128 characters in length, and can contain letters, digits, periods (.), underscores (_), hyphens (-), and colons (:). It must start with a letter or a digit and cannot start with `http://` or `https://`.
Description	String	No	This is description.	The description of the snapshot-consistent group. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the snapshot-consistent group belongs.
ExcludeDiskId.N	String	No	d-j6cf7l0ewidb78lq****	The ID of disk N for which you do not need to create snapshots. After this parameter is specified, the created snapshot-consistent group does not contain snapshots of the disk. Valid values of N: 1 to 16. This parameter is empty by default, which indicates that snapshots are created for all disks in the instance. **Note** You cannot specify both ExcludeDiskId.N and `DiskId.N`.

Parameter	Type	Required	Example	Description
DiskId.N	String	No	d-bp1bcpqxahucdrcn****	The ID of disk N for which to create snapshots. You can specify multiple disk IDs across instances with the same zone. Valid values of N: 1 to 16. A single snapshot-consistent group can contain snapshots of up to 16 disks and cannot exceed 32 TiB in size. Take note of the following items: • You cannot specify both DiskId.N and `ExcludeDiskId.N`. • If `InstanceId` is set, you can use DiskId.N to specify only disks attached to the instance specified by InstanceId. You cannot use DiskId.N to specify disks attached to multiple instances.
Tag.N.Key	String	No	TestKey	The key of tag N of the snapshot-consistent group. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.
Tag.N.Value	String	No	TestValue	The value of tag N of the snapshot-consistent group. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with `acs:`. It cannot contain `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
SnapshotGroupId	String	ssg-j6ciyh3k52qp7ovm****	The ID of the snapshot-consistent group.
RequestId	String	01ABBD93-1ABB-4D92-B496-1A3D20EC0697	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateSnapshotGroup
&InstanceId=i-j6ca469urv8ei629****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateSnapshotGroupResponse>
    <RequestId>01ABBD93-1ABB-4D92-B496-1A3D20EC0697</RequestId>
    <SnapshotGroupId>ssg-j6ciyh3k52qp7ovm****</SnapshotGroupId>
</CreateSnapshotGroupResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "01ABBD93-1ABB-4D92-B496-1A3D20EC0697",
  "SnapshotGroupId" : "ssg-j6ciyh3k52qp7ovm****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidSnapshotName.Malformed	The specified SnapshotName is wrongly formed.	The error message returned because the specified Name parameter is invalid.
400	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
400	DiskCategory.OperationNotSupported	The operation is not supported to the specified disk due to its disk category	The error message returned because the specified disk category does not support this operation.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	InvalidRetentionDays.Malformed	The specified RetentionDays is not valid.	The error message returned because the specified RetentionDays parameter is invalid. Check whether the specified InstantAccessRetentionDays parameter is correct.
400	InvalidParameter.Name	The specified Name is invalid.	The error message returned because the specified Name parameter is invalid.
403	IncorrectDiskStatus.CreatingSnapshot	A previous snapshot creation is in process.	The error message returned because another snapshot is being created for the disk. Wait until the snapshot is created and try again.
403	InstanceLockedForSecurity	The disk attached instance is locked due to security.	The error message returned because the instance to which the disk is attached is locked for security reasons.
403	IncorrectDiskStatus.NeverAttached	The specified disk has never been attached to any instance.	The error message returned because the removable disk has never been attached to instances and its content remains unchanged.
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The error message returned because the maximum number of snapshots has been exceeded. To create new snapshots, delete snapshots that are no longer needed.
403	IncorrectDiskStatus.NeverUsed	The specified disk has never been used after creating.	The error message returned because the specified disk has never been used and its content remains unchanged.
403	CreateSnapshot.Failed	The process of creating snapshot is failed.	The error message returned because the snapshot fails to be created.
403	DiskInArrears	The specified operation is denied as your disk has expired.	The error message returned because the disk has expired due to overdue payments.
403	DiskId.ValueNotSupported	The specified parameter diskid is not supported.	The error message returned because the category of the specified Elastic Block Storage (EBS) device does not support this operation.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payments for it.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.

HTTP status code	Error code	Error message	Description
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.
403	IncorrectVolumeStatus	The current volume status does not support this operation.	The error message returned because the operation is not supported while the Shared Block Storage device is in the current state.
403	IdempotentParameterMismatch	The specified clientToken is used.	The error message returned because the specified client token is already in use.
403	IncorrectDiskStatus.Invalid	The specified device status invalid, restart instance and try again.	The error message returned because the state of the specified disk is invalid. Restart the instance and try again.
403	IncorrectDiskType.NotSupport	The specified device type is not supported.	The error message returned because the specified disk type does not support the operation.
403	IncorrectDiskStatus.Transferring	The specified device is transferring, you can retry after the process is finished.	The error message returned because the specified disk is being migrated. Wait until the disk is migrated and try again.
403	InvalidParameter.KMSKeyId.CMKNotEnabled	The CMK needs to be enabled.	The error message returned because the customer master key (CMK) is not enabled when a Key Management Service (KMS) key ID is specified for a disk. You can call the DescribeKey operation of KMS to query information about the specified CMK.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
403	IdempotentProcessing	The previous idempotent request(s) is still processing.	The error message returned because a previous idempotent request is being processed. Try again later.
403	QuotaExceed.Tags	%s	The error message returned because the maximum number of tags has been reached.
403	InvalidSnapshotCategory.Malformed	The specified Category is not valid.	The error message returned because the specified Category parameter is invalid. Check whether the specified Category parameter is valid.
403	InvalidOperation.MultiAttachDisk	Multi attach disk does not support this operation.	The error message returned because the disk that has the multi-attach feature enabled does not support the operation.
404	InvalidDiskId.NotFound	The specified DiskId does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
404	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter is invalid.
404	InvalidVolumeId.NotFound	The specified volume does not exist.	The error message returned because the specified Shared Block Storage device does not exist. Check whether the Shared Block Storage device ID is correct.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

HTTP status code	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

16.15. DescribeSnapshotGroups

Queries the details of one or more snapshot-consistent groups.

Description

You can specify multiple request parameters such as `InstanceId`, `SnapshotGroupId.N`, and `Status.N` to be queried. Specified parameters have logical AND relations. Only the specified parameters are included in the filter conditions.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSnapshotGroups	The operation that you want to perform. Set the value to **DescribeSnapshotGroups**.
RegionId	String	Yes	cn-hangzhou	The region ID of the snapshot-consistent group. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	No	i-j6ca469urv8ei629****	The ID of the instance.
Name	String	No	testName	The name of the snapshot-consistent group.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The query token. Set the value to the NextToken value that is returned in the last call to the DescribeSnapshotGroups operation.
MaxResults	Integer	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the snapshot-consistent group belongs.
SnapshotGroupId.N	String	No	ssg-j6ciyh3k52qp7ovm****	The ID of snapshot-consistent group N. Valid values of N: 1 to 10.
Status.N	String	No	accomplished	The state of snapshot-consistent group N. Valid values of N: 1 to 3. Valid values: • progressing: The snapshot-consistent group is being created. • accomplished: The snapshot-consistent group is created. • failed: The snapshot-consistent group fails to be created.
Tag.N.Key	String	No	TestKey	The key of tag N of the snapshot-consistent group. Valid values of N: 1 to 20.

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	TestValue	The value of tag N of the snapshot-consistent group. Valid values of N: 1 to 20.

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query. **Note** If this parameter is empty, no more data is returned.
RequestId	String	3F9A4CC4-362F-469A-B9EF-B3204EF8AA3A	The ID of the request.
SnapshotGroups	Array of SnapshotGroup		Details of the snapshot-consistent groups.
SnapshotGroup			
Status	String	accomplished	The state of the snapshot-consistent group. Valid values: • progressing: The snapshot-consistent group is being created. • accomplished: The snapshot-consistent group is created. • failed: The snapshot-consistent group fails to be created.
CreationTime	String	2021-03-23T10:58:48Z	The time when the snapshot-consistent group was created.
Description	String	This is description.	The description of the snapshot-consistent group.
ProgressStatus	String	null	**Note** This parameter is unavailable.
SnapshotGroupId	String	ssg-j6ciyh3k52qp7ovm****	The ID of the snapshot-consistent group.
InstanceId	String	i-j6ca469urv8ei629****	The ID of the instance to which the snapshot-consistent group belongs. This parameter has a value only when all disk snapshots in the snapshot-consistent group belong to the same instance. If disk snapshots in the snapshot-consistent group belong to different instances, you can use parameters starting with `Snapshots.Snapshot.Tags.` in the response to view the ID of the instance to which each snapshot in the snapshot-consistent group belongs.
Name	String	testName	The name of the snapshot-consistent group.
ResourceGroupId	String	rg-bp67acfmxazb4p****	The ID of the resource group to which the snapshot-consistent group belongs.
Tags	Array of Tag		The tags of the snapshot-consistent group.
Tag			
Key	String	TestKey	The tag key of the snapshot-consistent group.
Value	String	TestValue	The tag value of the snapshot-consistent group.

Parameter	Type	Example	Description
Snapshots	Array of Snapshot		Details of the snapshots in the snapshot-consistent group.
Snapshot			
SourceDiskId	String	d-j6c3ogynmvpi6wy7****	The ID of the source disk. This parameter is retained even after the source disk of the snapshot is released.
Progress	String	100%	The progress of the snapshot creation task. Unit: percent (%).
InstantAccessRetentionDays	Integer	3	The retention period of the instant access feature. After the retention period ends, the snapshot is automatically released.
SnapshotId	String	s-j6cbzmrlbf09w72q****	The ID of the snapshot.
InstantAccess	Boolean	true	Indicates whether the instant access feature is enabled. Valid values: • true: The instant access feature is enabled. This feature can be enabled only for enhanced SSDs (ESSDs). • false: The instant access feature is disabled. The snapshot is a normal snapshot for which the instant access feature is disabled.
SourceDiskType	String	system	The type of the source disk. Valid values: • system: system disk • data: data disk
Tags	Array of Tag		The tags of the snapshots in the snapshot-consistent group. The default value contains the details of the instance to which the snapshot-consistent group belongs.
Tag			
Key	String	acs:ecs:createFrom	The tag key of each snapshot in the snapshot-consistent group. The default values of Key and Value contain the details of the instance to which the snapshot-consistent group belongs.
Value	String	i-bp11qm0o3dk4iuc****	The tag value of each snapshot in the snapshot- consistent group. The default values of Key and Value contain the details of the instance to which the snapshot-consistent group belongs.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSnapshotGroups
&RegionId=cn-hangzhou
&SnapshotGroupId.1=ssg-j6ciyh3k52qp7ovm****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeSnapshotGroupsResponse>
    <NextToken>caeba0bbb2be03f84eb48b699f0a4883</NextToken>
    <RequestId>3F9A4CC4-362F-469A-B9EF-B3204EF8AA3A</RequestId>
    <SnapshotGroups>
        <SnapshotGroup>
            <Status>accomplished</Status>
            <Description>This is description.</Description>
            <InstanceId/>
            <CreationTime>2021-03-23T10:58:48Z</CreationTime>
            <SnapshotGroupId>ssg-j6ciyh3k52qp7ovm****</SnapshotGroupId>
            <ResourceGroupId>rg-bp67acfmxazb4p****</ResourceGroupId>
            <Name>testName</Name>
            <Tags>
                <Tag>
                    <Value>TestValue</Value>
                    <Key>TestKey</Key>
                </Tag>
            </Tags>
            <Snapshots>
                <Snapshot>
                    <SnapshotId>s-j6cbzmrlbf09w72q****</SnapshotId>
                    <Progress>100%</Progress>
                    <InstantAccessRetentionDays>3</InstantAccessRetentionDays>
                    <SourceDiskType>system</SourceDiskType>
                    <SourceDiskId>d-j6c3ogynmvpi6wy7****</SourceDiskId>
                    <Tags>
                        <Tag>
                            <Value>i-bp11qm0o3dk4iuc****</Value>
                            <Key>acs:ecs:createFrom</Key>
                        </Tag>
                    </Tags>
                </Snapshot>
                <Snapshot>
                    <SnapshotId>s-bp1fgrjucs8wr31****</SnapshotId>
                    <Progress>100%</Progress>
                    <SourceDiskType>system</SourceDiskType>
                    <SourceDiskId>d-bp1bcsu5leotddp****</SourceDiskId>
                    <Tags>
                        <Tag>
                            <Value>i-bp1emqgxsg88zdl****</Value>
                            <Key>acs:ecs:createFrom</Key>
                        </Tag>
                    </Tags>
                </Snapshot>
            </Snapshots>
        </SnapshotGroup>
    </SnapshotGroups>
</DescribeSnapshotGroupsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "NextToken" : "caeba0bbb2be03f84eb48b699f0a4883",
  "RequestId" : "3F9A4CC4-362F-469A-B9EF-B3204EF8AA3A",
  "SnapshotGroups" : {
    "SnapshotGroup" : [ {
      "Status" : "accomplished",
      "Description" : "This is description.",
      "InstanceId" : "",
      "CreationTime" : "2021-03-23T10:58:48Z",
      "SnapshotGroupId" : "ssg-j6ciyh3k52qp7ovm****",
      "ResourceGroupId" : "rg-bp67acfmxazb4p****",
      "Name" : "testName",
      "Tags" : {
        "Tag" : [ {
          "Value" : "TestValue",
          "Key" : "TestKey"
        } ]
      },
      "Snapshots" : {
        "Snapshot" : [ {
          "SnapshotId" : "s-j6cbzmrlbf09w72q****",
          "Progress" : "100%",
          "InstantAccessRetentionDays" : 3,
          "SourceDiskType" : "system",
          "SourceDiskId" : "d-j6c3ogynmvpi6wy7****",
          "Tags" : {
            "Tag" : [ {
              "Value" : "i-bp11qm0o3dk4iuc****",
              "Key" : "acs:ecs:createFrom"
            } ]
          }
        }, {
          "SnapshotId" : "s-bp1fgrjucs8wr31****",
          "Progress" : "100%",
          "SourceDiskType" : "system",
          "SourceDiskId" : "d-bp1bcsu5leotddp****",
          "Tags" : {
            "Tag" : [ {
              "Value" : "i-bp1emqgxsg88zdl****",
              "Key" : "acs:ecs:createFrom"
            } ]
          }
        } ]
      }
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidStatus.ValueNotSupported	%s	The error message returned because the operation is not supported while the resource is in the current state.

For a list of error codes, visit the API Error Center.

16.16. DeleteSnapshotGroup

Deletes a snapshot-consistent group.

Description

If you have custom images that were created from a disk snapshot contained in a snapshot-consistent group, the disk snapshot is retained when the snapshot-consistent group is deleted. Before you can delete the disk snapshot, you must call the DeleteImage operation to delete the custom images. Then, you can call the DeleteSnapshot operation to delete the disk snapshot.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteSnapshotGroup	The operation that you want to perform. Set the value to **DeleteSnapshotGroup**.
RegionId	String	Yes	cn-hangzhou	The region ID of the snapshot-consistent group. You can call the DescribeRegions operation to query the most recent region list.
SnapshotGroupId	String	Yes	ssg-j6c9lpuyxo2uxxny****	The ID of the snapshot-consistent group. You can call the DescribeSnapshotGroups operation to query the IDs of one or more snapshot-consistent groups.

Response parameters

Parameter	Type	Example	Description
RequestId	String	6EDE885A-FDC1-4FAE-BC44-6EACAEA6CC6E	The ID of the request.
OperationProgressSet	Array of OperationProgress		Details about the delete operation.
OperationProgress			
ErrorMsg	String	testErrorMsg	The error message. This parameter is empty when the operation was successful. For information about error codes and error messages, visit the API error center.
ErrorCode	String	400	The error code. This parameter is empty when the operation was successful. For information about error codes and error messages, visit the API error center.
OperationStatus	String	Success	Indicates whether the operation was successful. If the operation was successful, a value of Success is returned. If the operation failed, an error code and an error message are returned.
RelatedItemSet	Array of RelatedItem		Details about the resources.
RelatedItem			
Name	String	SnapshotId	The name of the resource.
Value	String	s-j6c9lpuyxo2uxxnx****	The ID of the resource.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteSnapshotGroup
&RegionId=cn-hangzhou
&SnapshotGroupId=ssg-j6c9lpuyxo2uxxny****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DeleteSnapshotGroupResponse>
    <RequestId>6EDE885A-FDC1-4FAE-BC44-6EACAEA6CC6E</RequestId>
    <OperationProgressSet>
        <OperationProgress>
            <OperationStatus>Success</OperationStatus>
            <ErrorMsg/>
            <RelatedItemSet>
                <RelatedItem>
                    <Value>s-j6c9lpuyxo2uxxnx****</Value>
                    <Name>SnapshotId</Name>
                </RelatedItem>
            </RelatedItemSet>
            <ErrorCode/>
        </OperationProgress>
        <OperationProgress>
            <OperationStatus>Success</OperationStatus>
            <ErrorMsg/>
            <RelatedItemSet>
                <RelatedItem>
                    <Value>s-j6c9lpuyxo2uxxnx****</Value>
                    <Name>SnapshotId</Name>
                </RelatedItem>
            </RelatedItemSet>
            <ErrorCode/>
        </OperationProgress>
    </OperationProgressSet>
</DeleteSnapshotGroupResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "6EDE885A-FDC1-4FAE-BC44-6EACAEA6CC6E",
  "OperationProgressSet" : {
    "OperationProgress" : [ {
      "OperationStatus" : "Success",
      "ErrorMsg" : "",
      "RelatedItemSet" : {
        "RelatedItem" : [ {
          "Value" : "s-j6c9lpuyxo2uxxnx****",
          "Name" : "SnapshotId"
        } ]
      },
      "ErrorCode" : ""
    }, {
      "OperationStatus" : "Success",
      "ErrorMsg" : "",
      "RelatedItemSet" : {
        "RelatedItem" : [ {
          "Value" : "s-j6c9lpuyxo2uxxnx****",
          "Name" : "SnapshotId"
        } ]
      },
      "ErrorCode" : ""
    } ]
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
403	SnapshotCreatedImage	The snapshot has been used to create user defined image(s).	The error message returned because the specified snapshot has been used to create custom images and cannot be deleted. You must call the DeleteImage operation to delete the custom images before you can delete the snapshot.

HttpCode	Error code	Error message	Description
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.

For a list of error codes, visit the API Error Center.

16.17. ModifySnapshotGroup

Modifies the name and description of a snapshot-consistent group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySnapshotGroup	The operation that you want to perform. Set the value to **ModifySnapshotGroup**.
RegionId	String	Yes	cn-hangzhou	The region ID of the snapshot-consistent group. You can call the DescribeRegions operation to query the most recent region list.
SnapshotGroupId	String	Yes	ssg-j6ciyh3k52qp7ovm****	The ID of the snapshot-consistent group. You can call the DescribeSnapshotGroups operation to query the IDs of one or more snapshot-consistent groups.
Name	String	No	testName02	The new name of the snapshot-consistent group. The name must be 2 to 128 characters in length. It can contain letters, digits, periods (.), underscores (_), hyphens (-), and colons (:). It must start with a letter or a digit and cannot start with `http://` or `https://`.
Description	String	No	This is new description	The new description of the snapshot-consistent group. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
RequestId	String	A00B5E55-76B7-42C8-8A80-AF10E980DCC7	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifySnapshotGroup
&RegionId=cn-hangzhou
&SnapshotGroupId=ssg-j6ciyh3k52qp7ovm****
&Name=testName02
&Description=This is new description
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifySnapshotGroupResponse>
    <RequestId>A00B5E55-76B7-42C8-8A80-AF10E980DCC7</RequestId>
</ModifySnapshotGroupResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "A00B5E55-76B7-42C8-8A80-AF10E980DCC7"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidParameter.Name	The specified Name is invalid.	The error message returned because the specified Name parameter is invalid.

For a list of error codes, visit the API Error Center.

17.Prefix lists

17.1. CreatePrefixList

Creates a prefix list.

Description

- A prefix list is a set of one or more network prefixes (CIDR blocks). You can reference prefix lists to configure network rules for other network resources. For more information, see Overview.
- When you create a prefix list, take note of the following items:
  - You must specify an IP address family (IPv4 or IPv6) for the prefix list, and cannot change the IP address family after the prefix list is created. You cannot combine IPv4 and IPv6 CIDR blocks in a single prefix list.
  - You must specify the maximum number of entries that the prefix list can contain. You cannot modify the maximum number of entries after the prefix list is created.
  - You can specify one or more entries for the prefix list. Each entry consists of a CIDR block and a description for the CIDR block. The total number of your specified entries cannot exceed the maximum number.
- For more information about the limits on prefix lists and other resources, see Limits.
- You can create RAM users and grant them minimum permissions. This eliminates the need to share the AccessKey pair of your Alibaba Cloud account with other users and reduces security risks for your enterprises. For information about how to grant permissions on prefix lists to RAM users, see Grant permissions on prefix lists to RAM users

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreatePrefixList	The operation that you want to perform. Set the value to **CreatePrefixList**.
RegionId	String	Yes	cn-chengdu	The ID of the region in which to create the prefix list.
MaxEntries	Integer	Yes	10	The maximum number of entries that the prefix list can contain. Valid values: 1 to 200.
AddressFamily	String	Yes	IPv4	The IP address family. Valid values: • IPv4 • IPv6
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The `ClientToken` value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
PrefixListName	String	Yes	PrefixListNameSample	The name of the prefix list. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://`, `https://`, `com.aliyun`, or `com.alibabacloud`. It can contain letters, digits, colons (:), underscores (_), periods (.), and hyphens (-).
Description	String	No	This is description.	The description of the prefix list. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.

Parameter	Type	Required	Example	Description
Entry.N.Description	String	No	Description Sample 01	The description in entry N. The description must be 2 to 32 characters in length and cannot start with `http://` or `https://`. Valid values of N: 0 to 200.
Entry.N.Cidr	String	Yes	192.168.1.0/24	The CIDR block in entry N. Valid values of N: 0 to 200. Take note of the following items: • The total number of entries must not exceed the `MaxEntries` value. • CIDR block types are determined by the IP address family. You cannot combine IPv4 and IPv6 CIDR blocks in a single prefix list. • CIDR blocks must be unique across all entries in a prefix list. For example, you cannot specify 192.168.1.0/24 twice in the entries of the prefix list. • IP addresses are supported. The system converts IP addresses into CIDR blocks. For example, if you specify 192.168.1.100, the system converts it into the 192.168.1.100/32 CIDR block. • If an IPv6 CIDR block is used, the system converts it to the zero compression format and changes uppercase letters into lowercase ones. For example, if you specify 2001:0DB8:0000:0000:0000:0000:0000/32, the system converts it into 2001:db8::/32. For more information about CIDR blocks, see the "What is CIDR block?" section of the Network FAQ topic. This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
PrefixListId	String	pl-x1j1k5ykzqlixdcy****	The ID of the prefix list.
RequestId	String	38793DB8-A4B2-4AEC-BFD3-111234E9188D	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreatePrefixList
&RegionId=cn-chengdu
&AddressFamily=IPv4
&MaxEntries=20
&Entry.1.Cidr=192.168.1.0/24
&Entry.1.Description=Description Sample 01
&PrefixListName=PrefixListNameSample
&Description=This is description.
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreatePrefixListResponse>
    <RequestId>38793DB8-A4B2-4AEC-BFD3-111234E9188D</RequestId>
    <PrefixListId>pl-x1j1k5ykzqlixdcy****</PrefixListId>
</CreatePrefixListResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "38793DB8-A4B2-4AEC-BFD3-111234E9188D",
  "PrefixListId" : "pl-x1j1k5ykzqlixdcy****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter.AddressFamily	The parameter AddressFamily should be IPv4 or IPv6.	The error message returned because the specified AddressFamily parameter is invalid. The valid values of this parameter are IPv4 and IPv6.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidParameter.PrefixListName	The parameter PrefixListName is not valid.	The error message returned because the specified PrefixListName parameter is invalid.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
400	InvalidParameter.CidrMalformed	%s	The error message returned because the specified Entry.N.Cidr parameter is invalid.
400	InvalidParameter.CidrDuplicated	%s	The error message returned because duplicate CIDR blocks are specified in one or more entries.
400	LimitExceed.Entry	The number of entries added or removed exceeds the limit.	The error message returned because the number of entries to add or remove at a time exceeds the limit.
400	LimitExceed.MaxEntries	The number of entries exceeds the MaxEntries of the specified prefix list.	The error message returned because the number of specified entries exceeds the MaxEntries value.
404	LimitExceed.PrefixListPerRegion	The number of prefix lists in the region exceeds the limit.	The error message returned because the maximum number of prefix lists in the current region has been reached.

For a list of error codes, visit the API Error Center.

17.2. DescribePrefixLists

Queries the information of one or more prefix lists.

Description

You can specify the `AddressFamily`, `PrefixListId.N`, and `PrefixListName` request parameters to be queried. Specified parameters have logical AND relations. Only the specified parameters are included in the filter conditions.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribePrefixLists	The operation that you want to perform. Set the value to **DescribePrefixLists**.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-chengdu	The region ID. You can call the DescribeRegions operation to query the most recent region list.
PrefixListName	String	No	PrefixListNameSample	The name of the prefix list.
NextToken	String	No	AAAAAdDWBF2****	The query token. Set the value to the `NextToken` value returned in the previous call to the DescribePrefixLists operation. Leave this parameter empty the first time you call this operation.
MaxResults	Integer	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.
AddressFamily	String	No	IPv4	The IP address family of the prefix list. Valid values: • IPv4 • IPv6 This parameter is empty by default, which indicates that all prefix lists are queried.
PrefixListId.N	String	No	pl-x1j1k5ykzqlixdcy****	The ID of prefix list N. Valid values of N: 0 to 100.

Response parameters

Parameter	Type	Example	Description
NextToken	String	AAAAAdDWBF2****	The query token returned in this call. If the return value is empty, no more data is returned.
RequestId	String	38793DB8-A4B2-4AEC-BFD3-111234E9188D	The ID of the request.
PrefixLists	Array of PrefixList		Details about the prefix lists.
PrefixList			
CreationTime	String	2021-02-20T07:11Z	The time when the prefix list was created.
AssociationCount	Integer	1	The number of associated resources.
MaxEntries	Integer	20	The maximum number of entries that the prefix list can contain.
Description	String	This is description.	The description of the prefix list.
AddressFamily	String	IPv4	The IP address family of the prefix list. Valid values: • IPv4 • IPv6
PrefixListName	String	PrefixListNameSample	The name of the prefix list.
PrefixListId	String	pl-x1j1k5ykzqlixdcy****	The ID of the prefix list.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=DescribePrefixLists
&RegionId=cn-chengdu
&PrefixListName=PrefixListNameSample
&NextToken=AAAAAdDWBF2****
&MaxResults=10
&AddressFamily=IPv4
&PrefixListId=["pl-x1j1k5ykzqlixdcy****"]
&<Common request parameters>
```

Sample responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribePrefixListsResponse>
    <NextToken>AAAAAdDWBF2****</NextToken>
    <RequestId>38793DB8-A4B2-4AEC-BFD3-111234E9188D</RequestId>
    <PrefixLists>
        <CreationTime>2021-02-20T07:11Z</CreationTime>
        <AssociationCount>1</AssociationCount>
        <MaxEntries>20</MaxEntries>
        <Description>This is description.</Description>
        <AddressFamily>IPv4</AddressFamily>
        <PrefixListName>PrefixListNameSample</PrefixListName>
        <PrefixListId>pl-x1j1k5ykzqlixdcy****</PrefixListId>
    </PrefixLists>
</DescribePrefixListsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "NextToken" : "AAAAAdDWBF2****",
  "RequestId" : "38793DB8-A4B2-4AEC-BFD3-111234E9188D",
  "PrefixLists" : [ {
    "CreationTime" : "2021-02-20T07:11Z",
    "AssociationCount" : 1,
    "MaxEntries" : 20,
    "Description" : "This is description.",
    "AddressFamily" : "IPv4",
    "PrefixListName" : "PrefixListNameSample",
    "PrefixListId" : "pl-x1j1k5ykzqlixdcy****"
  } ]
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	LimitExceed.PrefixListId	The specified number of PrefixListId exceeds the limit.	The error message returned because the maximum number of prefix lists has been reached.

For a list of error codes, visit the API Error Center.

17.3. DescribePrefixListAssociations

Queries the information of resources that are associated with a specific prefix list.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribePrefixListAssociations	The operation that you want to perform. Set the value to **DescribePrefixListAssociations**.
RegionId	String	Yes	cn-chengdu	The region ID of the prefix list. You can call the DescribeRegions operation to query the most recent region list.
PrefixListId	String	Yes	pl-x1j1k5ykzqlixdcy****	The ID of the prefix list.
NextToken	String	No	AAAAAdDWBF2****	The query token. Set the value to the `NextToken` value returned in the previous call to the DescribePrefixListAssociations operation. Leave this parameter empty the first time you call this operation.
MaxResults	Integer	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
NextToken	String	AAAAAdDWBF2****	The query token returned in this call. If the return value is empty, no more data is returned.
RequestId	String	38793DB8-A4B2-4AEC-BFD3-111234E9188D	The ID of the request.
PrefixListAssociations	Array of PrefixListAssociation		Details about the resources that are associated with the prefix list.
PrefixListAssociation			
ResourceId	String	sg-bp11ujym6xsff6l0****	The ID of the resource.
ResourceType	String	securitygroup	The type of the resource.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=DescribePrefixListAssociations
&RegionId=cn-chengdu
&PrefixListId=pl-x1j1k5ykzqlixdcy****
&NextToken=AAAAAdDWBF2****
&MaxResults=10
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribePrefixListAssociationsResponse>
    <NextToken>AAAAAdDWBF2****</NextToken>
    <RequestId>38793DB8-A4B2-4AEC-BFD3-111234E9188D</RequestId>
    <PrefixListAssociations>
        <ResourceId>sg-bp11ujym6xsff6l0****</ResourceId>
        <ResourceType>securitygroup</ResourceType>
    </PrefixListAssociations>
</DescribePrefixListAssociationsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "NextToken" : "AAAAAdDWBF2****",
  "RequestId" : "38793DB8-A4B2-4AEC-BFD3-111234E9188D",
  "PrefixListAssociations" : [ {
    "ResourceId" : "sg-bp11ujym6xsff6l0****",
    "ResourceType" : "securitygroup"
  } ]
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	NotSupported.ResourceType	The specified resource type is not supported.	The error message returned because the specified resource type is not supported.
404	InvalidPrefixListId.NotFound	The specified prefix list was not found.	The error message returned because the specified prefix list does not exist.

For a list of error codes, visit the API Error Center.

17.4. DescribePrefixListAttributes

Queries the details of a prefix list, including the name, address family, maximum number of entries, and details of the entries.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribePrefixListAttributes	The operation that you want to perform. Set the value to **DescribePrefixListAttributes**.
RegionId	String	Yes	cn-chengdu	The region ID of the prefix list. You can call the DescribeRegions operation to query the most recent region list.
PrefixListId	String	Yes	pl-x1j1k5ykzqlixdcy****	The ID of the prefix list.

Response parameters

Parameter	Type	Example	Description
CreationTime	String	2021-02-20T07:11Z	The time when the prefix list was created.
MaxEntries	Integer	10	The maximum number of entries that the prefix list can contain.
RequestId	String	38793DB8-A4B2-4AEC-BFD3-111234E9188D	The ID of the request.
Description	String	This is description.	The description of the prefix list.

Parameter	Type	Example	Description
AddressFamily	String	IPv4	The IP address family of the prefix list. Valid values: • IPv4 • IPv6
PrefixListName	String	PrefixListNameSample	The name of the prefix list.
PrefixListId	String	pl-x1j1k5ykzqlixdcy****	The ID of the prefix list.
Entries	Array of Entry		Details about the entries in the prefix list.
Entry			
Description	String	Description Sample 01	The description of the entry in the prefix list.
Cidr	String	192.168.1.0/24	The CIDR block in the entry in the prefix list.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=DescribePrefixListAttributes
&RegionId=cn-chengdu
&PrefixListId=pl-x1j1k5ykzqlixdcy****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribePrefixListAttributesResponse>
    <CreationTime>2021-02-20T07:11Z</CreationTime>
    <MaxEntries>10</MaxEntries>
    <RequestId>38793DB8-A4B2-4AEC-BFD3-111234E9188D</RequestId>
    <Description>This is description.</Description>
    <AddressFamily>IPv4</AddressFamily>
    <PrefixListName>PrefixListNameSample</PrefixListName>
    <PrefixListId>pl-x1j1k5ykzqlixdcy****</PrefixListId>
    <Entries>
        <Description>Description Sample 01</Description>
        <Cidr>192.168.1.0/24</Cidr>
    </Entries>
</DescribePrefixListAttributesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "CreationTime" : "2021-02-20T07:11Z",
  "MaxEntries" : 10,
  "RequestId" : "38793DB8-A4B2-4AEC-BFD3-111234E9188D",
  "Description" : "This is description.",
  "AddressFamily" : "IPv4",
  "PrefixListName" : "PrefixListNameSample",
  "PrefixListId" : "pl-x1j1k5ykzqlixdcy****",
  "Entries" : [ {
    "Description" : "Description Sample 01",
    "Cidr" : "192.168.1.0/24"
  } ]
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidPrefixListId.NotFound	The specified prefix list was not found.	The error message returned because the specified prefix list does not exist.

For a list of error codes, visit the API Error Center.

17.5. ModifyPrefixList

Modifies the name, description, or entries of a specific prefix list.

Description

- The specified CIDR block must be valid. For example, 10.0.0.0/8 is a valid CIDR block while 10.0.0.1/8 is not. For more information, see the What is CIDR? section in Network FAQ.
- When you add or delete an entry, you cannot specify duplicate CIDR blocks. Examples:
  - For IPv4 CIDR blocks, you cannot specify the 10.0.0.0/8 CIDR block in two entries. You cannot specify the 10.0.0.1/32 CIDR block in one entry and the 10.0.0.1 CIDR block in another entry. These two CIDR blocks are the same.
  - For IPv6 CIDR blocks, you cannot specify the 2001:fd01:0:0:0:0:0:0/32 CIDR block in one entry and the 2001:fd01::/32 CIDR block in another entry. These two CIDR blocks are the same.
- The CIDR block in an entry to be added cannot the same as that in an entry to be deleted. For example, when you add an entry in which the 10.0.0.0/8 CIDR block is specified, the entry to be deleted cannot have the 10.0.0.0/8 CIDR block specified.
- If you want to modify the description of an entry, you must specify the CIDR block (`AddEntry.N.Cidr`) and new description (`AddEntry.N.Description`) in the entry.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyPrefixList	The operation that you want to perform. Set the value to **ModifyPrefixList**.
RegionId	String	Yes	cn-chengdu	The region ID of the prefix list. You can call the DescribeRegions operation to query the most recent region list.
PrefixListId	String	Yes	pl-x1j1k5ykzqlixdcy****	The ID of the prefix list.
PrefixListName	String	No	PrefixListNameSample	The name of the prefix list. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` , `https://` , `com.aliyun` , or `com.alibabacloud` . It can contain letters, digits, colons (:), underscores (_), periods (.), and hyphens (-).
Description	String	No	This is description.	The description of the prefix list. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://` .
AddEntry.N.Description	String	No	Description Sample 01	The description in entry N. The description must be 2 to 32 characters in length and cannot start with `http://` or `https://` . Valid values of N: 0 to 200.

Parameter	Type	Required	Example	Description
AddEntry.N.Cidr	String	Yes	192.168.2.0/24	The CIDR block of entry N to be added to the prefix list. Valid values of N: 0 to 200. Take note of the following items when you add the entries: • The number of entries in the prefix list cannot be greater than the maximum number of entries allowed for the prefix list. You can call the DescribePrefixListAttributes operation to query the maximum number of entries in a specific prefix list. • You cannot specify duplicate CIDR blocks. • The CIDR blocks cannot be the same as the `RemoveEntry.N.Cidr` values.
RemoveEntry.N.Cidr	String	Yes	192.168.1.0/24	The CIDR block of entry N to be deleted from the prefix list. Valid values of N: 0 to 200. Take note of the following items when you delete the entries: • You cannot specify duplicate CIDR blocks. • The CIDR blocks cannot be the same as the `AddEntry.N.Cidr` values.

Response parameters

Parameter	Type	Example	Description
RequestId	String	38793DB8-A4B2-4AEC-BFD3-111234E9188D	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=ModifyPrefixList
&RegionId=cn-chengdu
&PrefixListId=pl-x1j1k5ykzqlixdcy****
&PrefixListName=PrefixListNameSample
&Description=This is description.
&AddEntry=[{"Description":"Description Sample 01","Cidr":"192.168.2.0/24"}]
&RemoveEntry=[{"Cidr":"192.168.1.0/24"}]
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyPrefixListResponse>
    <RequestId>38793DB8-A4B2-4AEC-BFD3-111234E9188D</RequestId>
</ModifyPrefixListResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "38793DB8-A4B2-4AEC-BFD3-111234E9188D"
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter.PrefixListName	The parameter PrefixListName is not valid.	The error message returned because the specified PrefixListName parameter is invalid.
400	InvalidParameter.CidrDuplicated	%s	The error message returned because duplicate CIDR blocks are specified in one or more entries.
400	InvalidParameter.CidrMalformed	%s	The error message returned because the specified CIDR block is invalid.
400	LimitExceed.MaxEntries	The number of entries exceeds the MaxEntries of the specified prefix list.	The error message returned because the number of specified entries exceed the maximum number of entries that can be supported by the specified prefix list.
400	LimitExceed.Entry	The number of entries added or removed exceeds the limit.	The error message returned because the number of entries to add or remove at a time exceeds the limit.
404	InvalidPrefixListId.NotFound	The specified prefix list was not found.	The error message returned because the specified prefix list does not exist.

For a list of error codes, visit the API Error Center.

17.6. DeletePrefixList

Deletes a prefix list and all entries in the prefix list.

Description

If a prefix list is associated with resources, you cannot delete the prefix list. You must disassociate the prefix list from the resources before you can delete the prefix list. You can call the DescribePrefixListAssociations operation to query resources that are associated with a specific prefix list.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeletePrefixList	The operation that you want to perform. Set the value to **DeletePrefixList**.
RegionId	String	Yes	cn-chengdu	The region ID of the prefix list. You can call the DescribeRegions operation to query the most recent region list.
PrefixListId	String	Yes	pl-x1j1k5ykzqlixdcy****	The ID of the prefix list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	38793DB8-A4B2-4AEC-BFD3-111234E9188D	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeletePrefixList
&RegionId=cn-chengdu
&PrefixListId=pl-x1j1k5ykzqlixdcy****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DeletePrefixListResponse>
    <RequestId>38793DB8-A4B2-4AEC-BFD3-111234E9188D</RequestId>
</DeletePrefixListResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "38793DB8-A4B2-4AEC-BFD3-111234E9188D"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	NotAllowed.AssociationExist	The specified prefix list has associated resources.	The error message returned because the prefix list is associated with resources.
404	InvalidPrefixListId.NotFound	The specified prefix list was not found.	The error message returned because the specified prefix list does not exist.

For a list of error codes, visit the API Error Center.

18.Security groups

18.1. CreateSecurityGroup

Creates a security group. By default, a new security group allows mutual access between instances in the security group. Access requests to the security group from outside are denied. If you want to allow requests from the Internet or requests from instances in other security groups, you can call the AuthorizeSecurityGroup operation.

Description

When you call this operation, take note of the following items:

- You can create a maximum of 100 security groups within a single Alibaba Cloud region.
- To create a security group of the Virtual Private Cloud (VPC) type, you must specify the VpcId parameter.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateSecurityGroup	The operation that you want to perform. Set the value to **CreateSecurityGroup**.
RegionId	String	Yes	cn-hangzhou	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
Description	String	No	testDescription	The description of the security group. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
SecurityGroupName	String	No	testSecurityGroupName	The name of the security group. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
VpcId	String	No	vpc-bp1opxu1zkhn00gzv****	The ID of the VPC in which to create the security group. **Note** If the specified region supports the classic network, you can create security groups of the classic network type without specifying the VpcId parameter. If the specified region does not support the classic network, you must specify the VpcId parameter to create security groups of the VPC type.
SecurityGroupType	String	No	enterprise	The type of the security group. Valid values: - normal: basic security group - enterprise: advanced security group. For more information, see Advanced security groups.

Parameter	Type	Required	Example	Description
ServiceManaged	Boolean	No	false	This parameter is unavailable.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the security group belongs.
Tag.N.key	String	No	null	The key of tag N of the security group. **Note** This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N of the security group. Valid values of N: 1 to 20. The tag key cannot be an empty string. The tag key can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	TestValue	The value of tag N of the security group. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with acs: or contain http:// or https://.
Tag.N.value	String	No	null	The value of tag N of the security group. **Note** This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.

Response parameters

Parameter	Type	Example	Description
SecurityGroupId	String	sg-bp1fg655nh68xyz9****	The ID of the security group.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateSecurityGroup
&RegionId=cn-hangzhou
&Description=testDescription
&VpcId=vpc-bp1opxu1zkhn00gzv****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateSecurityGroupResponse>
    <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
    <SecurityGroupId>sg-bp1fg655nh68xyz9****</SecurityGroupId>
</CreateSecurityGroupResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "CEF72CEB-54B6-4AE8-B225-F876FF7BA984",
  "SecurityGroupId" : "sg-bp1fg655nh68xyz9****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidSecurityGroupName.Malformed	Specified security group name is not valid.	The error message returned because the specified SecurityGroupName parameter is invalid. The SecurityGroupName parameter is empty by default. If this parameter is specified, the specified name is displayed in the Elastic Compute Service (ECS) console. The name must be 2 to 128 characters in length. It must start with a letter and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It cannot start with http:// or https://.
400	InvalidSecurityGroupDiscription.Malformed	Specified security group description is not valid.	The error message returned because the specified description of the security group is invalid.
400	IncorrectVpcStatus	Current VPC status does not support this operation.	The error message returned because the operation is not supported while the VPC is in the current state.
400	InvalidTagKey.Malformed	Specified tag key is not valid.	The error message returned because the specified tag key is invalid.
400	InvalidTagValue.Malformed	Specified tag value is not valid.	The error message returned because the specified tag value is invalid.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	InvalidParams.GroupType	The specified security group type is not valid.	The error message returned because the specified type of the security group is invalid. Check whether the SecurityGroupType parameter is valid.
400	InvalidParams.VpcIdGroupType	Only VPC instance supports enterprise level security group.	The error message returned because only ECS instances of the VPC type support advanced security groups.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	QuotaExceed.SecurityGroup	The maximum number of security groups is reached.	The error message returned because the maximum number of security groups has been reached. Submit a ticket to request a quota increase.

HTTP status code	Error code	Error message	Description
403	InvalidVpcId.NotFound	vpc id must not empty when only support vpc vm.	The error message returned because the VpcId parameter is not specified.
403	IdempotentProcessing	The previous idempotent request(s) is still processing.	The error message returned because a previous idempotent request is being processed. Try again later.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit. %s is a variable. An error message is dynamically returned based on call conditions.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because you cannot modify security groups managed by cloud services.
404	InvalidVpcId.NotFound	Specified VPC does not exist.	The error message returned because the specified VpcId parameter does not exist.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified resource group does not exist.

For a list of error codes, visit the API Error Center.

18.2. AuthorizeSecurityGroup

Creates an inbound rule in a security group. You can use the created rule to allow or deny inbound traffic from other hosts to instances in the security group.

Description

In the security group-related API documents, inbound traffic is sent by the source and received by the destination.

When you call this operation, take note of the following items:

- The total number of outbound and inbound rules in each security group cannot exceed 200.
- The valid value of Priority ranges from 1 to 100. A smaller value indicates a higher priority.
- When multiple security group rules have the same priority, drop rules take precedence.
- The source can belong to a CIDR block specified by SourceCidrIp, Ipv6SourceCidrIp, or SourcePrefixListId or can be Elastic Compute Service (ECS) instances in a security group specified by SourceGroupId.
- For advanced security groups, security groups are not supported as authorization objects.
- For each basic security group, a maximum of 20 security groups are supported as authorization objects.
- If the rule that you want to create matches an existing rule, after the AuthorizeSecurityGroup operation is called, no rule is created.
- You can determine a security group rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying only one parameter.
  - Parameters used to specify an inbound security group rule that controls access from a specific CIDR block: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, and SourceCidrIp. For a security group in the classic network, you can set the NicType parameter to internet or intranet. For a security group in a virtual private cloud (VPC), you must set the NicType parameter to intranet. Sample request:

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroup
&SecurityGroupId=sg-F876FF7**
&SourceCidrIp=10.0.0.0/8
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=accept
&<Common request parameters>
```

- Parameters used to specify an inbound security group rule that controls access from a security group: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, SourceGroupOwnerAccount, and SourceGroupId. In this case, you must set the NicType parameter to intranet. For mutual access between security groups in the classic network, you can allow or deny another security group in the same region access to your security group. The security group that is allowed access to your security group can belong to your own Alibaba Cloud account or another Alibaba Cloud account specified by the SourceGroupOwnerAccount parameter. For mutual access between security groups in VPCs, you can allow or deny another security group in the same VPC access to your security group. Sample request:

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroup
&SecurityGroupId=sg-F876FF7**
&SourceGroupId=sg-1651FBB**
&SourceGroupOwnerAccount=test@aliyun.com
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=drop
&<Common request parameters>
```

- Parameters used to specify an inbound security group rule in which a prefix list is referenced: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, and SourcePrefixListId. In this case, prefix lists support only security groups in VPCs. NicType must be set to intranet. Sample request:

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroup
&SecurityGroupId=sg-F876FF7**
&SourcePrefixListId=pl-x1j1k5ykzqlixdcy****
&SourceGroupOwnerAccount=test@aliyun.com
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=drop
&<Common request parameters>
```

- For information about examples on security group rule settings, see Security groups for different use cases and Security group quintuple rules.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AuthorizeSecurityGroup	The operation that you want to perform. Set the value to **AuthorizeSecurityGroup**.
RegionId	String	Yes	cn-hangzhou	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmxazb4p****	The ID of the destination security group.
IpProtocol	String	Yes	all	The transport layer protocol. The values of this parameter are case-sensitive. Valid values: • tcp • udp • icmp • gre • all: All protocols are supported. **Note** IpProtocol can be set to icmp only for IPv4 addresses.

Parameter	Type	Required	Example	Description
PortRange	String	Yes	22/22	The range of destination ports that correspond to the transport layer protocol. Valid values: • When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port number and the end port number with a forward slash (/). Example: 1/200. • When the IpProtocol parameter is set to icmp, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to gre, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to all, the port number range is -1/-1, which indicates all ports. For more information, see Typical applications of commonly used ports.
SourceGroupId	String	No	sg-bp67acfmxazb4p****	The ID of the source security group. At least one of `SourceGroupId` and `SourceCidrIp` must be specified. • If `SourceGroupId` is specified but `SourceCidrIp` is not specified, the `NicType` parameter must be set to `intranet`. • If both `SourceGroupId` and `SourceCidrIp` are specified, `SourceCidrIp` takes precedence. Take note of the following items: • For advanced security groups, security groups are not supported as authorization objects. • For each basic security group, a maximum of 20 security groups are supported as authorization objects.
SourceGroupOwnerId	Long	No	1234567890	The ID of the Alibaba Cloud account that manages the source security group when you set a security group rule across accounts. • If both `SourceGroupOwnerId` and `SourceGroupOwnerAccount` are empty, access permissions are configured for another security group managed by your account. • If `SourceCidrIp` is specified, the `SourceGroupOwnerId` parameter is ignored.
SourceGroupOwnerAccount	String	No	test@aliyun.com	The Alibaba Cloud account that manages the source security group when you set a security group rule across accounts. • If both `SourceGroupOwnerAccount` and `SourceGroupOwnerId` are empty, access permissions are configured for another security group managed by your account. • If `SourceCidrIp` is specified, the `SourceGroupOwnerAccount` parameter is ignored.
SourceCidrIp	String	No	10.0.0.0/8	The source IPv4 CIDR block to which you want to control access. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.

Parameter	Type	Required	Example	Description
Ipv6SourceCidrIp	String	No	2001:250:6000::***	The source IPv6 CIDR block to which you want to control access. CIDR blocks and IPv6 addresses are supported. **Note** Only the IPv6 addresses of the VPC type are supported. You cannot specify both the Ipv6SourceCidrIp parameter and the `SourceCidrIp` parameter. This parameter is empty by default.
SourcePrefixListId	String	No	pl-x1j1k5ykzqlixdcy****	The ID of the source prefix list to which you want to control access. You can call the DescribePrefixLists operation to query the IDs of available prefix lists. Take note of the following items: • If a security group is in the classic network, you cannot configure prefix lists in the security group rules. For information about the limits on security groups and prefix lists, see the "Security group limits" section in Limits. • If you specify the `SourceCidrIp`, `Ipv6SourceCidrIp`, or `SourceGroupId` parameter, this parameter is ignored.
SourcePortRange	String	No	22/22	The range of source ports that correspond to the transport layer protocol. Valid values: • When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port number and the end port number with a forward slash (/). Example: 1/200. • When the IpProtocol parameter is set to icmp, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to gre, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to all, the port number range is -1/-1, which indicates all ports.
DestCidrIp	String	No	10.0.0.0/8	The destination IPv4 CIDR block. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.
Ipv6DestCidrIp	String	No	2001:250:6000::***	The destination IPv6 CIDR block. CIDR blocks and IPv6 addresses are supported. **Note** Only the IPv6 addresses of the VPC type are supported. You cannot specify both the Ipv6DestCidrIp parameter and the `DestCidrIp` parameter. This parameter is empty by default.
Policy	String	No	accept	The authorization policy. Valid values: • accept: allows access. • drop: denies access and returns no responses. In this case, the request times out or the connection cannot be established.
Priority	String	No	1	The priority of the security group rule. A smaller value indicates a higher priority. Valid values: 1 to 100. Default value: 1.

Parameter	Type	Required	Example	Description

NicType	String	No	intranet	The network interface controller (NIC) type of the security group rule when the security group is in the classic network. Valid values:
				• internet: public NIC
				• intranet: internal NIC
				  ○ If the security group is in a VPC, this parameter is set to intranet by default and cannot be modified.
				  ○ If you specify only `SourceGroupId` when you configure access between security groups, this parameter must be set to intranet.
				Default value: internet.

ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Description	String	No	This is description.	The description of the security group rule. The description must be 1 to 512 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroup
&SecurityGroupId=sg-bp67acfmxazb4p****
&SourceCidrIp=10.0.0.0/8
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=accept
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<AuthorizeSecurityGroupResponse>
    <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</AuthorizeSecurityGroupResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	OperationDenied	The specified IpProtocol does not exist or IpProtocol and PortRange do not match.	The error message returned because the specified IpProtocol parameter does not exist or does not match the specified port range.
400	InvalidIpProtocol.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified IpProtocol or PortRange parameter is invalid.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist.
400	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type does not match the authorization object of the security group rule.
400	InvalidSourceGroupId.Mismatch	Specified security group and source group are not in the same VPC.	The error message returned because the destination security group and the source security group do not belong to the same VPC.
400	InvalidSourceGroup.NotFound	Specified source security group does not exist.	The error message returned because the specified inbound security group rule does not exist or because relevant parameters are not specified.
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the VPC does not support security groups.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType is not valid.	The error message returned because the specified NicType parameter does not exist.
400	InvalidSecurityGroupDiscription.Malformed	The specified security group rule description is not valid.	The error message returned because the specified Description parameter is invalid.
400	InvalidSecurityGroup.InvalidNetworkType	The specified security group network type is not support this operation, please check the security group network types. For VPC security groups, ClassicLink must be enabled.	The error message returned because the operation is not supported while the security group is of the current network type. If the network type is VPC, ClassicLink must be enabled.
400	MissingParameter.Source	One of the parameters SourceCidrIp, SourceGroupId or SourcePrefixListId must be specified.	The error message returned because the SourceCidrIp, SourceGroupId, and SourcePrefixListId parameters are all empty. At least one of the parameters must be specified.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or All.	The error message returned because the specified IpProtocol parameter is invalid. The valid values of this parameter are tcp, udp, icmp, gre, and all.
400	InvalidSecurityGroupId.Malformed	The specified parameter "SecurityGroupId" is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.
400	InvalidParamter.Conflict	The specified SourceCidrIp should be different from the DestCidrIp.	The error message returned because the value of SourceCidrIp is the same as that of DestCidrIp.
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.
400	InvalidParam.SourceIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol by mistake.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol by mistake.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.PrefixListAddressFamilyMismatch	The address family of the specified prefix list does not match the specified CidrIp.	The error message returned because the address family of the specified prefix list does not match that of the specified CIDR block.
400	NotSupported.ClassicNetworkPrefixList	The prefix list is not supported when the network type of security group is classic.	The error message returned because security groups in the classic network do not support prefix lists.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InvalidGressFlow.Malformed	The specified parameter GressFlow is not valid,it cause by internal,try calling again.	The error message returned because the specified GressFlow parameter is invalid.
403	InvalidSourceGroupId.Mismatch	NicType is required or NicType expects intranet.	The error message returned because the NicType parameter is not specified or is not set to intranet.
403	MissingParameter	The input parameter "SourceGroupId" or "SourceCidrIp" cannot be both blank.	The error message returned because both the SourceGroupId and SourceCidrIp parameters are empty.
403	AuthorizationLimitExceed	The limit of authorization records in the security group reaches.	The error message returned because the maximum number of rules in the security group has been reached.
403	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the destination security group is the same as the source security group.
403	InvalidNetworkType.Mismatch	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the destination security group is different from that of the source security group.
403	InvalidNetworkType.Conflict	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the destination security group is different from that of the source security group.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because you cannot modify security groups managed by cloud services.

HTTP status code	Error code	Error message	Description
403	LimitExceed.PrefixListAssociationResource	The number of resources associated with the prefix list exceeds the limit.	The error message returned because the maximum amount of resources that can be associated with the prefix list has been reached.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist within this account. Check whether the security group ID is correct.
404	InvalidSourceGroupId.NotFound	The SourceGroupId provided does not exist in our records.	The error message returned because the specified SourceGroupId parameter does not exist.
404	InvalidPrefixListId.NotFound	The specified prefix list was not found.	The error message returned because the specified prefix list does not exist.
404	NotSupported.GrayFunction	The prefix list is a gray-scale function, not currently supported.	The error message returned because this operation is not supported while the prefix list feature is in invitational preview.

For a list of error codes, visit the API Error Center.

18.3. AuthorizeSecurityGroupEgress

Creates an outbound rule in a security group. You can use the created rule to allow or deny outbound traffic from instances in the security group to other objects.

Description

In the security group-related API documents, traffic is sent by the source security group and received at the destination security group.

When you call this operation, take note of the following items:

- The total number of outbound and inbound security group rules in each security group cannot exceed 200.
- You can set Policy to accept or drop for each security group rule to allow or deny access.
- The valid value of Priority ranges from 1 to 100. A smaller value indicates a higher priority.
- When several security group rules have the same priority, drop rules take precedence.
- The destination can belong to a CIDR block specified by DestCidrIp, Ipv6DestCidrIp, or DestPrefixListId or can be Elastic Compute Service (ECS) instances in a security group specified by DestGroupId.
- For advanced security groups, security groups are not supported as authorization objects.
- For each basic security group, a maximum of 20 security groups are supported as authorization objects.
- If the rule that you want to create matches an existing rule, after the AuthorizeSecurityGroupEgress operation is called, no rule is created.
- You can determine a security group rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying only one parameter.
  - Parameters used to specify an outbound security group rule that controls access from a specific CIDR block: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, and DestCidrIp.

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroupEgress
&SecurityGroupId=sg-bp67acfmxazb4ph***
&IpProtocol=icmp
&DestCidrIp=10.0.0.0/8
&PortRange=-1/-1
&NicType=intranet
&Policy=Allow
&<Common request parameters>
```

- Parameters used to specify an outbound security group rule that controls access to another security group: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestGroupOwnerAccount, and DestGroupId.

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroupEgress
&SecurityGroupId=sg-bp67acfmxazb4ph***
&DestGroupId=sg-bp67acfmxazb4pi***
&DestGroupOwnerAccount=Test@aliyun.com
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=Drop
&<Common request parameters>
```

- Parameters used to specify an outbound security group rule that controls access to a security group in which a prefix list is referenced: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, and DestPrefixListId. In this case, prefix lists support only security groups in virtual private clouds (VPCs). NicType must be set to intranet.

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroupEgress
&SecurityGroupId=sg-bp67acfmxazb4ph***
&DestPrefixListId=pl-x1j1k5ykzqlixdcy****
&DestGroupOwnerAccount=Test@aliyun.com
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=Drop
&<Common request parameters>
```

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AuthorizeSecurityGroupEgress	The operation that you want to perform. Set the value to **AuthorizeSecurityGroupEgress**.
RegionId	String	Yes	cn-hangzhou	The region ID of the source security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmxazb4p****	The ID of the source security group.
IpProtocol	String	Yes	all	The transport layer protocol. The values of this parameter are case-sensitive. Valid values: • icmp • gre • tcp • udp • all: All protocols are supported.
PortRange	String	Yes	80/80	The range of destination ports that correspond to the transport layer protocol. Valid values: • When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port number and the end port number with a forward slash (/). Example: 1/200. • When the IpProtocol parameter is set to icmp, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to gre, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to all, the port number range is -1/-1, which indicates all ports.

Parameter	Type	Required	Example	Description
DestGroupId	String	No	sg-bp67acfmxazb4p****	The ID of the destination security group. You must specify at least one of the `DestGroupId` and `DestCidrIp` parameters. • If `DestGroupId` is specified but `DestCidrIp` is not specified, the `NicType` parameter must be set to intranet. • If both `DestGroupId` and `DestCidrIp` are specified, `DestCidrIp` takes precedence. Take note of the following items: • For advanced security groups, security groups are not supported as authorization objects. • For each basic security group, a maximum of 20 security groups are supported as authorization objects.
DestGroupOwnerId	Long	No	12345678910	The ID of the Alibaba Cloud account that manages the destination security group when you set a security group rule across accounts. • If both `DestGroupOwnerId` and `DestGroupOwnerAccount` are empty, the rule is created to control access to another security group within your Alibaba Cloud account. • If you specify the `DestCidrIp` parameter, the `DestGroupOwnerId` parameter is ignored.
DestGroupOwnerAccount	String	No	Test@aliyun.com	The Alibaba Cloud account that manages the destination security group when you set a security group rule across accounts. • If both `DestGroupOwnerAccount` and `DestGroupOwnerId` are empty, the rule is created to control access to another security group within your Alibaba Cloud account. • If `DestCidrIp` is specified, `DestGroupOwnerAccount` is ignored.
DestCidrIp	String	No	10.0.0.0/8	The destination IPv4 CIDR block to which you want to control access. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.
Ipv6DestCidrIp	String	No	2001:db8:1233:1a00::***	The destination IPv6 CIDR block to which you want to control access. CIDR blocks and IPv6 addresses are supported. **Note** Only the IP addresses of the VPC type are supported. You cannot specify both the Ipv6DestCidrIp parameter and the `DestCidrIp` parameter. This parameter is empty by default.
DestPrefixListId	String	No	pl-x1j1k5ykzqlixdcy****	The ID of the destination prefix list to which you want to control access. You can call the DescribePrefixLists operation to query the IDs of available prefix lists. Take note of the following items: • If a security group is in the classic network, you cannot reference prefix lists in the security group rules. For information about the limits on security groups and prefix lists, see the "Security group limits" section in Limits. • If you specify `DestCidrIp`, `Ipv6DestCidrIp`, or `DestGroupId`, DestPrefixListId is ignored.

Parameter	Type	Required	Example	Description
SourceCidrIp	String	No	10.0.0.0/8	The source IPv4 CIDR block. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00::***	The source IPv6 CIDR block. CIDR blocks and IPv6 addresses are supported. **Note** Only the IP addresses of the VPC type are supported. You cannot specify both the Ipv6SourceCidrIp parameter and the `SourceCidrIp` parameter. This parameter is empty by default.
SourcePortRange	String	No	80/80	The range of source ports that correspond to the transport layer protocol. Valid values: • When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port number and the end port number with a forward slash (/). Example: 1/200. • When the IpProtocol parameter is set to icmp, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to gre, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to all, the port number range is -1/-1, which indicates all ports.
Policy	String	No	accept	The authorization policy. Valid values: • accept: allows access. • drop: denies access and returns no responses. Default value: accept.
Priority	String	No	1	The priority of the security group rule. Valid values: 1 to 100. Default value: 1.

NicType	String	No	intranet	The network interface controller (NIC) type of the security group rule when the security group is in the classic network. Valid values:
				• internet: public NIC
				• intranet: internal NIC
				  ○ If the security group is in a VPC, this parameter is set to intranet by default and cannot be modified.
				  ○ If you specify only DestGroupId when you configure access between security groups, this parameter must be set to intranet.
				Default value: internet.

ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Description	String	No	This is description.	The description of the security group rule. The description must be 1 to 512 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroupEgress
&SecurityGroupId=sg-Fbp67acfmxazb4p****
&DestGroupId=sg-bp67acfmxazb4p****
&DestGroupOwnerAccount=Test@aliyun.com
&IpProtocol=all
&PortRange=22/22
&NicType=intranet
&Policy=Drop
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<AuthorizeSecurityGroupEgressResponse>
    <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</AuthorizeSecurityGroupEgressResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	OperationDenied	The specified IpProtocol does not exist or IpProtocol and PortRange do not match.	The error message returned because the specified IpProtocol parameter does not exist or does not match the specified port range.
400	InvalidIpProtocol.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified IpProtocol or PortRange parameter is invalid.
400	InvalidDestCidrIp.Malformed	The specified parameter "DestCidrIp" is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist.
400	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type does not match the authorization object of the security group rule.
400	InvalidDestGroupId.Mismatch	Specified security group and destination group are not in the same VPC.	The error message returned because the specified source and destination security groups do not belong to the same VPC.
400	InvalidDestGroup.NotFound	Specified destination security group does not exist.	The error message returned because the specified DestGroupId parameter does not exist.

HTTP status code	Error code	Error message	Description
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the VPC does not support security groups.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidDestCidrIp.Malformed	The parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidNicType.ValueNotSupported	The parameter NicType is not valid.	The error message returned because the specified NicType parameter is invalid.
400	InvalidSecurityGroupDiscription.Malformed	The specified security group rule description is not valid.	The error message returned because the specified Description parameter is invalid.
400	InvalidSecurityGroup.InvalidNetworkType	The specified security group network type is not support this operation, please check the security group network types. For VPC security groups, ClassicLink must be enabled.	The error message returned because the operation is not supported while the security group is of the current network type. If the network type is VPC, ClassicLink must be enabled.
400	MissingParameter.Dest	One of the parameters DestCidrIp, DestGroupId or DestPrefixListId must be specified.	The error message returned because the DestCidrIp, DestGroupId, and DestPrefixListId parameters are all empty. At least one of the parameters must be specified.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or All.	The error message returned because the specified IpProtocol parameter is invalid. The valid values of this parameter are tcp, udp, icmp, gre, and all.
400	InvalidSecurityGroupId.Malformed	The specified parameter "SecurityGroupId" is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.
400	InvalidParamter.Conflict	The specified SourceCidrIp should be different from the DestCidrIp.	The error message returned because the value of SourceCidrIp is the same as that of DestCidrIp.
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.
400	InvalidParam.SourceIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol by mistake.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol by mistake.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParam.PrefixListAddressFamilyMismatch	The address family of the specified prefix list does not match the specified CidrIp.	The error message returned because the address family of the specified prefix list does not match that of the specified CIDR block.
400	NotSupported.ClassicNetworkPrefixList	The prefix list is not supported when the network type of security group is classic.	The error message returned because security groups in the classic network do not support prefix lists.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InvalidGressFlow.Malformed	The specified parameter GressFlow is not valid,it cause by internal,try calling again.	The error message returned because the specified GressFlow parameter is invalid.
403	InvalidDestGroupId.Mismatch	NicType is required or NicType expects intranet.	The error message returned because the NicType parameter is not specified or is not set to intranet.
403	MissingParameter	The input parameter "DestGroupId" or "DestCidrIp" cannot be both blank.	The error message returned because both the DestGroupId and DestCidrIp parameters are empty.
403	AuthorizationLimitExceed	The limit of authorization records in the security group reaches.	The error message returned because the maximum number of rules in the security group has been reached.
403	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the destination security group is the same as the source security group.
403	InvalidNetworkType.Conflict	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the destination security group is different from that of the source security group.
403	InvalidSecurityGroup.IsSame	The authorized SecurityGroupId should be different from the DestGroupId.	The error message returned because the ID of the source security group is the same as that of the destination security group.
403	InvalidNetworkType.Conflict	The parameter SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the specified security group is different from that of the source group.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because you cannot modify security groups managed by cloud services.
403	LimitExceed.PrefixListAssociationResource	The number of resources associated with the prefix list exceeds the limit.	The error message returned because the maximum amount of resources that can be associated with the prefix list has been reached.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist within this account. Check whether the security group ID is correct.
404	InvalidDestGroupId.NotFound	The DestGroupId provided does not exist in our records.	The error message returned because the specified DestGroupId parameter does not exist.
404	InvalidPrefixListId.NotFound	The specified prefix list was not found.	The error message returned because the specified prefix list does not exist.
404	NotSupported.GrayFunction	The prefix list is a gray-scale function, not currently supported.	The error message returned because this operation is not supported while the prefix list feature is in invitational preview.

For a list of error codes, visit the API Error Center.

18.4. RevokeSecurityGroup

Deletes an inbound security group rule. After the rule is deleted, the access control implemented by it is revoked.

Description

In the security group-related API documents, traffic is sent by the source device and received at the destination device.

- You can determine an inbound rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying only one parameter.
  - Parameters used to delete an inbound security group rule that controls access from a specified CIDR block: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), and SourceCidrIp.

    ```
    https://ecs.aliyuncs.com/?Action=RevokeSecurityGroup
    &SecurityGroupId=sg-bp67acfmxazb4p****
    &SourceCidrIp=10.0.0.0/8
    &IpProtocol=tcp
    &PortRange=80/80
    &NicType=intranet
    &Policy=accept
    &<Common request parameters>
    ```

  - Parameters used to delete an inbound security group rule that controls access to a specified security group: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), and SourceCidrIp.

    ```
    https://ecs.aliyuncs.com/?Action=RevokeSecurityGroup
    &SecurityGroupId=sg-bp67acfmxazb4p****
    &SourceGroupId=sg-bp67acfmxa123b****
    &IpProtocol=tcp
    &PortRange=80/80
    &NicType=intranet
    &Policy=accept
    &<Common request parameters>
    ```

  - Parameters used to delete an inbound security group rule that is associated with a prefix list: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), and SourceCidrIp.

    ```
    https://ecs.aliyuncs.com/?Action=RevokeSecurityGroup
    &SecurityGroupId=sg-bp67acfmxazb4p****
    &SourcePrefixListId=pl-x1j1k5ykzqlixdcy****
    &IpProtocol=tcp
    &PortRange=80/80
    &NicType=intranet
    &Policy=accept
    &<Common request parameters>
    ```

- If the security group rule to be deleted does not exist, the RevokeSecurityGroup operation succeeds but no rule is deleted.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RevokeSecurityGroup	The operation that you want to perform. Set the value to RevokeSecurityGroup.
IpProtocol	String	Yes	all	The transport layer protocol. The values are case-sensitive. Valid values: • icmp • gre • tcp • udp • all: All protocols are supported.

Parameter	Type	Required	Example	Description
PortRange	String	Yes	1/200	The range of destination ports that correspond to the transport layer protocol. Valid values: • When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port and the end port with a forward slash (/). Example: 1/200. • When the IpProtocol parameter is set to icmp, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to gre, the port number range is -1/-1, which indicates all ports. • When IpProtocol is set to all, the port number range is -1/-1, which indicates all ports.
RegionId	String	Yes	cn-hangzhou	The region ID of the destination security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmxazb4p****	The ID of the destination security group.
DestCidrIp	String	No	10.0.0.0/8	The destination IPv4 CIDR block. CIDR blocks and IPv4 addresses are supported. Default value: 0.0.0.0/0.
Ipv6DestCidrIp	String	No	2001:db8:1233:1a00::***	The destination IPv6 CIDR blocks. CIDR blocks and IPv6 addresses are supported. **Note** You can specify only the IP addresses of instances in virtual private clouds (VPCs). This parameter is empty by default.
SourceGroupId	String	No	sg-bp67acfmxa123b****	The ID of the source security group. At least one of `SourceGroupId` and `SourceCidrIp` must be specified. • If `SourceGroupId` is specified but `SourceCidrIp` is not, the `NicType` parameter can be set only to intranet. • If both `SourceGroupId` and `SourceCidrIp` are specified, `SourceCidrIp` takes precedence.
SourceGroupOwnerId	Long	No	12345678910	The ID of the Alibaba Cloud account that manages the source security group when you delete a security group rule across accounts. • If both `SourceGroupOwnerId` and `SourceGroupOwnerAccount` are empty, access control is revoked for another security group managed by your account. • If `SourceCidrIp` is specified, the `SourceGroupOwnerId` parameter is ignored.
SourceGroupOwnerAccount	String	No	Test@aliyun.com	The Alibaba Cloud account that manages the source security group when you delete a security group rule across accounts. • If both `SourceGroupOwnerAccount` and `SourceGroupOwnerId` are empty, access control is revoked for another security group managed by your account. • If `SourceCidrIp` is specified, the `SourceGroupOwnerAccount` parameter is ignored.
SourceCidrIp	String	No	10.0.0.0/8	The source IPv4 CIDR block to which you want to revoke access. CIDR blocks and IPv4 addresses are supported. Default value: 0.0.0.0/0.

Parameter	Type	Required	Example	Description
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00::***	The source IPv6 CIDR block to which you want to revoke access. CIDR blocks and IPv6 addresses are supported. **Note** You can specify only the IP addresses of instances in VPCs. This parameter is empty by default.
SourcePrefixListId	String	No	pl-x1j1k5ykzqlixdcy****	The ID of the source prefix list to which you want to revoke access. You can call the DescribePrefixLists operation to query the IDs of avaialble prefix lists Note: • If a security group is in the classic network, you cannot configure prefix lists in the security group rules. For information about limits on security groups and prefix lists, see Limits. • If you specify the `SourceCidrIp`, `Ipv6SourceCidrIp`, or `SourceGroupId` parameter, this parameter is ignored.
SourcePortRange	String	No	80/80	The range of source ports that correspond to the transport layer protocol. Valid values: • When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port and the end port with a forward slash (/). Example: 1/200. • When the IpProtocol parameter is set to icmp, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to gre, the port number range is -1/-1, which indicates all ports. • When IpProtocol is set to all, the port number range is -1/-1, which indicates all ports.
Policy	String	No	accept	The access control policy. Valid values: • accept: allows access. • drop: denies access and returns a rejection response. Default value: accept.
Priority	String	No	1	The priority of the security group rule. Valid values: 1 to 100. Default value : 1.
NicType	String	No	intranet	The network interface controller (NIC) type of the security group rule when the security group is in the classic network. Valid values: • internet • intranet Default value: internet. The NicType parameter can be set only to intranet in the following cases: • If the security group is in a VPC, this parameter is set to intranet by default and cannot be modified. • If only `SourceGroupId` is specified, this parameter must be set to intranet.

Parameter	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value that is unique among different requests. The **ClientToken** value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Description	String	No	This is description.	The description of the security group rule.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RevokeSecurityGroup
&SecurityGroupId=sg-bp67acfmxazb4p****
&SourceGroupId=sg-bp67acfmxa123b****
&SourceGroupOwnerAccount=Test@aliyun.com
&IpProtocol=all
&PortRange=80/80
&Priority=1
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RevokeSecurityGroupResponse>
       <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</RevokeSecurityGroupResponse>
```

`JSON` format

```
{
    "RequestId":"CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist within this account. Check whether the security group ID is correct.
400	InvalidSecurityGroupId.Malformed	The specified SecurityGroupId is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.
400	InvalidIpProtocol.ValueNotSupported	The specified IpProtocol does not exist.	The error message returned because the specified IpProtocol parameter is invalid.
400	InvalidIpPortRange.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified PortRange parameter is invalid.
404	InvalidSourceGroupId.NotFound	The SourceGroupId provided does not exist in our records.	The error message returned because the specified SourceGroupId parameter does not exist.

HTTP status code	Error code	Error message	Description
403	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type conflicts with the authorization record.
403	InvalidGroupAuthItem.NotFound	Specified group authorized item does not exist in our records.	The error message returned because the specified authorized security group does not exist.
400	InvalidSourceCidrIp.Malformed	The specified parameter "SourceCidrIp" is not valid.	The error message returned because the format of the SourceGroupId parameter is invalid.
400	MissingParameter	The input parameter "SourceGroupId" or "SourceCidrIp" cannot be both blank.	The error message returned because both the SourceGroupId and SourceCidrIp parameters are empty.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist.
400	InvalidSourceGroupId.Mismatch	Specified security group and source group are not in the same VPC.	The error message returned because the destination security group and the source security group do not belong to the same VPC.
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the VPC does not support security groups.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
400	MissingParameter.Source	One of the parameters SourceCidrIp, SourceGroupId or SourcePrefixListId must be specified.	The error message returned because the SourceCidrIp, SourceGroupId, and SourcePrefixListId parameters are all empty. At least one of the parameters must be specified.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or All.	The error message returned because the specified IpProtocol parameter is invalid. The valid values of this parameter are tcp, udp, icmp, gre, and all.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the destination security group is the same as the source security group.
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.SourceIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol by mistake.

HTTP status code	Error code	Error message	Description
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol by mistake.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.
400	InvalidSecurityGroupDiscription.Malformed	The specified security group rule description is not valid.	The error message returned because the specified Description parameter is invalid.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because the security groups managed by cloud services cannot be modified.
404	InvalidPrefixListId.NotFound	The specified prefix list was not found.	The error message returned because the prefix list does not exist.
404	NotSupported.GrayFunction	The prefix list is a gray-scale function, not currently supported.	The error message returned because this operation is not supported. The prefix list feature is in invitational preview.
400	NotSupported.ClassicNetworkPrefixList	The prefix list is not supported when the network type of security group is classic.	The error message returned because security groups in the classic network do not support prefix lists.

For a list of error codes, visit the API Error Center.

18.5. RevokeSecurityGroupEgress

Deletes an outbound security group rule. After the rule is deleted, the access control implemented by it is revoked.

Description

In the security group-related API documents, inbound traffic refers to the traffic sent by the source device and received at the destination device.

- You can determine a security group rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying only one parameter.
  - Parameters used to delete an outbound security group rule that controls access to a specified CIDR block: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp, and SourceCidrIp (optional).

```
https://ecs.aliyuncs.com/?Action=RevokeSecurityGroupEgress
&SecurityGroupId=sg-bp67acfmxazb4ph***
&IpProtocol=tcp
&DestCidrIp=10.0.0.0/8
&PortRange=-22/22
&NicType=intranet
&Policy=accept
&<Common request parameters>
```

  - Parameters used to delete an outbound security group rule that controls access to a specified security group: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), DestGroupOwnerAccount, and DestGroupId.

```
https://ecs.aliyuncs.com/?Action=RevokeSecurityGroupEgress
&SecurityGroupId=sg-bp67acfmxazb4ph***
&DestGroupId=sg-bp67acfmxa123b****
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=accept
&<Common request parameters>
```

- Parameters used to delete an outbound security group rule that is associated with a prefix list: IpProtocol, PortRange (optional), SourcePortRange, NicType, Policy (optional), SourceCidrIp, and DestPrefixListId.

```
https://ecs.aliyuncs.com/?Action=RevokeSecurityGroupEgress
&SecurityGroupId=sg-bp67acfmxazb4ph***
&IpProtocol=tcp
&DestPrefixListId=pl-x1j1k5ykzqlixdcy****
&PortRange=-22/22
&NicType=intranet
&Policy=accept
&<Common request parameters>
```

- If the security group rule to match does not exist, the RevokeSecurityGroupEgress operation succeeds but no rules are deleted.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RevokeSecurityGroupEgress	The operation that you want to perform. Set the value to RevokeSecurityGroupEgress.
IpProtocol	String	Yes	tcp	The transport layer protocol. The values of this parameter are case-insensitive. Valid values: • icmp • gre • tcp • udp • all: All protocols are supported.
PortRange	String	Yes	22/22	The range of destination ports that correspond to the transport layer protocol. Valid values: • When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port and the end port with a forward slash (/). Example: 1/200. • When the IpProtocol parameter is set to icmp, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating all ports. • When IpProtocol is set to all, the port number range is -1/-1, which indicates all ports.
RegionId	String	Yes	cn-hangzhou	The region ID of the source security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmxazb4p****	The ID of the source security group.
DestGroupId	String	No	sg-bp67acfmxa123b****	The ID of the destination security group. You must specify at least one of the `DestGroupId` and `DestCidrIp` parameters. • If `DestGroupId` is specified but `DestCidrIp` is not, the `NicType` parameter can be set only to intranet. • If both `DestGroupId` and `DestCidrIp` are specified, `DestCidrIp` takes precedence.

Parameter	Type	Required	Example	Description
DestGroupOwnerId	Long	No	12345678910	The ID of the Alibaba Cloud account that manages the destination security group when you delete security group rules across accounts. • If both `DestGroupOwnerId` and `DestGroupOwnerAccount` are empty, the access control is revoked from another security group managed by your account. • If `DestCidrIp` is specified, `DestGroupOwnerId` is ignored.
DestGroupOwnerAccount	String	No	EcsforCloud@Alibaba.com	The Alibaba Cloud account that manages the destination security group when you delete security group rules across accounts. • If both `DestGroupOwnerAccount` and `DestGroupOwnerId` are empty, the access control is revoked from another security group managed by your account. • If `DestCidrIp` is specified, `DestGroupOwnerAccount` is ignored.
DestCidrIp	String	No	10.0.0.0/8	The destination IPv4 CIDR block to which you want to revoke access. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.
Ipv6DestCidrIp	String	No	2001:db8:1233:1a00::***	The destination IPv6 CIDR block to which you want to revoke access. CIDR blocks and IPv6 addresses are supported. **Note** You can specify only the IP addresses of instances in virtual private clouds (VPCs). This parameter is empty by default.
DestPrefixListId	String	No	pl-x1j1k5ykzqlixdcy****	The ID of the destination prefix list to which you want to revoke access. You can call the DescribePrefixLists operation to query the IDs of avaialble prefix lists. Note: • If a security group is in the classic network, you cannot configure prefix lists in the security group rules. For information about limits on security groups and prefix lists, see Limits. • If you specify `DestCidrIp`, `Ipv6DestCidrIp`, or `DestGroupId`, this parameter is ignored.
SourceCidrIp	String	No	10.0.0.0/8	The IPv4 CIDR block. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00::***	The IPv6 CIDR block. CIDR blocks and IPv6 addresses are supported. This parameter is empty by default. **Note** You can specify only the IP addresses of instances in VPCs.

Parameter	Type	Required	Example	Description
SourcePortRange	String	No	22/22	The range of destination ports that correspond to the transport layer protocol. Valid values: • When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port and the end port with a forward slash (/). Example: 1/200. • When the IpProtocol parameter is set to icmp, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating all ports. • When IpProtocol is set to all, the port number range is -1/-1, which indicates all ports.
Policy	String	No	accept	The access control policy. Valid values: • accept: allows access. • drop: denies access and returns no responses. Default value: accept.
Priority	String	No	1	The priority of the security group rule. Valid values: 1 to 100. Default value : 1.
NicType	String	No	intranet	The network interface controller (NIC) type of the security group rule when the security group is in the classic network. Valid values: • internet • intranet Default value: internet. The NicType parameter can be set only to intranet in the following cases: • If the security group is in a VPC, this parameter is set to intranet by default and cannot be modified. • If only `DestGroupId` is specified, this parameter must be set to intranet.
ClientToken	String	No	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value that is unique among different requests. The **ClientToken** value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Description	String	No	This is description.	The description of the security group rule.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RevokeSecurityGroupEgress
&SecurityGroupId=sg-bp67acfmxazb4p****
&IpProtocol=tcp
&DestCidrIp=10.0.0.0/8
&PortRange=22/22
&NicType=intranet
&Policy=Allow
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RevokeSecurityGroupEgressResponse>
       <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</RevokeSecurityGroupEgressResponse>
```

`JSON` format

```
{
    "RequestId":"CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist within this account. Check whether the security group ID is correct.
400	InvalidIpProtocol.ValueNotSupported	The specified IpProtocol does not exist.	The error message returned because the specified IpProtocol parameter is invalid.
400	InvalidIpPortRange.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified PortRange parameter is invalid.
404	InvalidDestGroupId.NotFound	The DestGroupId provided does not exist in our records.	The error message returned because the specified DestGroupId parameter does not exist.
403	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type conflicts with the authorization record.
403	InvalidGroupAuthItem.NotFound	Specified group authorized item does not exist in our records.	The error message returned because the specified authorized security group does not exist.
400	InvalidDestCidrIp.sMalformed	The specified parameter "DestCidrIp" is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
400	MissingParameter	The input parameter "DestGroupId" or "DestCidrIp" cannot be both blank.	The error message returned because both the DestGroupId and DestCidrIp parameters are empty.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist.
400	InvalidDestGroupId.Mismatch	Specified security group and destination group are not in the same VPC.	The error message returned because the specified source and destination security groups do not belong to the same VPC.
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the VPC does not support security groups.

HTTP status code	Error code	Error message	Description
403	InvalidSecurityGroup.IsSame	The authorized SecurityGroupId should be different from the DestGroupId.	The error message returned because the ID of the source security group is the same as that of the destination security group.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
400	InvalidDestCidrIp.Malformed	The specified parameter "DestCidrIp" is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
400	MissingParameter.Dest	One of the parameters DestCidrIp, DestGroupId or DestPrefixListId must be specified.	The error message returned because the DestCidrIp, DestGroupId, and DestPrefixListId parameters are all empty. At least one of the parameters must be specified.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or All.	The error message returned because the specified IpProtocol parameter is invalid. The valid values of this parameter are tcp, udp, icmp, gre, and all.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
403	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the destination security group is the same as the source security group.
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.SourceIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol by mistake.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol by mistake.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.
400	InvalidSecurityGroupId.Malformed	The specified parameter "SecurityGroupId" is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.
400	InvalidSecurityGroupDiscription.Malformed	The specified security group rule description is not valid.	The error message returned because the specified Description parameter is invalid.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because the security groups managed by cloud services cannot be modified.

HTTP status code	Error code	Error message	Description
404	InvalidPrefixListId.NotFound	The specified prefix list was not found.	The error message returned because the prefix list does not exist.
404	NotSupported.GrayFunction	The prefix list is a gray-scale function, not currently supported.	The error message returned because this operation is not supported. The prefix list feature is in invitational preview.
400	NotSupported.ClassicNetwork PrefixList	The prefix list is not supported when the network type of security group is classic.	The error message returned because security groups in the classic network do not support prefix lists.

For a list of error codes, visit the API Error Center.

18.6. JoinSecurityGroup

Adds an Elastic Compute Service (ECS) instance or an elastic network interface (ENI) to a security group.

Description

> **Note** This operation is not recommended. We recommend that you call the ModifyInstanceAttribute operation to add instances to or remove instances from a security group, and call the ModifyNetworkInterfaceAttribute operation to add ENIs to or remove ENIs from a security group.

When you call this operation, take note of the following items:

- Before you add an instance to a security group, the instance must be in the **Stopped** (Stopped) or **Running** (Running) state.
- An instance can be added to up to five security groups.
- You can submit a ticket to add an instance to more security groups. An instance can be added to up to 16 security groups.
- A basic security group can contain up to 2,000 instances. An advanced security group can contain up to 65,536 instances.
- The security group and the instance must belong to the same region.
- The security group and the instance must be of the same network type. If the network type is Virtual Private Cloud (VPC), the security group and the instance must be in the same VPC.
- An instance and an ENI cannot be added to a security group at the same time. You cannot specify the `InstanceId` and `NetworkInterfaceId` parameters at the same time.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	JoinSecurityGroup	The operation that you want to perform. Set the value to JoinSecurityGroup.
SecurityGroupId	String	Yes	sg-bp67acfmxazb4p****	The ID of the security group. You can call the DescribeSecurityGroups operation to query available security groups.
InstanceId	String	No	i-bp67acfmxazb4p****	The ID of the instance. **Note** If this parameter is specified, the `NetworkInterfaceId` parameter cannot be specified.

Parameter	Type	Required	Example	Description
NetworkInterfaceId	String	No	eni-bp13kd656hxambfe****	The ID of the ENI. **Note** If this parameter is specified, the `InstanceId` parameter cannot be specified.
RegionId	String	No	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list. • You do not need to specify a region ID when you add an instance to a security group. • You must specify a region ID when you add an ENI to a security group.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=JoinSecurityGroup
&InstanceId=i-bp67acfmxazb4p****
&SecurityGroupId=sg-bp67acfmxazb4p****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<JoinSecurityGroupResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</JoinSecurityGroupResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist within this account. Check whether the security group ID is correct.
400	InstanceSecurityGroupLimitExceeded	Exceeding the allowed amount of security groups that an instance can be in.	The error message returned because the maximum number of security groups to which the instance can belong has been reached.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.

HttpCode	Error code	Error message	Description
403	SecurityGroupInstanceLimitExceeded	The maximum number of instances in a security group is exceeded.	The error message returned because the maximum number of instances in the specified security group has been reached.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
400	InvalidInstanceId.Mismatch	Specified instance and security group are not in the same VPC.	The error message returned because the specified instance and security group do not belong to the same VPC or because one of the following cases occurs:1. The security group is of the VPC network type but the instance is not.2. The instance is of the VPC network type but the security group is not.
403	InvalidInstanceId.AlreadyExists	The specified instance already exists in the specified security group.	The error message returned because the specified instance already exists in the specified security group.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	SecurityGroupInstanceLimitExceeded	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	AclLimitExceed	%s	The error message returned because the value of AccessPoint exceeds the upper limit.
403	InstanceSecurityGroupLimitExceeded	%s	The error message returned because the maximum number of security groups to which the instance can belong has been reached.
400	InvalidInstanceId.Malformed	The specified parameter "InstanceId" is not valid.	The error message returned because the specified InstanceId parameter is invalid.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because the security groups managed by cloud services cannot be modified.
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId parameter does not exist.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the operation is not supported while the ENI is of the current type.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the operation is invalid. Check whether the VPC in the operation corresponds to other parameters.
400	NotBelongUser	%s	The error message returned because you are not authorized to manage the specified resource.
400	MissingParameter.RegionId	The specified RegionId should not be null.	The error message returned because the required RegionId parameter is not specified.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.
403	InvalidParam.EniIdAndInstanceId.Conflict	%s	The error message returned because the InstanceId and NetworkInterfaceId parameters are both specified. You cannot specify both parameters.

For a list of error codes, visit the API Error Center.

18.7. LeaveSecurityGroup

You can call this operation to remove an ECS instance or an elastic network interface (ENI) from a security group.

Description

> **Note** This operation is not recommended. We recommend that you call the ModifyInstanceAttribute operation to add or remove ECS instances to or from a security group, and call the ModifyNetworkInterfaceAttribute operation to add or remove ENIs to or from a security group.

When you call this operation, take note of the following items:

- Before you remove an instance from a security group, make sure that the instance is in the **Stopped** (Stopped) or **Running** (Running) state.
- An instance must belong to at least one security group. Therefore, if the instance to be removed belongs to only a single security group, the LeaveSecurityGroup request fails.
- An instance and an ENI cannot be removed from a security group at the same time. The `InstanceId` and `NetworkInterfaceId` parameters cannot be specified at the same time.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	LeaveSecurityGroup	The operation that you want to perform. Set the value to LeaveSecurityGroup.
SecurityGroupId	String	Yes	sg-bp67acfmxazb4p****	The ID of the security group.
InstanceId	String	No	i-bp67acfmxazb4p****	The ID of the instance. **Note** When this parameter is specified, the `NetworkInterfaceId` parameter cannot be specified.
NetworkInterfaceId	String	No	eni-bp13kd656hxambfe****	The ID of the ENI. **Note** When this parameter is specified, the `InstanceId` parameter cannot be specified.
RegionId	String	No	cn-hangzhou	The region ID. You can call the DescribeRegions operation to query the most recent region list. • If you remove an instance from a security group, you do not need to specify a region ID. • If you remove an ENI from a security group, you must specify the ID of the region to which the ENI belongs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=LeaveSecurityGroup
&InstanceId=i-bp67acfmxazb4p****
&SecurityGroupId=sg-bp67acfmxazb4p****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<LeaveSecurityGroupResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</LeaveSecurityGroupResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance ID does not exist. Check whether the instance ID is correct.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.
403	InstanceLastSecurityGroup	The specified security group is the last security group for the instance.	The error message returned because the specified security group is the only security group to which the instance belongs.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InstanceNotInSecurityGroup	The instance not in the group.	The error message returned because the specified instance does not belong to the security group.
504	RequestTimeout	The request encounters an upstream server timeout.	The error message returned because the request is denied due to an upstream server timeout.
400	InvalidInstanceId.Malformed	The specified parameter "InstanceId" is not valid.	The error message returned because the specified InstanceId parameter is invalid.
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId parameter does not exist.
400	MissingParameter.RegionId	The specified RegionId should not be null.	The error message returned because the RegionId parameter is not specified.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the ENI type does not support this operation.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.

For a list of error codes, visit the API Error Center.

18.8. DescribeSecurityGroupAttribute

Queries the rules of a security group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSecurityGroupAttribute	The operation that you want to perform. Set the value to DescribeSecurityGroupAttribute.
RegionId	String	Yes	cn-hangzhou	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp1gxw6bznjjvhu3****	The ID of the security group.

NicType	String	No	intranet	The network interface controller (NIC) type of the security group rule.
				• Default value for rules of security groups in the classic network: internet. Valid values for rules of security groups in the classic network:
				  ○ internet
				  ○ intranet
				  Note You can query security group rules of only one NIC type in a single call. To query security group rules of both NIC types, call the operation twice.
				• When the security group is in a virtual private cloud (VPC), set the value to intranet. This is also the default value.
				  Note If you set this parameter to internet or leave this parameter empty, the intranet value is automatically used.

Direction	String	No	all	The direction in which the security group rule is applied. Valid values: • egress: outbound • ingress: inbound • all: outbound and inbound Default value: all.

Response parameters

Parameter	Type	Example	Description
Description	String	This is description.	The description of the security group.
InnerAccessPolicy	String	Accept	The access control policy of the security group. Valid values: • Accept: All instances in the security group can communicate with each other. • drop: All instances in the security group are isolated from each other.
Permissions	Array of Permission		Details about the security group rules.
Permission			

Parameter	Type	Example	Description
CreateTime	String	2018-12-12T07:28:38Z	The time when the security group rule was created. The time is displayed in UTC.
Description	String	Description Sample 01	The description of the security group.
DestCidrIp	String	0.0.0.0/0	The destination CIDR blocks for outbound access control
DestGroupId	String	sg-bp1czdx84jd88i7v****	The ID of the destination security group for outbound access control.
DestGroupName	String	testDestGroupName	The name of the destination security group.
DestGroupOwnerAccount	String	1234567890	The Alibaba Cloud account that manages the destination security group.
DestPrefixListId	String	pl-x1j1k5ykzqlixabc****	The ID of the destination prefix list for outbound access control.
DestPrefixListName	String	DestPrefixListName Sample	The name of the destination prefix list.
Direction	String	ingress	The direction in which the security group rule is applied.
IpProtocol	String	TCP	The transport layer protocol.
Ipv6DestCidrIp	String	2001:db8:1233:1a00::***	The destination IPv6 CIDR block.
Ipv6SourceCidrIp	String	2001:db8:1234:1a00::***	The source IPv6 CIDR block.
NicType	String	intranet	The NIC type of the security group rule.
Policy	String	Accept	The access control policy.
PortRange	String	80/80	The port number range.
Priority	String	1	The priority of the rule.
SourceCidrIp	String	0.0.0.0/0	The source CIDR block for inbound access control.
SourceGroupId	String	sg-bp12kc4rqohaf2js****	The source security group for inbound access control.
SourceGroupName	String	testSourceGroupName1	The name of the source security group.
SourceGroupOwnerAccount	String	1234567890	The Alibaba Cloud account that manages the source security group.
SourcePortRange	String	80/80	The source port number range.
SourcePrefixListId	String	pl-x1j1k5ykzqlixdcy****	The ID of the source prefix list for inbound access control.
SourcePrefixListName	String	SourcePrefixListName Sample	The name of the source prefix list.

Parameter	Type	Example	Description
RegionId	String	cn-hangzhou	The region ID.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SecurityGroupId	String	sg-bp1gxw6bznjjvhu3****	The ID of the destination security group.
SecurityGroupName	String	SecurityGroupName Sample	The name of the destination security group.
VpcId	String	vpc-bp1opxu1zkhn00gzv****	The ID of the VPC. If a VPC ID is returned, the network type of the security group is VPC. If no VPC ID is returned, the network type of the security group is classic network.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?RegionId=cn-hangzhou
&SecurityGroupId=sg-bp1gxw6bznjjvhu3****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeSecurityGroupAttributeResponse>
      <SecurityGroupId>sg-bp1gxw6bznjjvhu3****</SecurityGroupId>
      <InnerAccessPolicy>Accept</InnerAccessPolicy>
      <SecurityGroupName>SecurityGroupName Sample</SecurityGroupName>
      <Description>This is description.</Description>
      <RegionId>cn-hangzhou</RegionId>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
      <Permissions>
            <Permission>
                  <SourceCidrIp>0.0.0.0/0</SourceCidrIp>
                  <Description>Description Sample 01</Description>
                  <DestCidrIp></DestCidrIp>
                  <NicType>intranet</NicType>
                  <DestGroupName></DestGroupName>
                  <PortRange>22/22</PortRange>
                  <DestGroupId></DestGroupId>
                  <Ipv6DestCidrIp></Ipv6DestCidrIp>
                  <DestPrefixListId></DestPrefixListId>
                  <DestPrefixListName></DestPrefixListName>
                  <Direction>ingress</Direction>
                  <Priority>1</Priority>
                  <IpProtocol>TCP</IpProtocol>
                  <SourcePortRange></SourcePortRange>
                  <SourceGroupOwnerAccount></SourceGroupOwnerAccount>
                  <Policy>Accept</Policy>
                  <CreateTime>2018-12-12T07:28:38Z</CreateTime>
                  <SourceGroupId></SourceGroupId>
                  <DestGroupOwnerAccount></DestGroupOwnerAccount>
                  <Ipv6SourceCidrIp></Ipv6SourceCidrIp>
                  <SourceGroupName></SourceGroupName>
                  <SourcePrefixListId></SourcePrefixListId>
                  <SourcePrefixListName></SourcePrefixListName>
            </Permission>
      </Permissions>
      <VpcId>vpc-bp1opxu1zkhn00gzv****</VpcId>
</DescribeSecurityGroupAttributeResponse>
```

`JSON` format

```
{
    "SecurityGroupId": "sg-bp1gxw6bznjjvhu3****",
    "InnerAccessPolicy": "Accept",
    "SecurityGroupName": "SecurityGroupName Sample",
    "Description": "This is description.",
    "RegionId": "cn-hangzhou",
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
    "Permissions": {
        "Permission": [
            {
                "SourceCidrIp": "0.0.0.0/0",
                "Description": "Description Sample 01",
                "DestCidrIp": "",
                "NicType": "intranet",
                "DestGroupName": "",
                "PortRange": "22/22",
                "DestGroupId": "",
                "Ipv6DestCidrIp": "",
                "DestPrefixListId": "",
                "DestPrefixListName":"",
                "Direction": "ingress",
                "Priority": 1,
                "IpProtocol": "TCP",
                "SourcePortRange": "",
                "SourceGroupOwnerAccount": "",
                "Policy": "Accept",
                "CreateTime": "2018-12-12T07:28:38Z",
                "SourceGroupId": "",
                "DestGroupOwnerAccount": "",
                "Ipv6SourceCidrIp": "",
                "SourceGroupName": "",
                "SourcePrefixListId": "",
                "SourcePrefixListName": ""
            }
        ]
    },
    "VpcId": "vpc-bp1opxu1zkhn00gzv****"
}
```


Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist within this account. Check whether the security group ID is correct.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
400	InvalidParamter	Invalid Parameter	The error message returned because a specified parameter is invalid.
400	InvalidSecurityGroupId.Malformed	The specified parameter "SecurityGroupId" is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.

For a list of error codes, visit the API Error Center.

18.9. DescribeSecurityGroups

Queries basic information of security groups.

Description

Before you call this operation, take note of the following items:

- Basic information of security groups includes their IDs and descriptions. In the response, security groups are displayed in descending order of their IDs.
- We recommend that you use the NextToken and MaxResults parameters for a paged query. During a paged query, when you call the DescribeSecurityGroups operation to retrieve the first page of results, set MaxResults to specify the maximum number of entries to return in the call. The return value of NextToken is a pagination token, which can be used in the next call to retrieve a new page of results. When you call the DescribeSecurityGroups operation to retrieve a new page of results, set NextToken to the NextToken value returned in the previous call and set MaxResults to specify the maximum number of entries to return in this call. If the return value of NextToken is empty, the current page of results is the last page and no more results are to be returned.
- When you use Alibaba Cloud CLI to call an API operation, you must specify request parameter values of different data types in required formats. For more information, see Parameter format overview.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSecurityGroups	The operation that you want to perform. Set the value to **DescribeSecurityGroups**.
RegionId	String	Yes	cn-hangzhou	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	No	vpc-bp67acfmxazb4p****	The ID of the virtual private cloud (VPC) to which the security group belongs.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1. **Note** This parameter will be removed in the future. We recommend that you use the NextToken and MaxResults parameters for a paged query.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10. **Note** This parameter will be removed in the future. We recommend that you use the NextToken and MaxResults parameters for a paged query.
SecurityGroupIds	String	No	["sg-bp67acfmxazb4p****", "sg-bp67acfmxazb4p****", "sg-bp67acfmxazb4p****",....]	The IDs of security groups. The value is a JSON array that consists of up to 100 security group IDs. Separate multiple security group IDs with commas (,).
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the security group belongs. When this parameter is specified to query resources, up to 1,000 resources that belong to the specified resource group can be displayed in the response.

Parameter	Type	Required	Example	Description
NetworkType	String	No	vpc	The network type of the security group. Valid values: • vpc • classic
SecurityGroupId	String	No	sg-bp67acfmxazb4p****	The ID of the security group.
SecurityGroupName	String	No	SGTestName	The name of the security group.
SecurityGroupType	String	No	normal	The type of the security group. Valid values: • normal: basic security group • enterprise: advanced security group Note If you do not specify this parameter, both basic and advanced security groups are queried.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are granted permissions, and whether the required parameters are specified. If the check fails, the corresponding error message is returned. If the check succeeds, the DryRunOperation error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned, and the request is made. Default value: false.
NextToken	String	No	e71d8a535bd9cc11	The query token. Set the value to the NextToken value returned in the previous call to the DescribeSecurityGroups operation. Leave this parameter empty the first time you call this operation.
MaxResults	Integer	No	10	The maximum number of entries to return on each page. If you specify the MaxResults parameter, both the `MaxResults` and `NextToken` parameters are used for a paged query. Maximum value: 100. Default value: 10.
Tag.N.key	String	No	testkey	The key of tag N of the security group. Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	TestKey	The key of tag N of the security group. Valid values of N: 1 to 20. If a single tag is specified to query resources, up to 1,000 resources that have this tag added can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources that have all these tags added can be displayed in the response. To query more than 1,000 resources that have specified tags added, call the ListTagResources operation.
Tag.N.Value	String	No	TestValue	The value of tag N of the security group. Valid values of N: 1 to 20.
Tag.N.value	String	No	testvalue	The value of tag N of the security group. **Note** This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.

Response parameters

Parameter	Type	Example	Description
PageSize	Integer	10	The number of entries returned per page. **Note** This parameter will be removed in the future. We recommend that you use the NextToken and MaxResults parameters for a paged query.
PageNumber	Integer	1	The page number of the returned page. **Note** This parameter will be removed in the future. We recommend that you use the NextToken and MaxResults parameters for a paged query.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	20	The total number of security groups. If the `MaxResults` and `NextToken` parameters are specified in the request, the value of this parameter is not returned.
RegionId	String	cn-hangzhou	The region ID of the security group.
SecurityGroups	Array of SecurityGroup		Details about the security groups.
SecurityGroup			
CreationTime	String	2021-08-31T03:12:29Z	The time when the security group was created. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
VpcId	String	vpc-bp67acfmxazb4p****	The ID of the VPC to which the security group belongs.
ServiceManaged	Boolean	false	Indicates whether the user is an Alibaba Cloud service or a distributor.

Parameter	Type	Example	Description
Description	String	TestDescription	The description of the security group.
SecurityGroupId	String	sg-bp67acfmxazb4p****	The ID of the security group.
ResourceGroupId	String	rg-bp67acfmxazb4p****	The ID of the resource group to which the security group belongs.
SecurityGroupName	String	SGTestName	The name of the security group.
EcsCount	Integer	0	**Note** This parameter is in invitational preview and unavailable.
ServiceID	Long	12345678910	The ID of the distributor to which the security group belongs.
SecurityGroupType	String	normal	The type of the security group. Valid values: • normal: basic security group • enterprise: advanced security group
AvailableInstanceAmount	Integer	0	**Note** This parameter is in invitational preview and unavailable.
Tags	Array of Tag		The tags of the security group.
Tag			
TagValue	String	TestValue	The tag value of the security group.
TagKey	String	TestKey	The tag key of the security group.
NextToken	String	e71d8a535bd9cc11	The query token returned in this call. If the return value of this parameter is empty when MaxResults and NextToken are used for a paged query, no more results are to be returned.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSecurityGroups
&RegionId=cn-hangzhou
&MaxResults=1
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeSecurityGroupsResponse>
    <SecurityGroups>
        <SecurityGroup>
            <Description>TestDescription</Description>
            <VpcId>vpc-bp67acfmxazb4p****</VpcId>
            <ServiceManaged>false</ServiceManaged>
            <SecurityGroupName>SGTestName</SecurityGroupName>
            <ResourceGroupId>rg-bp67acfmxazb4p****</ResourceGroupId>
            <SecurityGroupId>sg-bp67acfmxazb4p****</SecurityGroupId>
            <CreationTime>2021-08-31T03:12:29Z</CreationTime>
            <SecurityGroupType>normal</SecurityGroupType>
            <Tags>
                <Tag>
                    <TagKey>TestValue</TagKey>
                    <TagValue>TestValue</TagValue>
                </Tag>
            </Tags>
        </SecurityGroup>
    </SecurityGroups>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <NextToken>e71d8a535bd9cc11</NextToken>
    <RegionId>cn-hangzhou</RegionId>
</DescribeSecurityGroupsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "SecurityGroups" : {
    "SecurityGroup" : [ {
      "Description" : "TestDescription",
      "VpcId" : "vpc-bp67acfmxazb4p****",
      "ServiceManaged" : false,
      "SecurityGroupName" : "SGTestName",
      "ResourceGroupId" : "rg-bp67acfmxazb4p****",
      "SecurityGroupId" : "sg-bp67acfmxazb4p****",
      "CreationTime" : "2021-08-31T03:12:29Z",
      "SecurityGroupType" : "normal",
      "Tags" : {
        "Tag" : [ {
          "TagKey" : "TestValue",
          "TagValue" : "TestValue"
        } ]
      }
    } ]
  },
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "NextToken" : "e71d8a535bd9cc11",
  "RegionId" : "cn-hangzhou"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	NotSupported.PageNumberAndPageSize	The parameters PageNumber and PageSize are currently not supported, please use NextToken and MaxResults instead.	The error message returned because the PageNumber and PageSize parameters are not available. Use the NextToken and MaxResults parameters instead.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

18.10. DescribeSecurityGroupReferences

You can call this operation to query whether a security group is referenced by other security groups.

Description

When you call this operation, take note of the following items:

- Authorization for security groups includes authorization for inbound and outbound traffic.
- A maximum of 100 authorization entries can be returned each time.
- When you fail to delete a security group (DeleteSecurityGroup), you can call the DescribeSecurityGroupReferences operation to query whether the specified security group is referenced by other security groups. If the security group is referenced by other security groups, you must revoke the reference before the security group can be deleted.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSecurityGroupReferences	The operation that you want to perform. Set the value to DescribeSecurityGroupReferences.
RegionId	String	Yes	cn-hangzhou	The region ID of the security group.
SecurityGroupId.N	RepeatList	Yes	sg-bp14vtedjtobkvi****	The ID of security group N to be queried. Valid values of N: 1 to 10.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SecurityGroupReferences	Array of SecurityGroupReference		Details about the security groups that reference the specified security group.
SecurityGroupReference			
ReferencingSecurityGroups	Array of ReferencingSecurityGroup		Details about the security groups that referenced by the specified security group.
ReferencingSecurityGroup			
AliUid	String	1234567890	The ID of the Alibaba Cloud account to which the security group belongs.
SecurityGroupId	String	sg-bp67acfmxazb4j****	The ID of the security group.
SecurityGroupId	String	sg-bp67acfmxazb4p****	The ID of the queried security group.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSecurityGroupReferences
&RegionId=cn-hangzhou
&SecurityGroupId.1=sg-bp14vtedjtobkvi****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeSecurityGroupReferencesResponse>
      <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
      <SecurityGroupReferences>
          <SecurityGroupReference>
              <SecurityGroupId>sg-bp67acfmxazb4ph****</SecurityGroupId>
              <ReferencingSecurityGroups>
                  <ReferencingSecurityGroup>
                      <SecurityGroupId>sg-bp67acfmxazb4pi****</SecurityGroupId>
                      <AliUid>1234567890</AliUid>
                  </ReferencingSecurityGroup>
                  <ReferencingSecurityGroup>
                      <SecurityGroupId>sg-bp67acfmxazb4pj****</SecurityGroupId>
                      <AliUid>1234567890</AliUid>
                  </ReferencingSecurityGroup>
              </ReferencingSecurityGroups>
          </SecurityGroupReference>
      </SecurityGroupReferences>
</DescribeSecurityGroupReferencesResponse>
```

`JSON` format

```
{
    "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984",
    "SecurityGroupReferences": [
        {
            "SecurityGroupId": "sg-bp67acfmxazb4ph****",
            "SecurityReferencingGroups": [
                {
                    "AliUid": "1234567890",
                    "SecurityGroupId": "sg-bp67acfmxazb4pi****"
                },
                {
                    "AliUid": "1234567890",
                    "SecurityGroupId": "sg-bp67acfmxazb4pj****"
                }
            ]
        }
    ]
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidSecurityGroupId.Malformed	The specified parameter SecurityGroupId is essential and size should less than 10	The error message returned because the specified SecurityGroupId.N parameter must be specified and the value of N cannot exceed 10.
404	InvalidSecurityGroupId.NotFound	The SecurityGroupId provided does not exist in our records.	The error message returned because the specified security group does not exist under this account. Check whether the security group ID is correct.

For a list of error codes, visit the API Error Center.

18.11. ModifySecurityGroupAttribute

Modifies the name or description of a security group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySecurityGroupAttribute	The operation that you want to perform. Set the value to ModifySecurityGroupAttribute.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmxazb4p****	The ID of the security group.
SecurityGroupName	String	No	SecurityGroupTestName	The new name of the security group. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
Description	String	No	TestDescription	The new description of the security group. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`. This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupAttribute
&SecurityGroupId=sg-bp67acfmxazb4p****
&RegionId=cn-hangzhou
&SecurityGroupName=SecurityGroupTestName
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifySecurityGroupAttributeResponse>
       <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</ModifySecurityGroupAttributeResponse>
```

`JSON` format

```
{
    "RequestId":"CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist within this account. Check whether the security group ID is correct.

HttpCode	Error code	Error message	Description
400	InvalidSecurityGroupName.Malformed	Specified security group name is not valid.	The error message returned because the specified SecurityGroupName parameter is invalid. By default, the SecurityGroupName parameter is empty. If this parameter is specified, the specified name is displayed on the console. The name must be 2 to 128 characters in length. It must start with a letter and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It cannot start with http:// or https://.
400	InvalidSecurityGroupDiscription.Malformed	Specified security group description is not valid.	The error message returned because the specified Description parameter is invalid.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because the security groups managed by cloud services cannot be modified.

For a list of error codes, visit the API Error Center.

18.12. ModifySecurityGroupRule

Modifies the description of an inbound rule of a security group. This operation can be called to modify only the description of an inbound security group rule. If you want to modify other information such as the policy, port range, and authorization object of the rule, log on to the Elastic Compute Service (ECS) console.

Description

In the security group-related API documents, inbound traffic refers to the traffic that is sent by the source device and received at the destination device.

You can determine an inbound security group rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying only one parameter.

- Parameters used to specify an inbound security group rule that controls access to a specific CIDR block: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), and SourceCidrIp.

```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupRule
&SecurityGroupId=sg-bp67acfmxazb4p****
&SourceCidrIp=10.0.0.0/8
&IpProtocol=tcp
&PortRange=80/80
&Policy=accept
&Description=This is a new security group rule.
&<Common request parameters>
```

- Parameters used to specify an inbound security group rule that controls access to other security groups: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), and SourceGroupId.

```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupRule
&SecurityGroupId=sg-bp67acfmxazb4p****
&SourceGroupId=sg-bp67acfmxa123b****
&IpProtocol=tcp
&PortRange=80/80
&Policy=accept
&Description=This is a new security group rule.
&<Common request parameters>
```

- Parameters used to specify an inbound security group rule in which a prefix list is referenced: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), and SourcePrefixListId.

```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupRule
&SecurityGroupId=sg-bp67acfmxazb4p****
&SourcePrefixListId=pl-x1j1k5ykzqlixdcy****
&IpProtocol=tcp
&PortRange=80/80
&Policy=accept
&Description=This is a new security group rule.
&<Common request parameters>
```

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySecurityGroupRule	The operation that you want to perform. Set the value to **ModifySecurityGroupRule**.
RegionId	String	Yes	cn-hangzhou	The region ID of the destination security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmxazb4p****	The ID of the destination security group.
IpProtocol	String	Yes	all	The transport layer protocol. The values of this parameter are case-insensitive. Valid values: • icmp • gre • tcp • udp • all: All protocols are supported.
PortRange	String	Yes	80/80	The range of destination ports that correspond to the transport layer protocol. Valid values: • When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port number and the end port number with a forward slash (/). Example: 1/200. • When the IpProtocol parameter is set to icmp, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to gre, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to all, the port number range is -1/-1, which indicates all ports.
SourceGroupId	String	No	sg-bp67acfmxa123b****	The ID of the source security group. At least one of `SourceGroupId` and `SourceCidrIp` must be specified. • If `SourceGroupId` is specified but `SourceCidrIp` is not specified, the `NicType` parameter must be set to intranet. • If both `SourceGroupId` and `SourceCidrIp` are specified, `SourceCidrIp` takes precedence.
SourceGroupOwnerId	Long	No	12345678910	The ID of the Alibaba Cloud account that manages the source security group when you set a security group rule across accounts. • If both `SourceGroupOwnerId` and `SourceGroupOwnerAccount` are empty, access permissions are configured for another security group managed by your account. • If `SourceCidrIp` is specified, the `SourceGroupOwnerId` parameter is ignored.

Parameter	Type	Required	Example	Description
SourceGroupOwnerAccount	String	No	EcsforCloud@Alibaba.com	The Alibaba Cloud account that manages the source security group when you set a security group rule across accounts. • If both `SourceGroupOwnerId` and `SourceGroupOwnerAccount` are empty, access permissions are configured for another security group managed by your account. • If `SourceCidrIp` is specified, the `SourceGroupOwnerAccount` parameter is ignored.
SourceCidrIp	String	No	10.0.0.0/8	The source IPv4 CIDR block to which you want to control access. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.
Ipv6SourceCidrIp	String	No	2001:db8:1233:1a00::***	The source IPv6 CIDR block. CIDR blocks and IPv6 addresses are supported. **Note** Only the IP addresses of instances in virtual private clouds (VPCs) are supported. You cannot specify both the Ipv6SourceCidrIp parameter and the `SourceCidrIp` parameter. This parameter is empty by default.
SourcePrefixListId	String	No	pl-x1j1k5ykzqlixdcy****	The ID of the source prefix list to which you want to control access. You can call the DescribePrefixLists operation to query the IDs of available prefix lists. If you specify the `SourceCidrIp`, `Ipv6SourceCidrIp`, or `SourceGroupId` parameter, this parameter is ignored.
SourcePortRange	String	No	80/80	The range of source ports that correspond to the transport layer protocol. Valid values: • When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port number and the end port number with a forward slash (/). Example: 1/200. • When the IpProtocol parameter is set to icmp, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to gre, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to all, the port number range is -1/-1, which indicates all ports.
DestCidrIp	String	No	10.0.0.0/8	The destination IPv4 CIDR block. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.
Ipv6DestCidrIp	String	No	2001:db8:1234:1a00::***	The destination IPv6 CIDR block. CIDR blocks and IPv6 addresses are supported. **Note** Only the IP addresses of instances in VPCs are supported. You cannot specify both the Ipv6DestCidrIp parameter and the `DestCidrIp` parameter. This parameter is empty by default.

Parameter	Type	Required	Example	Description
Policy	String	No	accept	The authorization policy. Valid values: • accept: allows access. • drop: denies access and returns no responses. Default value: accept.
Priority	String	No	1	The priority of the security group rule. Valid values: 1 to 100. Default: 1.
NicType	String	No	intranet	The network interface controller (NIC) type of the security group rule when the security group is in the classic network. Valid values: • internet: public NIC • intranet: private NIC Default value: internet. The NicType parameter must be set to intranet in the following cases: • If the security group is in a VPC, this parameter is required and must be set to intranet. • If you specify only `DestGroupId` when you configure access between security groups, this parameter must be set to intranet.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Description	String	No	This is a new security group rule.	The description of the security group rule. The description must be 1 to 512 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupRule
&SecurityGroupId=sg-bp67acfmxazb4p****
&SourceGroupId=sg-bp67acfmxa123b****
&IpProtocol=all
&PortRange=80/80
&Policy=accept
&Description=This is a new security group rule.
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifySecurityGroupRuleResponse>
    <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</ModifySecurityGroupRuleResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	OperationDenied	The specified IpProtocol does not exist or IpProtocol and PortRange do not match.	The error message returned because the specified IpProtocol parameter does not exist or does not match the specified port range.
400	InvalidIpProtocol.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified IpProtocol or PortRange parameter is invalid.
400	InvalidSourceCidrIp.Malformed	The specified parameter "SourceCidrIp" is not valid.	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist.
400	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type does not match the authorization object of the security group rule.
400	InvalidSourceGroupId.Mismatch	Specified security group and source group are not in the same VPC.	The error message returned because the destination security group and the source security group do not belong to the same VPC.
400	InvalidSourceGroup.NotFound	Specified source security group does not exist.	The error message returned because the specified inbound security group rule does not exist or because relevant parameters are not specified.
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the VPC does not support security groups.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidSecurityGroupDiscription.Malformed	The specified security group rule description is not valid.	The error message returned because the specified Description parameter is invalid.
400	MissingParameter.Source	One of the parameters SourceCidrIp, SourceGroupId or SourcePrefixListId must be specified.	The error message returned because the SourceCidrIp, SourceGroupId, and SourcePrefixListId parameters are all empty. At least one of the parameters must be specified.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or All.	The error message returned because the specified IpProtocol parameter is invalid. The valid values of this parameter are tcp, udp, icmp, gre, and all.
400	InvalidParam.SourceIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6DestCidrIp parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol by mistake.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol by mistake.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.
400	InvalidSecurityGroupId.Malformed	The specified parameter "SecurityGroupId" is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	InvalidSourceGroupId.Mismatch	NicType is required or NicType expects intrnet.	The error message returned because the NicType parameter is not specified or is not set to intranet.
403	MissingParameter	The input parameter "SourceGroupId" or "SourceCidrIp" cannot be both blank.	The error message returned because both the SourceGroupId and SourceCidrIp parameters are empty.
403	AuthorizationLimitExceed	The limit of authorization records in the security group reaches.	The error message returned because the maximum number of rules in the security group has been reached.
403	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the destination security group is the same as the source security group.
403	InvalidNetworkType.Mismatch	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the destination security group is different from that of the source security group.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because you cannot modify security groups managed by cloud services.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist within this account. Check whether the security group ID is correct.
404	InvalidSourceGroupId.NotFound	The SourceGroupId provided does not exist in our records.	The error message returned because the specified SourceGroupId parameter does not exist.
404	SecurityGroupRule.NotFound	The target security group rule not exist.	The error message returned because the specified security group rule does not exist.
404	InvalidPrefixListId.NotFound	The specified prefix list was not found.	The error message returned because the specified prefix list does not exist.
404	NotSupported.GrayFunction	The prefix list is a gray-scale function, not currently supported.	The error message returned because this operation is not supported. The prefix list feature is in invitational preview.

For a list of error codes, visit the API Error Center.

18.13. ModifySecurityGroupEgressRule

Modifies the description of an outbound rule of a security group. This operation can be called to modify only the description of an outbound security group rule. If you want to modify other information such as the policy, port range, and authorization object of the rule, log on to the Elastic Compute Service (ECS) console.

Description

You can determine an outbound rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying only one parameter.

- Parameters used to specify an outbound security group rule that controls access to a specific CIDR block: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, SourceCidrIp (optional), and DestCidrIp.

```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupEgressRule
&SecurityGroupId=sg-bp67acfmxazb4p****
&DestCidrIp=10.0.0.0/8
&IpProtocol=tcp
&PortRange=80/80
&Policy=allow
&Description=This is a new security group rule.
&<Common request parameters>
```

- Parameters used to specify an outbound security group rule that controls access to other security groups: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, SourceCidrIp (optional), and DestGroupId.

```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupEgressRule
&SecurityGroupId=sg-bp67acfmxazb4p****
&DestGroupId=sg-bp67acfmxa123b****
&IpProtocol=tcp
&PortRange=80/80
&Policy=allow
&Description=This is a new security group rule.
&<Common request parameters>
```

- Parameters used to specify an outbound security group rule in which a prefix list is referenced: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, SourceCidrIp (optional), and DestPrefixListId.

```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupEgressRule
&SecurityGroupId=sg-bp67acfmxazb4p****
&DestPrefixListId=pl-x1j1k5ykzqlixdcy****
&IpProtocol=tcp
&PortRange=80/80
&Policy=allow
&Description=This is a new security group rule.
&<Common request parameters>
```

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySecurityGroupEgressRule	The operation that you want to perform. Set the value to **ModifySecurityGroupEgressRule**.
RegionId	String	Yes	cn-hangzhou	The region ID of the source security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmxazb4p****	The ID of the source security group.

Parameter	Type	Required	Example	Description
IpProtocol	String	Yes	tcp	The transport layer protocol. The values of this parameter are case-insensitive. Valid values: • icmp • gre • tcp • udp • all: All protocols are supported.
PortRange	String	Yes	80/80	The range of destination ports that correspond to the transport layer protocol. Valid values: • When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port number and the end port number with a forward slash (/). Example: 1/200. • When the IpProtocol parameter is set to icmp, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to gre, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to all, the port number range is -1/-1, which indicates all ports.
DestGroupId	String	No	sg-bp67acfmxa123b****	The ID of the destination security group. You must specify at least one of the `DestGroupId` and `DestCidrIp` parameters. • If `DestGroupId` is specified but `DestCidrIp` is not specified, the `NicType` parameter must be set to intranet. • If both `DestGroupId` and `DestCidrIp` are specified, `DestCidrIp` takes precedence.
DestGroupOwnerId	Long	No	1234567890	The ID of the Alibaba Cloud account (UID) that manages the destination security group.
DestGroupOwnerAccount	String	No	EcsforCloud@Alibaba.com	The logon name of the Alibaba Cloud account that manages the destination security group.
DestCidrIp	String	No	10.0.0.0/8	The destination IPv4 CIDR block. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.
Ipv6DestCidrIp	String	No	2001:db8:1233:1a00::***	The destination IPv6 CIDR block. CIDR blocks and IPv6 addresses are supported. **Note** Only the IP addresses of instances in virtual private clouds (VPCs) are supported. You cannot specify both the Ipv6DestCidrIp parameter and the `DestCidrIp` parameter. This parameter is empty by default.
SourceCidrIp	String	No	10.0.0.0/8	The source IPv4 CIDR block. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.

Parameter	Type	Required	Example	Description
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00::***	The source IPv6 CIDR block. CIDR blocks and IPv6 addresses are supported. **Note** Only the IP addresses of instances in VPCs are supported. You cannot specify both the Ipv6SourceCidrIp parameter and the `SourceCidrIp` parameter. This parameter is empty by default.
DestPrefixListId	String	No	pl-x1j1k5ykzqlixdcy****	The ID of the destination prefix list. You can call the DescribePrefixLists operation to query the IDs of available prefix lists. If you specify `DestCidrIp`, `Ipv6DestCidrIp`, or `DestGroupId`, this parameter is ignored.
SourcePortRange	String	No	80/80	The range of source ports that correspond to the transport layer protocol. Valid values: • When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port number and the end port number with a forward slash (/). Example: 1/200. • When the IpProtocol parameter is set to icmp, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to gre, the port number range is -1/-1, which indicates all ports. • When the IpProtocol parameter is set to all, the port number range is -1/-1, which indicates all ports.
Policy	String	No	accept	The authorization policy. Valid values: • accept: allows access. • drop: denies access and returns no responses. Default value: accept.
Priority	String	No	1	The priority of the security group rule. Valid values: 1 to 100. Default: 1.
NicType	String	No	intranet	The network interface controller (NIC) type of the security group rule when the security group is in the classic network. Valid values: • internet: public NIC • intranet: private NIC Default value: internet. The NicType parameter must be set to intranet in the following cases: • If the security group is in a VPC, this parameter is required and must be set to intranet. • If you specify only `DestGroupId` when you configure access between security groups, this parameter must be set to intranet.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Parameter	Type	Required	Example	Description
Description	String	No	This is a new securitygroup rule.	The description of the security group rule. The description must be 1 to 512 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupEgressRule
&SecurityGroupId=sg-bp67acfmxazb4p****
&DestGroupId=sg-bp67acfmxa123b****
&IpProtocol=tcp
&PortRange=80/80
&Policy=allow
&Description=This is a new securitygroup rule.
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifySecurityGroupEgressRuleResponse>
    <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</ModifySecurityGroupEgressRuleResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	OperationDenied	The specified IpProtocol does not exist or IpProtocol and PortRange do not match.	The error message returned because the specified IpProtocol parameter does not exist or does not match the specified port range.
400	InvalidIpProtocol.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified IpProtocol or PortRange parameter is invalid.
400	InvalidDestCidrIp.Malformed	The specified parameter "DestCidrIp" is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist.
400	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type does not match the authorization object of the security group rule.
400	InvalidDestGroupId.Mismatch	Specified security group and destination group are not in the same VPC.	The error message returned because the specified source and destination security groups do not belong to the same VPC.

HttpCode	Error code	Error message	Description
400	InvalidDestGroup.NotFound	Specified destination security group does not exist.	The error message returned because the specified DestGroupId parameter does not exist.
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the VPC does not support security groups.
400	InvalidPriority.Malformed	The specified parameter "Priority" is not valid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The specified Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType is not valid.	The error message returned because the specified NicType parameter does not exist.
400	InvalidSecurityGroupDiscription.Malformed	The specified security group rule description is not valid.	The error message returned because the specified Description parameter is invalid.
400	InvalidSecurityGroup.InvalidNetworkType	The specified security group network type is not support this operation, please check the security group network types. For VPC security groups, ClassicLink must be enabled.	The error message returned because the operation is not supported while the security group is of the current network type. If the network type is VPC, ClassicLink must be enabled.
400	MissingParameter.Dest	One of the parameters DestCidrIp, DestGroupId or DestPrefixListId must be specified.	The error message returned because the DestCidrIp, DestGroupId, and DestPrefixListId parameters are all empty. At least one of these parameters must be specified.
400	InvalidParam.PortRange	The specified param PortRange or SourcePortRange is not valid. should be integer and less than 65535, range separator is '/'.	The error message returned because the specified PortRange or SourcePortRange parameter is invalid. The values of PortRange and SourcePortRange must be in the format of <Start port number>/<End port number>. The port numbers must be integers and range from 1 to 65535.
400	InvalidIpProtocol.ValueNotSupported	The specified parameter IpProtocol should not be null and only tcp, udp, icmp, gre or all is supported. Ignore case.	The error message returned because the specified IpProtocol parameter is invalid. The valid values of this parameter are tcp, udp, icmp, gre, and all.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidParam.SourceIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol by mistake.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol by mistake.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.

HttpCode	Error code	Error message	Description
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	InvalidDestGroupId.Mismatch	NicType is required or NicType expects intranet.	The error message returned because the NicType parameter is not specified or is not set to intranet.
403	MissingParameter	The input parameter "DestGroupId" or "DestCidrIp" cannot be both blank.	The error message returned because both the DestGroupId and DestCidrIp parameters are empty.
403	AuthorizationLimitExceed	The limit of authorization records in the security group reaches.	The error message returned because the maximum number of rules in the security group has been reached.
403	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the destination security group is the same as the source security group.
403	InvalidNetworkType.Conflict	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the destination security group is different from that of the source security group.
403	InvalidSecurityGroup.IsSame	The authorized SecurityGroupId should be different from the DestGroupId.	The error message returned because the ID of the source security group is the same as that of the destination security group.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because you cannot modify security groups managed by cloud services.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist within this account. Check whether the security group ID is correct.
404	InvalidDestGroupId.NotFound	The DestGroupId provided does not exist in our records.	The error message returned because the specified destination security group does not exist.
404	InvalidPrefixListId.NotFound	The specified prefix list was not found.	The error message returned because the specified prefix list does not exist.
404	NotSupported.GrayFunction	The prefix list is a gray-scale function, not currently supported.	The error message returned because this operation is not supported. The prefix list feature is in invitational preview.

For a list of error codes, visit the API Error Center.

18.14. ModifySecurityGroupPolicy

Modifies the internal access control policy of a basic security group. The internal access control policies of advanced security groups cannot be modified.

Description

When you call this operation, take note of the following items:

- When InnerAccessPolicy is set to Accept for a security group, the instances in the security group can communicate with each other. In this case, the Accept internal access control policy takes precedence over user-created security group rules to keep instances in the security group accessible to each other.
- When InnerAccessPolicy is set to Drop for a security group, the instances in the security group are isolated from each other. In this case, user-created security group rules take precedence over the Drop internal access control policy and can be used to allow access between the instances. For example, you can call the AuthorizeSecurityGroup operation to create an inbound security group rule that allows the instances in the security group to communicate with each other.
- You can call the DescribeSecurityGroupAttribute operation to query the internal access control policy of a security group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySecurityGroupPolicy	The operation that you want to perform. Set the value to ModifySecurityGroupPolicy.
InnerAccessPolicy	String	Yes	Drop	The internal access control policy of the security group. Valid values: • Accept: All instances in the security group can communicate with each other. • Drop: All instances in the security group are isolated from each other. The values are case-insensitive.
RegionId	String	Yes	cn-hangzhou	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmxazb4ph****	The ID of the security group.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate a value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example	Description
RequestId	String	CEF72CEB-54B6-4AE8-B225-F876FF7BA984	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupPolicy
&RegionId=cn-hangzhou
&SecurityGroupId=sg-bp67acfmxazb4ph****
&InnerAccessPolicy=Drop
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifySecurityGroupPolicyResponse>
      <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</ModifySecurityGroupPolicyResponse>
```

`JSON` format

```
{
    "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidSecurityGroupId.Malformed	The SecurityGroupId is invalid. Only letters, numbers and underscores are supported. Maximum length is 100 characters.	The error message returned because the specified SecurityGroupId parameter is invalid. The security group ID can be up to 100 characters in length and can contain only letters, digits, and underscores (_).
400	InvalidPolicy.Malformed	The Policy is invalid. Only 'Accept' and 'Drop' are supported. Ignore case.	The error message returned because the specified InnerAccessPolicy parameter is invalid. The valid values of this parameter are Accept and Drop, and these values are case-insensitive.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist within this account. Check whether the security group ID is correct.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because security groups managed by cloud services cannot be modified.

For a list of error codes, visit the API Error Center.

18.15. DeleteSecurityGroup

Deletes a security group.

Description

Before you delete a security group, make sure that no instances exist in the security group and that the security group is not referenced by other security groups (DescribeSecurityGroupReferences). Otherwise, the DeleteSecurityGroup request fails.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteSecurityGroup	The operation that you want to perform. Set the value to **DeleteSecurityGroup**.
RegionId	String	Yes	cn-hangzhou	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp1fg655nh68xyz9****	The ID of the security group. You can call the DescribeSecurityGroups to query the security group ID.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.

Examples

Sample request

```
http(s)://ecs.aliyuncs.com/?Action=DeleteSecurityGroup
&RegionId=cn-hangzhou
&SecurityGroupId=sg-bp1fg655nh68xyz9****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DeleteSecurityGroupResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
</DeleteSecurityGroupResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	DependencyViolation	There is still instance(s) in the specified security group.	The error message returned because instances exist in the security group. Remove the instances and try again.
403	DependencyViolation	The specified security group has been authorized in another one.	The error message returned because the specified security group is referenced by another security group.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because you cannot modify security groups managed by cloud services.

For a list of error codes, visit the API Error Center.

19.Deployment sets

19.1. CreateDeploymentSet

Creates a deployment set in a specific region.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateDeploymentSet	The operation that you want to perform. Set the value to **CreateDeploymentSet**.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which to create the deployment set. You can call the DescribeRegions operation to query the most recent region list.
OnUnableToRedeployFailedInstance	String	No	CancelMembershipAndStart	The emergency solution to be used in the following situation: Instances in the deployment set cannot be evenly distributed to different zones due to resource insufficiency after the instances are failed over from faulty physical machines to normal physical machines. Valid values: • CancelMembershipAndStart: removes the instances from the deployment set and restarts the instances immediately after they are failed over. • KeepStopped: leaves the instances in the abnormal state and restarts them after resources are replenished. Default value: CancelMembershipAndStart.
Description	String	No	testDescription	The description of the deployment set. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
DeploymentSetName	String	No	testDeploymentSetName	The name of the deployment set. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Strategy	String	No	Availability	The deployment strategy. Valid values: • Availability: availability strategy • AvailabilityGroup: availability group strategy Default value: Availability.

Parameter	Type	Required	Example	Description
GroupCount	Long	No	1	The number of deployment set groups in the deployment set. Valid values: 1 to 7. Default value: 3. **Note** This parameter is valid only when `Strategy` is set to AvailabilityGroup.

Response parameters

Parameter	Type	Example	Description
DeploymentSetId	String	ds-bp1frxuzdg87zh4pzq****	The ID of the deployment set.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateDeploymentSet
&RegionId=cn-hangzhou
&DeploymentSetName=testDeploymentSetName
&Strategy=Availability
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateDeploymentSetResponse>
    <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
    <DeploymentSetId>ds-bp1frxuzdg87zh4pzq****</DeploymentSetId>
</CreateDeploymentSetResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "04F0F334-1335-436C-A1D7-6C044FE73368",
  "DeploymentSetId" : "ds-bp1frxuzdg87zh4pzq****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter RegionId that is mandatory for processing this request is not supplied.	The error message returned because the RegionId parameter is not specified.
400	InvalidDeploymentSetName.Malformed	Specified deployment set name is not valid.	The error message returned because the specified DeploymentSetName parameter is invalid.
400	InvalidDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidParameter.Domain	The specified parameter Domain is not valid.	The error message returned because the specified Domain parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.Strategy	The specified parameter Strategy is not valid	The error message returned because the specified Strategy parameter is invalid.
400	InvalidParameter.granularity	The specified parameter Granularity is not valid.	The error message returned because the specified Granularity parameter is invalid.
400	DependencyViolation.domain.granularity	The DeploymentSet domain and granularity is violation.	The error message returned because the specified Domain and Granularity parameters do not correspond to each other.
400	DependencyViolation.strategy.granularity	The DeploymentSet strategy and granularity is violation.	The error message returned because the specified Strategy and Granularity parameters do not correspond to each other.
400	DEPLOYMENTSET.QUOTA_FULL	The deploymentSet quota is full	The error message returned because the maximum number of deployment sets has been reached. Reduce the number of deployment sets.

For a list of error codes, visit the API Error Center.

19.2. DescribeDeploymentSets

Queries the attributes of one or more deployment sets.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDeploymentSets	The operation that you want to perform. Set the value to **DescribeDeploymentSets**.
RegionId	String	Yes	cn-hangzhou	The region ID of the deployment set. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.
DeploymentSetIds	String	No	["ds-bp67acfmxazb4ph****", "ds-bp67acfmxazb4pi****", ... "ds-bp67acfmxazb4pj****"]	The IDs of deployment sets. The value can be a JSON array that consists of up to 100 deployment set IDs in the format of `["ds-xxxxxxxxx", "ds-yyyyyyyyy", ... "ds-zzzzzzzzz"]`. Separate multiple deployment set IDs with commas (,).
Strategy	String	No	Availability	The deployment strategy. Valid values: • Availability: high availability strategy. • AvailabilityGroup: high availability group strategy.

Parameter	Type	Required	Example	Description
DeploymentSetName	String	No	testDeploymentSetName	The name of the deployment set. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).

Response parameters

Parameter	Type	Example	Description
PageSize	Integer	1	The number of entries returned per page.
PageNumber	Integer	1	The page number of the returned page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of deployment sets returned.
RegionId	String	cn-hangzhou	The region ID of the deployment set.
DeploymentSets	Array of DeploymentSet		Details about the deployment sets.
DeploymentSet			
CreationTime	String	2021-12-07T06:01:46Z	The time when the deployment set was created.
Strategy	String	LooseDispersion	The deployment strategy.
DeploymentSetId	String	ds-bp67acfmxazb4ph****	The ID of the deployment set.
DeploymentStrategy	String	Availability	The deployment strategy. The value of this response parameter is that of the `Strategy` request parameter.
DeploymentSetDescription	String	testDeploymentSetDescription	The description of the deployment set.
Domain	String	default	The deployment domain.
GroupCount	Integer	3	The number of deployment set groups in the deployment set. **Note** This parameter is valid only when the Strategy request parameter is set to AvailabilityGroup.
Granularity	String	host	The deployment granularity.
DeploymentSetName	String	testDeploymentSetName	The name of the deployment set.
InstanceAmount	Integer	3	The number of instances in the deployment set.
InstanceIds	Array of String	["i-bp67acfmxazb4ph****","i-bp67acfmxazb4pi****","i-bp67acfmxazb4pj****"]	The IDs of the instances in the deployment set.

Parameter	Type	Example	Description
Capacities	Array of Capacity		Details of the capacities of the deployment set. This parameter is valid only when the deployment set contains Elastic Compute Service (ECS) instances. The value contains the capacities of the deployment set in different zones.
Capacity			
ZoneId	String	cn-hangzhou-i	The ID of the zone. Only the zone IDs of existing ECS instances in the deployment set are returned.
UsedAmount	Integer	2	The number of ECS instances that belong to the zone in the deployment set.
AvailableAmount	Integer	18	The number of ECS instances that can be added to the deployment set within the zone.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDeploymentSets
&RegionId=cn-hangzhou
&PageSize=1
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeDeploymentSetsResponse>
    <DeploymentSets>
        <DeploymentSet>
            <CreationTime>2021-12-07T06:01:46Z</CreationTime>
            <Granularity>host</Granularity>
            <DeploymentSetDescription>testDeploymentSetDescription</DeploymentSetDescription>
            <Domain>default</Domain>
            <InstanceIds>
                <InstanceId>i-bp67acfmxazb4ph****</InstanceId>
                <InstanceId>i-bp67acfmxazb4pi****</InstanceId>
                <InstanceId>i-bp67acfmxazb4pj****</InstanceId>
            </InstanceIds>
            <InstanceAmount>3</InstanceAmount>
            <Strategy>LooseDispersion</Strategy>
            <DeploymentSetName>testDeploymentSetName</DeploymentSetName>
            <DeploymentStrategy>Availability</DeploymentStrategy>
            <DeploymentSetId>ds-bp67acfmxazb4ph****</DeploymentSetId>
            <capacities>
                <Capacity>
                    <UsedAmount>1</UsedAmount>
                    <ZoneId>cn-hangzhou-h</ZoneId>
                    <AvailableAmount>19</AvailableAmount>
                </Capacity>
                <Capacity>
                    <UsedAmount>2</UsedAmount>
                    <ZoneId>cn-hangzhou-i</ZoneId>
                    <AvailableAmount>18</AvailableAmount>
                </Capacity>
            </capacities>
        </DeploymentSet>
    </DeploymentSets>
    <PageNumber>1</PageNumber>
    <TotalCount>1</TotalCount>
    <PageSize>1</PageSize>
    <RegionId>cn-hangzhou</RegionId>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DescribeDeploymentSetsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "DeploymentSets" : {
    "DeploymentSet" : {
      "CreationTime" : "2021-12-07T06:01:46Z",
      "Granularity" : "host",
      "DeploymentSetDescription" : "testDeploymentSetDescription",
      "Domain" : "default",
      "InstanceIds" : {
        "InstanceId" : [ "i-bp67acfmxazb4ph****", "i-bp67acfmxazb4pi****", "i-bp67acfmxazb4pj****" ]
      },
      "InstanceAmount" : 3,
      "Strategy" : "LooseDispersion",
      "DeploymentSetName" : "testDeploymentSetName",
      "DeploymentStrategy" : "Availability",
      "DeploymentSetId" : "ds-bp67acfmxazb4ph****",
      "capacities" : {
        "Capacity" : [ {
          "UsedAmount" : 1,
          "ZoneId" : "cn-hangzhou-h",
          "AvailableAmount" : 19
        }, {
          "UsedAmount" : 2,
          "ZoneId" : "cn-hangzhou-i",
          "AvailableAmount" : 18
        } ]
      }
    }
  },
  "PageNumber" : 1,
  "TotalCount" : 1,
  "PageSize" : 1,
  "RegionId" : "cn-hangzhou",
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidDeploymentSetIds.TooManyInput	The parameter DeploymentSets size should less than 100.	The error message returned because the number of specified deployment sets exceeds 100.

For a list of error codes, visit the API Error Center.

19.3. DescribeDeploymentSetSupportedInstanceTypeFamily

You can call this operation to query instance families that support deployment sets.

Description

For more information about instance families, see Instance families.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDeploymentSetSupportedInstanceTypeFamily	The operation that you want to perform. Set the value to DescribeDeploymentSetSupportedInstanceTypeFamily.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the deployment set. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
InstanceTypeFamilies	String	ecs.i2g, ecs.i1, ecs.i2ne, and ecs.i2gne	The instance families that support deployment sets.
RequestId	String	473469C7-AA6F-4DC5-B7DB-A3DC7DE1C52E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDeploymentSetSupportedInstanceTypeFamily
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeDeploymentSetSupportedInstanceTypeFamilyResponse>
      <RequestId>473469C7-AA6F-4DC5-B7DB-A3DC7DE1C52E</RequestId>
      <InstanceTypeFamilies>ecs.sccgn6ex,ecs.i2g,ecs.i1,ecs.i2ne,ecs.i2gne,ecs.hfc6,ecs.hfg6,ecs.hfr6,ecs.sn1nec,ecs.sn2nec,ecs.
se1nec,ecs.c6,ecs.g6,ecs.r6,ecs.scch5s,ecs.sccg5s,ecs.ic5,ecs.c5,ecs.d1,ecs.d1-c14d3,ecs.d1-c8d3,ecs.d1ne,ecs.g5,ecs.hfc5,ecs.hf
g5,ecs.i2,ecs.mn4,ecs.n1,ecs.n1.tiny,ecs.n2,ecs.n4,ecs.r5,ecs.se1,ecs.se1ne,ecs.sn1,ecs.sn1ne,ecs.sn2,ecs.sn2ne,ecs.xn4,ecs.s1,e
cs.s2,ecs.s3,ecs.t1,ecs.scch5,ecs.ebmg5,ecs.sccg5,ecs.sccgn6,ecs.re6,ecs.d2,ecs.d2s,ecs.d2c,ecs.sccgn6ne-inc,ecs.g5ne</InstanceT
ypeFamilies>
</DescribeDeploymentSetSupportedInstanceTypeFamilyResponse>
```

`JSON` format

```
{
 "RequestId": "473469C7-AA6F-4DC5-B7DB-A3DC7DE1C52E",
 "InstanceTypeFamilies": "ecs.sccgn6ex,ecs.i2g,ecs.i1,ecs.i2ne,ecs.i2gne,ecs.hfc6,ecs.hfg6,ecs.hfr6,ecs.sn1nec,ecs.sn2nec,ecs.se
1nec,ecs.c6,ecs.g6,ecs.r6,ecs.scch5s,ecs.sccg5s,ecs.ic5,ecs.c5,ecs.d1,ecs.d1-c14d3,ecs.d1-c8d3,ecs.d1ne,ecs.g5,ecs.hfc5,ecs.hfg5
,ecs.i2,ecs.mn4,ecs.n1,ecs.n1.tiny,ecs.n2,ecs.n4,ecs.r5,ecs.se1,ecs.se1ne,ecs.sn1,ecs.sn1ne,ecs.sn2,ecs.sn2ne,ecs.xn4,ecs.s1,ecs
.s2,ecs.s3,ecs.t1,ecs.scch5,ecs.ebmg5,ecs.sccg5,ecs.sccgn6,ecs.re6,ecs.d2,ecs.d2s,ecs.d2c,ecs.sccgn6ne-inc,ecs.g5ne"
}
```

Error codes

For a list of error codes, visit the API Error Center.

19.4. ModifyDeploymentSetAttribute

You can call this operation to modify the name and description of a deployment set.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDeploymentSetAttribute	The operation that you want to perform. Set the value to ModifyDeploymentSetAttribute.
DeploymentSetId	String	Yes	ds-bp1frxuzdg87zh4p****	The ID of the deployment set.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the deployment set. You can call the DescribeRegions operation to query the most recent region list.
Description	String	No	TestDescription	The new description of the deployment set. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
DeploymentSetName	String	No	DeploymentSetTestName	The new name of the deployment set. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyDeploymentSetAttribute
&RegionId=cn-hangzhou
&DeploymentSetId=ds-bp1frxuzdg87zh4p****
&DeploymentSetName=DeploymentSetTestName
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyDeploymentSetAttributeResponse>
      <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyDeploymentSetAttributeResponse>
```

`JSON` format

```
{
    "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter RegionId that is mandatory for processing this request is not supplied.	The error message returned because the required RegionId parameter is not specified.
400	InvalidDeploymentSetName.Malformed	Specified deployment set name is not valid.	The error message returned because the specified DeploymentSetName parameter is invalid.
400	InvalidDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidDeploymentSetId.NotFound	The specified DeploymentSetId does not exist.	The error message returned because the specified DeploymentSetId parameter does not exist. Check whether the deployment set ID is correct.

HTTP status code	Error code	Error message	Description
403	QuotaExceed.DeploymentSetInstanceQuotaFull	instance quota in one deployment set exceeded.	The error message returned because the maximum number of instances in the current deployment set has been reached.

For a list of error codes, visit the API Error Center.

19.5. DeleteDeploymentSet

You can call this operation to delete a deployment set.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteDeploymentSet	The operation that you want to perform. Set the value to DeleteDeploymentSet.
DeploymentSetId	String	Yes	ds-bp1g5ahlkal88d7x****	The ID of the deployment set. You cannot delete a deployment set that contains instances.
RegionId	String	Yes	cn-hangzhou	The region ID of the deployment set. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteDeploymentSet
&RegionId=cn-hangzhou
&DeploymentSetId=ds-bp1g5ahlkal88d7x****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteDeploymentSetResponse>
      <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</DeleteDeploymentSetResponse>
```

`JSON` format

```
{
    "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter "DeploymentSetId" that is mandatory for processing this request is not supplied.	The error message returned because the required DeploymentSetId parameter is not specified.
403	DependencyViolation.NotEmpty	There are still instance(s) in the specified DeploymentSetId.	The error message returned because the specified deployment set contains instances. You must remove the instances before you can delete the deployment set.
403	DependencyViolation.ReferByHPC	The specified deployment set is still referred by an HPC cluster.	The error message returned because the specified deployment set is associated with other HPC clusters.

For a list of error codes, visit the API Error Center.

20.SSH key pairs

20.1. CreateKeyPair

Creates an SSH key pair. The system stores the public key and returns the unencrypted private key. The private key is encoded with PEM in the PKCS#8 format. You are responsible for storing the private key and ensuring its confidentiality.

Description

In addition to calling CreateKeyPair, you can create a key pair by using a third-party key pair generation tool and call the ImportKeyPair operation to upload the key pair to an Alibaba Cloud region.

A maximum of 500 key pairs can be created in each region. For more information, see Limits.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateKeyPair	The operation that you want to perform. Set the value to **CreateKeyPair**.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which to create the key pair. You can call the DescribeRegions operation to query the most recent region list.
KeyPairName	String	Yes	testKeyPairName	The name of the key pair. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the enterprise resource group to which the SSH key pair belongs.
Tag.N.Key	String	No	TestKey	The key of tag N to be bound to the key pair. Valid values of N: 1 to 20. The tag key cannot be an empty string. The tag key can be up to 128 characters in length and cannot contain `http://` or `https://`. It cannot start with `aliyun` or `acs:`.
Tag.N.Value	String	No	TestValue	The value of tag N of the key pair. Valid values of N: 1 to 20. The tag value can be an empty string. The tag value can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs:.

Response parameters

Parameter	Type	Example	Description
PrivateKeyBody	String	MIIEpAIBAAKCAQEAtReyMzLIcBH78EV2zj****	The private key of the key pair. The private key is encoded with PEM in the PKCS#8 format.
KeyPairName	String	testKeyPairName	The name of the SSH key pair.
KeyPairId	String	ssh-bp67acfmxazb4p****	The ID of the SSH key pair.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Parameter	Type	Example	Description
KeyPairFingerPrint	String	89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**	The fingerprint of the key pair. The message-digest algorithm 5 (MD5) is used based on the public key fingerprint format defined in RFC 4716. For more information, see RFC 4716.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateKeyPair
&RegionId=cn-hangzhou
&KeyPairName=testKeyPairName
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateKeyPairResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <KeyPairName>testKeyPairName</KeyPairName>
    <KeyPairId>ssh-bp67acfmxazb4p****</KeyPairId>
    <KeyPairFingerPrint>89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**</KeyPairFingerPrint>
    <PrivateKeyBody>MIIEpAIBAAKCAQEAtReyMzLIcBH78EV2zj****</PrivateKeyBody>
</CreateKeyPairResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "KeyPairName" : "testKeyPairName",
  "KeyPairId" : "ssh-bp67acfmxazb4p****",
  "KeyPairFingerPrint" : "89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**",
  "PrivateKeyBody" : "MIIEpAIBAAKCAQEAtReyMzLIcBH78EV2zj****"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidKeyPairName.Malformed	Specified Key Pair name is not valid.	The error message returned because the specified KeyPairName parameter is invalid.
400	KeyPair.AlreadyExist	The key pair already exist.	The error message returned because a key pair with the same name already exists. Key pair names must be unique.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	QuotaExceed.KeyPair	The key pair quota exceeds.	The error message returned because the maximum number of key pairs has been reached.
403	QuotaExceed.Tags	%s	The error message returned because the maximum number of tags has been reached.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.

For a list of error codes, visit the API Error Center.

20.2. ImportKeyPair

You can call this operation to import the public key of an RSA-encrypted key pair that is generated by a third-party tool. After the key pair is imported, the public key is stored in Alibaba Cloud. You must store the private key on your own and keep it confidential.

Description

When you call this operation, take note of the following items:

- A maximum of 500 key pairs can be created in each region.
- The key pair to be imported must support one of the following encryption methods:
  - rsa
  - dsa
  - ssh-rsa
  - ssh-dss
  - ecdsa
  - ssh-rsa-cert-v00@openssh.com
  - ssh-dss-cert-v00@openssh.com
  - ssh-rsa-cert-v01@openssh.com
  - ssh-dss-cert-v01@openssh.com
  - ecdsa-sha2-nistp256-cert-v01@openssh.com
  - ecdsa-sha2-nistp384-cert-v01@openssh.com
  - ecdsa-sha2-nistp521-cert-v01@openssh.com

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ImportKeyPair	The operation that you want to perform. Set the value to ImportKeyPair.
KeyPairName	String	Yes	testKeyPairName	The name of the key pair. The name must be globally unique. It must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
PublicKeyBody	String	Yes	ABC1234567	The public key of the key pair.
RegionId	String	Yes	cn-hangzhou	The region ID of the key pair. You can call the DescribeRegions operation to query the most recent region list.
Tag.N.Key	String	No	TestKey	The key of tag N to be bound to the key pair. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length. It cannot start with acs: or aliyun, or contain http:// or https://.
Tag.N.Value	String	No	TestValue	The value of tag N to be bound to the key pair. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with acs: or contain http:// or https://.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to assign the key pair.

Response parameters

Parameter	Type	Example	Description
KeyPairFingerPrint	String	89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**	The fingerprint of the key pair. The message-digest algorithm 5 (MD5) is used based on the public key fingerprint format defined in RFC 4716.
KeyPairName	String	testKeyPairName	The name of the key pair.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ImportKeyPair
&RegionId=cn-qingdao
&PublicKeyBody=ABC1234567
&KeyPairName=testKeyPairName
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ImportKeyPairResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
      <KeyPairName>testKeyPairName</KeyPairName>
      <KeyPairFingerPrint>89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**</KeyPairFingerPrint>
</ImportKeyPairResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
    "KeyPairName": "testKeyPairName",
    "KeyPairFingerPrint": "89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidKeyPairName.Malformed	Specified Key Pair name is not valid.	The error message returned because the specified KeyPairName parameter is invalid.
403	QuotaExceed.KeyPair	The key pair quota exceeds.	The error message returned because the maximum number of key pairs has been reached.
400	InvalidPublicKeyBody.Malformed	The PublicKeyBody format is not supported.	The error message returned because the public key format is not supported.
400	MissingParameter	The input parameter "PublicKeyBody" that is mandatory for processing this request is not supplied.	The error message returned because the required PublicKeyBody parameter is not specified.
400	KeyPair.AlreadyExist	The key pair already exist.	The error message returned because a key pair with the same name already exists. Key pair names must be unique.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.

For a list of error codes, visit the API Error Center.

20.3. DescribeKeyPairs

You can call this operation to query one or more key pairs.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeKeyPairs	The operation that you want to perform. Set the value to DescribeKeyPairs.
RegionId	String	Yes	cn-hangzhou	The region ID of the key pair. You can call the DescribeRegions operation to query the most recent region list.
KeyPairName	String	No	*SshKey*	The name of the key pair. You can use the asterisk (*) symbol as a wildcard in regular expressions to query key pairs by performing a fuzzy search. Sample patterns: • `*SshKey` : queries key pairs whose names end with SshKey, including the key pair named SshKey. • `SshKey*` : queries key pairs whose names start with SshKey, including the key pair named SshKey. • `*SshKey*` : queries key pairs whose names include SshKey, including the key pair named SshKey. • `SshKey` : queries the key pair named SshKey.
KeyPairFingerPrint	String	No	ABC1234567	The fingerprint of the key pair. The message-digest algorithm 5 (MD5) is used based on the public key fingerprint format defined in RFC 4716. For more information, see RFC 4716.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default: 1
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 50. Default value: 10
Tag.N.Key	String	No	TestKey	The key of tag N of the key pair. Valid values of N: 1 to 20. If a single tag is specified to query resources, up to 1,000 resources that are bound with this tag can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources that are bound with all these tags can be displayed in the response. To query more than 1,000 resources that are bound with specified tags, call the ListTagResources operation.
Tag.N.Value	String	No	TestValue	The value of tag N of the key pair. Valid values of N: 1 to 20.

Parameter	Type	Required	Example	Description
ResourceGroupId	String	No	rg-amnhr7u7c7hj****	The ID of the resource group to which the key pair belongs. If this parameter is specified to query resources, up to 1,000 resources that belong to the specified resource group can be displayed in the response.

Response parameters

Parameter	Type	Example	Description
KeyPairs	Array of KeyPair		Details about the key pairs.
KeyPair			
CreationTime	String	2019-12-04T13:35:00Z	The time when the key pair was created.
KeyPairFingerPrint	String	ABC1234567	The fingerprint of the key pair.
KeyPairName	String	testKeyPairName	The name of the key pair.
ResourceGroupId	String	rg-amnhr7u7c7hj****	The ID of the resource group to which the key pair belongs.
Tags	Array of Tag		The tags of the key pair.
Tag			
TagKey	String	TestKey	The tag key of the key pair.
TagValue	String	TestValue	The tag value of the key pair.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of key pairs.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeKeyPairs
&RegionId=cn-qingdao
&KeyPairFingerPrint=ABC1234567
&KeyPairName=SshKey
&PageNumber=1
&PageSize=20
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeKeyPairsResponse>
      <PageNumber>1</PageNumber>
      <PageSize>2</PageSize>
      <TotalCount>1</TotalCount>
      <KeyPairs>
            <KeyPair>
                  <CreationTime>2018-10-10T01:00Z</CreationTime>
                  <ResourceGroupId></ResourceGroupId>
                  <KeyPairName>testKeyPairName</KeyPairName>
                  <KeyPairFingerPrint>ABC1234567</KeyPairFingerPrint>
            </KeyPair>
      </KeyPairs>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DescribeKeyPairsResponse>
```

`JSON` format

```
{
 "PageNumber": 1,
 "PageSize": 2,
 "TotalCount": 1,
 "KeyPairs": {
  "KeyPair": [{
   "CreationTime": "2018-10-10T01:00Z",
   "ResourceGroupId": "",
   "KeyPairName": "testKeyPairName",
   "KeyPairFingerPrint": "ABC1234567"
  }]
 },
 "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

For a list of error codes, visit the API Error Center.

20.4. AttachKeyPair

You can call this operation to attach an SSH key pair to one or more Linux instances.

Description

When you call this operation, take note of the following items:

- SSH key pairs are not supported on Windows instances.
- If an SSH key pair is attached to an instance, the username and password authentication is disabled for the instance.
- If an instance is in the **Running** (Running) state, call the RebootInstance operation to restart the instance for the SSH key pair to take effect.
- If an instance is in the **Stopped** (Stopped) state, call the StartInstance operation to start the instance for the SSH key pair to take effect.
- If an instance already has an SSH key pair attached, the new SSH key pair will automatically replace the original one.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachKeyPair	The operation that you want to perform. Set the value to AttachKeyPair.
InstanceIds	String	Yes	["i-bp1gtjxuuvwj17zr****", "i-bp17b7zrsbjwvmfy****", ... "i-bp1h6jmbefj1ytos****"]	The IDs of instances to which you want to attach the SSH key pair. The value can be a JSON array that consists of up to 50 instance IDs. Separate multiple instance IDs with commas (,).
KeyPairName	String	Yes	testKeyPairName	The name of the SSH key pair.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the SSH key pair belongs. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
FailCount	String	0	The number of instances to which the key pair fails to be attached.
KeyPairName	String	testKeyPairName	The name of the key pair.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Results	Array of Result		An array consisting of result data.
Result			
Code	String	200	The operation status code returned. 200 indicates that the operation is successful.
InstanceId	String	i-m5eg7be9ndloji64****	The ID of the instance.
Message	String	successful	The operation information returned. When the value of Code is 200, the value of Message becomes successful.
Success	String	true	Indicates whether the operation is successful.
TotalCount	String	2	The total number of instances to which the SSH key pair is attached.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AttachKeyPair
&InstanceIds=["i-bp1gtjxuuvwj17zr****", "i-bp17b7zrsbjwvmfy****", … "i-bp1h6jmbefj1ytos****"]
&KeyPairName=testKeyPairName
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AttachKeyPairResponse>
      <TotalCount>2</TotalCount>
      <RequestId>4ADF7A06-66BD-4FBF-A2ED-2364E41D8C06</RequestId>
      <Results>
            <Result>
                  <Message>successful</Message>
                  <InstanceId>i-m5eg7be9ndloji64****</InstanceId>
                  <Success>true</Success>
                  <Code>200</Code>
            </Result>
            <Result>
                  <Message>successful</Message>
                  <InstanceId>i-m5e25x2mwr0hk33d****</InstanceId>
                  <Success>true</Success>
                  <Code>200</Code>
            </Result>
      </Results>
      <FailCount>0</FailCount>
</AttachKeyPairResponse>
```

`JSON` format

```
{
    "TotalCount": 2,
    "RequestId": "4ADF7A06-66BD-4FBF-A2ED-2364E41D8C06",
    "Results": {
        "Result": [
            {
                "Message": "successful",
                "InstanceId": "i-m5eg7be9ndloji64****",
                "Success": true,
                "Code": "200"
            },
            {
                "Message": "successful",
                "InstanceId": "i-m5e25x2mwr0hk33d****",
                "Success": true,
                "Code": "200"
            }
        ]
    },
    "FailCount": 0
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidKeyPairName.NotFound	The specified KeyPairName does not exist in our records.	The error message returned because the specified key pair name does not exist.
403	DependencyViolation.WindowsInstance	The instance creating is windows, cannot use ssh key pair to login	The error message returned because the specified instance is a Windows instance and does not support logons with SSH key pairs.
400	InvalidInstanceIds.ValueNotSupported	The specified parameter InstanceIds is not valid.	The error message returned because the specified InstanceIds parameter is invalid.
400	DependencyViolation.IoOptimize	The specified parameter InstanceIds is not valid.	The error message returned because the specified instance is not an I/O optimized instance.

For a list of error codes, visit the API Error Center.

20.5. DetachKeyPair

You call this operation to unbind an SSH key pair from one or more Linux instances.

Description

When you call this operation, take note of the following items:

- After you unbind an SSH key pair from an instance, you must call the RebootInstance operation to restart the instance for the unbind operation to take effect.
- By default, the username and password authentication is used for an instance after you unbind an SSH key pair from the instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DetachKeyPair	The operation that you want to perform. Set the value to DetachKeyPair.
InstanceIds	String	Yes	["i-bp1d6tsvznfghy7y****", "i-bp1ippxbaql9zet7****", ... "i-bp1ib7bcz07l****"]	The IDs of instances from which you want to unbind the SSH key pair. The value can be a JSON array that consists of up to 50 instance IDs. Separate multiple instance IDs with commas (,).
KeyPairName	String	Yes	testKeyPairName	The name of the SSH key pair.
RegionId	String	Yes	cn-hangzhou	The region ID of the SSH key pair. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
FailCount	String	0	The number of instances from which the SSH key pair failed to be unbound.
KeyPairName	String	testKeyPairName	The name of the SSH key pair.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Results	Array of Result		The result set of the unbind operation.
Result			
Code	String	200	The operation status code returned. 200 indicates that the operation was successful.
InstanceId	String	i-bp1d6tsvznfghy7y****	The ID of the instance.
Message	String	successful	The operation information returned. For example, when the value of `Code` is 200, the value of `Message` is `successful`.
Success	String	true	Indicates whether the operation was successful.
TotalCount	String	2	The total number of instances from which you attempted to unbind the SSH key pair.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DetachKeyPair
&RegionId=cn-qingdao
&InstanceIds=["i-bp1d6tsvznfghy7y****", "i-bp1ippxbaql9zet7****", ... "i-bp1ib7bcz07l****"]
&KeyPairName=testKeyPairName
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DetachKeyPairResponse>
      <TotalCount>2</TotalCount>
      <RequestId>834B3E6B-2D1D-482F-81A4-810C327D4735</RequestId>
      <Results>
            <Result>
                  <Message>successful</Message>
                  <InstanceId>i-m5eg7be9ndloji64****</InstanceId>
                  <Success>true</Success>
                  <Code>200</Code>
            </Result>
            <Result>
                  <Message>successful</Message>
                  <InstanceId>i-m5e25x2mwr0hk33d****</InstanceId>
                  <Success>true</Success>
                  <Code>200</Code>
            </Result>
      </Results>
      <FailCount>0</FailCount>
</DetachKeyPairResponse>
```

`JSON` format

```
{
    "TotalCount": 2,
    "RequestId": "834B3E6B-2D1D-482F-81A4-810C327D4735",
    "Results": {
        "Result": [
            {
                "Message": "successful",
                "InstanceId": "i-m5eg7be9ndloji64****",
                "Success": true,
                "Code": "200"
            },
            {
                "Message": "successful",
                "InstanceId": "i-m5e25x2mwr0hk33d****",
                "Success": true,
                "Code": "200"
            }
        ]
    },
    "FailCount": 0
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidKeyPairName.NotFound	The specified KeyPairName does not exist in our records.	The error message returned because the specified KeyPairName parameter does not exist.
403	DependencyViolation.WindowsInstance	The instance creating is windows, cannot use ssh key pair to login	The error message returned because the specified instance is a Windows instance and does not support logons with SSH key pairs.
400	InvalidInstanceIds.ValueNotSupported	The specified parameter InstanceIds is not valid.	The error message returned because the specified InstanceIds parameter is invalid.

For a list of error codes, visit the API Error Center.

20.6. DeleteKeyPairs

Deletes one or more SSH key pairs.

Description

When you call this operation, take note of the following items:

- After an SSH key pair is deleted, you cannot query the SSH key pair by calling the DescribeKeyPairs operation.
- If an SSH key pair is bound to one or more Elastic Compute Service (ECS) instances, the SSH key pair cannot be deleted.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteKeyPairs	The operation that you want to perform. Set the value to **DeleteKeyPairs**.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
KeyPairNames	String	Yes	["skp-bp67acfmxazb41****", "skp-bp67acfmxazb42****", ... "skp-bp67acfmxazb4p3***"]	The names of SSH key pairs. The value can be a JSON array that consists of up to 100 key pair names. Separate multiple key pair names with commas (,).

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteKeyPairs
&RegionId=cn-hangzhou
&KeyPairNames=["skp-bp67acfmxazb41****", "skp-bp67acfmxazb42****", … "skp-bp67acfmxazb4p3***"]
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DeleteKeyPairsResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DeleteKeyPairsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter "KeyPairNames" that is mandatory for processing this request is not supplied.	The error message returned because the required KeyPairNames parameter is not specified.
400	InvalidKeyPairNames.ValueNotSupported	The specified parameter "KeyPairNames" is not valid.	The error message returned because the specified KeyPairName parameter is invalid.
403	InstanceKeyPairLimitExceeded	Exceeding the allowed amount of instance which will be deleted.	The error message returned because the number of specified key pairs exceeds the upper limit.

For a list of error codes, visit the API Error Center.

21.Networks

21.1. ModifyInstanceVpcAttribute

Modifies the virtual private cloud (VPC), private IP address, or vSwitch of a VPC-type instance.

Description

The instance must be in the **Stopped** (`Stopped`) state.

- When you call this operation to modify the private IP address or vSwitch of an instance, take note of the following items:
  - If the instance is a new instance, you must restart the instance before you call this operation on it.
  - After the private IP address or vSwitch of an instance is modified, you must restart the instance before you can call this operation again.
- When you call this operation to modify the VPC of an instance, take note of the following items:
  - **Instance:**
    - The instance cannot be associated with Server Load Balancer (SLB) instances.
    - The instance cannot be in the Locked, To Be Released, Expired, To Be Recycled, Expired and Being Recycled, or Overdue and Being Recycled state. For more information, see ECS instance lifecycle.
    - The instance cannot be used in other cloud services. For example, the instance cannot be in the process of being migrated or having its VPC changed, or the databases deployed on the instance cannot be managed by Data Transmission Service (DTS).
  - **Network:**
    - The cut-through mode or multi-elastic IP address (EIP) to elastic network interface (ENI) mode cannot be enabled for the instance.
    - The instance cannot be associated with a high-availability virtual IP address (HAVIP).
    - The vSwitch of the instance cannot be associated with a custom route table.
    - The instance cannot have Global Acceleration (GA) activated.
    - The instance cannot be attached with a secondary ENI.
    - The instance cannot be assigned an IPv6 address.
    - The primary ENI of the instance cannot be associated with multiple IP addresses.
    - The vSwitch must belong to the new VPC.
    - The zones of the vSwitches before and after the modification must be the same.
    - If the private IP address of the primary ENI is specified, the private IP address must be available and within the CIDR block of the vSwitch. If the private IP address is not specified, the system randomly assigns one. The available IP addresses in the new vSwitch CIDR block must be sufficient.
    - If advanced features are enabled in the new VPC, take note of the instance families that do not support advanced VPC features. For more information, see Instance families that do not support advanced VPC features.
    - The Alibaba Cloud account that owns the new VPC cannot share the VPC to other accounts.
  - **Security group (SecurityGroupId.N):**
    - All security groups must be of the same type.
    - The valid values of N depend on the maximum number of security groups to which an instance can belong. For more information, see the "Security group limits" section in Limits.
    - The VPC to which the security group belongs must be the new VPC.
    - You can switch the instance to a security group of a different type.

      When you switch an ECS instance to a security group of a different type, you must understand the differences between the rule configurations of the two security group types to avoid impacts on the instance network. For more information, see Overview.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceVpcAttribute	The operation that you want to perform. Set the value to ModifyInstanceVpcAttribute.
InstanceId	String	Yes	i-bp1iudwa5b1tqag1****	The ID of the instance.

Parameter	Type	Required	Example	Description
VSwitchId	String	Yes	vsw-bp1s5fnvk4gn3tw12****	The ID of the vSwitch. • If this parameter is set to the ID of the current vSwitch, the vSwitch of the instance remains unchanged. • If this parameter is set to the ID of a new vSwitch, and the `VpcId` parameter is not specified, the new vSwitch must belong to the same zone and VPC as the original vSwitch. • If the `VpcId` parameter is specified, the vSwitch specified by this parameter must belong to the VPC specified by the VpcId parameter and must belong to the same zone as the original vSwitch.
PrivateIpAddress	String	No	172.17.**.**	The new private IP address of the instance. **Note** The `PrivateIpAddress` value depends on the `VSwitchId` value. The specified IP address must be within the CIDR block of the specified vSwitch. By default, if this parameter is not specified, a private IP address is randomly assigned from the CIDR block of the specified vSwitch.
VpcId	String	No	vpc-bp1vwnn14rqpyiczj****	The ID of the new VPC.
SecurityGroupId.N	RepeatList	No	sg-o6w9l8bc8dgmkw87****	The ID of security group N to which the instance belongs after the VPC is changed. This parameter is required only when the `VpcId` parameter is specified. • The specified security groups must be of the same type. • The security group list can contain one or more security groups to which the instance belongs after the modification. The valid values of N depend on the maximum number of security groups to which an instance can belong. For more information, see the "Security group limits" section in Limits. • The specified security groups must belong to the VPC specified by the `VpcId` parameter.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceVpcAttribute
&InstanceId=i-bp1iudwa5b1tqag1****
&VSwitchId=vsw-bp1s5fnvk4gn3tw12****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyInstanceAttributeResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ModifyInstanceAttributeResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
400	InvalidPrivateIpAddress.Malformed	Specified private IP address is malformed.	The error message returned because the specified PrivateIpAddress parameter is invalid.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address is already in use. Try another IP address.
400	IncorrectVSwitchStatus	The current status of virtual switch does not support this operation.	The error message returned because the specified vSwitch is in the Pending state and cannot be deleted.
404	InvalidVSwitchId.NotFound	Specified virtual switch does not exist.	The error message returned because the specified VSwitchId parameter does not exist.
400	IncorrectInstanceStatus	The current status of instance does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
400	OperationDenied	Specified operation is denied as your instance is not in VPC.	The error message returned because the specified instance is not in a VPC.
400	InvalidVSwitchId.Mismatch	Specified instance and virtual switch are not in the same zone.	The error message returned because the specified instance and vSwitch do not belong to the same zone.
400	InvalidPrivateIpAddress.Mismatch	Specified private IP address is not in the CIDR block of virtual switch.	The error message returned because the specified private IP address is not in the CIDR block of the specified vSwitch.
404	InvalidVSwitchId.NotFound	Specified virtual switch is not found in current VPC.	The error message returned because the specified vSwitch does not exist in the current VPC.
400	InvalidPrivateIp.Changing	Previous action is not finished yet.	The error message returned because the private IP address is being modified.
404	NoSuchResource	The specified resource is not found.	The error message returned because the specified resource does not exist.
400	InvalidPrivateIpAddress.Duplicated	error new ip is the same with old ip	The error message returned because the new IP address is the same as the original one.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	OperationDenied	%s	The error message returned because the operation is denied.
404	InvalidVSwitch.NotBelongToVpc	%s	The error message returned because the specified vSwitch does not belong to the specified VPC. Check whether the specified VSwitchId parameter is valid.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.

HttpCode	Error code	Error message	Description
404	InvalidSecurityGroupType.NotSupportClassic	The specified SecurityGroupIds have classic group type.	The error message returned because the specified security group is in the classic network. Check whether the specified SecurityGroupIds parameter is valid.
404	InvalidSecurityGroupVpc.NotBelongToOneVpc	The specified SecurityGroupIds are belong to different vpc.	The error message returned because the specified security groups belong to different VPCs. Check whether the specified SecurityGroupIds parameter is valid. You can call the DescribeSecurityGroups operation to query the VPCs to which the security groups belong.
404	EnterpriseGroupLimited.MutliGroupType	The specified instance can not join multi SecurityGroup types.	The error message returned because the specified instance cannot belong to both a basic and an advanced security group. You can call the DescribeSecurityGroups operation to query the type of a specific security group.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because the security groups managed by cloud services cannot be modified.

For a list of error codes, visit the API Error Center.

21.2. AllocatePublicIpAddress

Assigns a public IP address to an Elastic Compute Service (ECS) instance.

Description

When you call this operation, take note of the following items:

- The instance to which to assign a public IP address must be in the **Running** (`Running`) or **Stopped** (`Stopped`) state.
- If `OperationLocks` in the DescribeInstances response contains `"LockReason" : "security"` for an instance, the instance is locked for security reasons and cannot be assigned a public IP address.
- You can assign only a single public IP address to an instance. If the instance already has a public IP address, the `AllocatedAlready` error code is returned.
- After you assign a public IP address to an instance, you must restart the instance (RebootInstance) or start the instance (StartInstance) for the public IP address to take effect.

If an instance is located in a virtual private cloud (VPC), you can assign a public IP address to the instance or associate an elastic IP address (EIP) with the instance. For more information, see AssociateEipAddress.

> **Note** After an EIP is associated with an instance located in a VPC, no public IP addresses can be assigned to the instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AllocatePublicIpAddress	The operation that you want to perform. Set the value to **AllocatePublicIpAddress**.
InstanceId	String	Yes	i-bp1gtjxuuvwj17zr****	The ID of the instance.
IpAddress	String	No	112.124.**.**	The public IP address to assign to the instance. This parameter is empty by default, which indicates that a public IP address is randomly assigned by the system.

Response parameters

Parameter	Type	Example	Description
IpAddress	String	112.124.**.**	The public IP address of the instance.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AllocatePublicIpAddress
&InstanceId=i-bp1gtjxuuvwj17zr****
&IpAddress=112.124.**.**
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<AllocatePublicIpAddressResponse>
    <RequestId>F2EF6A3B-E345-46B9-931E-0EA094818567</RequestId>
    <IpAddress>112.124.**.**</IpAddress>
</AllocatePublicIpAddressResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "F2EF6A3B-E345-46B9-931E-0EA094818567",
  "IpAddress" : "112.124.**.**"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidIpAddress.Malformed	The specified parameter "IpAddress" is not valid.	The error message returned because the specified IpAddress parameter is invalid.
400	OperationDenied	Specified operation is denied as your instance is in VPC.	The error message returned because the operation is not supported while the instance is located in a VPC.
400	InsufficientPublicIp	Ip address not found	The error message returned because the specified IP address does not exist.
400	AllocateIpInvalidInstanceBandwidth	OperationDenied The InternetMaxBandwidthOut of the specified instance cannot be less than 0.	The error message returned because the operation is not supported while the maximum outbound public bandwidth is not greater than 0 Mbit/s.
400	OperationDenied	The specified parameter "VlanId" is not valid or vlan has not enough IP address.	The error message returned because the specified VlanId parameter is invalid or because the maximum number of IP addresses in the VLAN has been reached.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance and try later.

HTTP status code	Error code	Error message	Description
403	IpInUse	The specified IP is already in use.	The error message returned because the specified IP address is already in use.
403	AllocatedAlready	There is an IpAddress allocated already for the specified instance.	The error message returned because the instance is assigned another IP address.
403	NAT_PUBLIC_IP_BINDING_FAILED	Binding nat public ip failed	The error message returned because the public IP address cannot be associated with the gateway.
403	NAT_PUBLIC_IP_ALLOCATE_FAILED	Nat public ip binding failed.	The error message returned because the public IP address cannot be assigned.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter is invalid.
404	InvalidVlanId.NotFound	The VlanId provided does not exist in our records.	The error message returned because the specified VlanId parameter does not exist.
404	InvalidIpAddress.NotFound	The specified IP is not in the specified vlan.	The error message returned because the specified IP address is not in the specified VLAN.

For a list of error codes, visit the API Error Center.

21.3. ConvertNatPublicIpToEip

You can call this operation to convert the public IP address of a VPC-type instance to an elastic IP address (EIP).

Description

After a public IP address is converted to an EIP, the EIP will be billed separately. Make sure that you have fully understood the billing methods of EIPs. For more information, see Billing overview.

Before you call this operation, make sure that the following requirements are met:

- The instance is in the **Stopped** (`Stopped`) or **Running** (`Running`) state.
- The instance has no EIPs associated.
- The instance has no configuration change tasks that have not taken effect.
- The public bandwidth of the instance cannot be 0 Mbit/s.
- The public bandwidth of the instance is billed on a pay-by-traffic basis.
- If the instance is a VPC-type subscription instance, it does not expire within 24 hours.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer automatically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ConvertNatPublicIpToEip	The operation that you want to perform. Set the value to ConvertNatPublicIpToEip.
InstanceId	String	Yes	i-bp171jr36ge2ulvk****	The ID of the instance for which you want to convert its public IP address to an EIP.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ConvertNatPublicIpToEip
&RegionId=cn-hangzhou
&InstanceId=i-bp171jr36ge2ulvk****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ConvertNatPublicIpToEipResponse>
      <RequestId>B154D309-F3E1-4AB7-BA94-FEFCA8B89001</RequestId>
</ConvertNatPublicIpToEipResponse>
```

`JSON` format

```
{
   "RequestId":"B154D309-F3E1-4AB7-BA94-FEFCA8B89001"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	InvalidInstanceId.PlanedChange	%s	The error message returned because the instance has scheduled configuration change tasks.
403	InvalidEndTime.OperateNotSupport	%s	The error message returned because this operation is not supported while the instance is in the current state.
403	InvalidInstanceStatus.Released	%s	The error message returned because the specified operation is invalid. Check whether the instance status is correct.
403	IncorrectInstanceStatus	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	OperationDenied	%s	The error message returned because the operation is denied.
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified InstanceId parameter does not exist.
403	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified InternetChargeType parameter is not supported. Check whether the parameter is correct.
403	MaxEIPQuotaExceeded	The number of EIP exceeds the limit per region.	The error message returned because the maximum number of EIPs in the current region has been reached.
403	InvalidInstance.OverduePayment	%s	The error message returned because you have overdue payments in your account. Create an instance again or contact the customer service.
403	InvalidInstance.OverduePayment	The special instance due to overdue payment,this operation is not supported.	The error message returned because you have overdue payments in your account. Top up your account before proceeding.

HttpCode	Error code	Error message	Description
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account before you proceed.
403	Forbidden.RiskControl	This operation is forbidden by Aliyun RiskControl system.	The error message returned because the operation is forbidden by the risk control system.

For a list of error codes, visit the API Error Center.

21.4. AttachClassicLinkVpc

Connects a classic network-type instance with a VPC. This way, the instance can communicate with cloud resources in the VPC through the internal network.

Description

When you call this operation, take note of the following items:

- The instance to be connected must be in the **Running** state or **Stopped** state.
- The ClassicLink feature must be enabled for the target VPC. For more information, see Enable ClassicLink.
- The instance and the VPC must be in the same region.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachClassicLinkVpc	The operation that you want to perform. Set the value to **AttachClassicLinkVpc**.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	Yes	i-bp1gtjxuuvwj17zr****	The ID of the classic network-type instance. You can call the DescribeInstances operation to query available instances.
VpcId	String	Yes	vpc-bp1j4z1sr8zxu4l8u****	The ID of the VPC for which the ClassicLink feature is enabled. You can call the DescribeVpcs operation to query available VPCs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AttachClassicLinkVpc
&RegionId=cn-hangzhou
&InstanceId=i-bp1gtjxuuvwj17zr****
&VpcId=vpc-bp1j4z1sr8zxu4l8u****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<AttachClassicLinkVpcResponse>
    <RequestId>C0003E8B-B930-4F59-ADC0-0E209A9012A8</RequestId>
</AttachClassicLinkVpcResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "C0003E8B-B930-4F59-ADC0-0E209A9012A8"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	InvalidInstanceId.NotFound	The InstanceId provided does not exist in our records.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
403	InvalidRegionId.Malformed	The specified parameter ?RegionId? is not valid.	The error message returned because the specified RegionId parameter is invalid.
403	InvalidVpcId.Malformed	The specified parameter ?VpcId? is not valid.	The error message returned because the specified VpcId parameter is invalid.
403	InvalidInstanceId.MalFormed	The specified instance is not a classic network instance.	The error returned because the specified instance is not in the classic network.
403	OperationDenied	The instance does not allow link to vpc.	The error returned because the instance is linked to another VPC.
403	InvalidParameter.InvalidInstanceIdAndVpcId	The parameter InstanceId and VpcId are not allowed to be empty at the same time.	The error message returned because the InstanceId and VpcId parameters cannot be empty at the same time.
403	OperationDenied	The specified vpc is disabled attach classic link.	The error message returned because ClassicLink cannot be enabled for the specified VPC.
403	InvalidInstanceId.NotFound	The specified instance does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
403	InvalidStatus.InstanceStatus	The specified instance status is not support this operation ,expect status is running or shutted.	The error message returned because the operation is not supported while the instance is in its current state. The instance must be in the Running state or Stopped state.
403	InvalidStatus.InstanceStatus	The specified instance status is not support this operation, expect status is running or shutted.	The error message returned because the operation is not supported while the instance is in its current state. The instance must be in the Running state or Stopped state.
403	InvalidInstanceId.NotBelong	The specified instance is not belong to you.	The error message returned because the specified instance does not exist in your account.
403	QuotaExceeded	The link quota exceeded in this vpc.	The error message returned because the maximum number of links that can be created in the specified VPC has been reached.
403	InvalidStatus.InstanceLocked	The specified instance is locked,please wait more.	The error message returned because the specified instance is locked. Try again when the instance is unlocked.
403	InvalidInstanceId.LimitedRegion	The specified instance does not support this operation due to the limitation of its region.	The error message returned because ClassicLink connections cannot be established in the specified region due to lack of support.

HttpCode	Error code	Error message	Description
403	Forbidden.SubUser	User not authorized to operate on the specified resource.	The error message returned because the RAM user is not authorized to manage the specified resource.

For a list of error codes, visit the API Error Center.

21.5. DetachClassicLinkVpc

You can call this operation to unlink a classic network-type instance from a virtual private cloud (VPC) by removing the ClassicLink connection between them. After the instance is unlinked from the VPC, it can no longer communicate with instances in the VPC.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DetachClassicLinkVpc	The operation that you want to perform. Set the value to DetachClassicLinkVpc.
InstanceId	String	Yes	i-bp67acfmxazb4p****	The ID of the classic network-type instance.
RegionId	String	Yes	cn-hangzhou	The region ID of the classic network-type instance. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	Yes	vpc-bp67acfmxazb4p****	The ID of the VPC to which the instance is linked.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DetachClassicLinkVpc
&RegionId=cn-hangzhou
&VpcId=vpc-bp67acfmxazb4p****
&InstanceId=i-bp67acfmxazb4p****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DetachClassicLinkVpcResponse>
      <RequestId>C0003E8B-B930-4F59-ADC0-0E209A9012A8</RequestId>
</DetachClassicLinkVpcResponse>
```

`JSON` format

```
{
    "RequestId": "C0003E8B-B930-4F59-ADC0-0E209A9012A8"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidInstanceId.NotFound	The InstanceId provided does not exist in our records.	The error message returned because the specified InstanceId parameter does not exist.
403	InvalidRegionId.Malformed	The specified parameter ? RegionId? is not valid.	The error message returned because the specified RegionId parameter is invalid.
403	InvalidVpcId.Malformed	The specified parameter ? VpcId? is not valid.	The error message returned because the specified VpcId parameter is invalid.
403	InvalidInstanceId.MalFormed	The specified instance is not a classic network instance.	The error returned because the specified instance is not in the classic network.
403	OperationDenied	The instances are not allowed to detach from the linked vpc.	The error message returned because the instance cannot be unlinked from the VPC.
403	InvalidParameter.InvalidInstanceIdAndVpcId	The parameter InstanceId and VpcId are not allowed to be empty at the same time.	The error message returned because neither InstanceId nor VpcId is specified.
403	InvalidInstanceId.NotFound	The specified instance does not exist.	The error message returned because the specified InstanceId parameter does not exist.
403	InvalidStatus.InstanceStatus	The specified instance status is not support this operation ,expect status is running or shutted.	The error message returned because the operation is not supported while the instance is in the current state. The instance must be in the Running or Stopped state.
403	InvalidInstanceId.NotBelong	The specified instance is not belong to you.	The error message returned because the specified instance does not exist in your account.
403	Forbidden.SubUser	User not authorized to operate on the specified resource.	The error message returned because the RAM user is not authorized to manage the specified resource.
403	InvalidStatus.InstanceStatus	The specified instance status does not support this operation, expected status is Running or Stopped.	The error message returned because the operation is not supported while the instance is in the current state. The instance must be in the Running or Stopped state.

For a list of error codes, visit the API Error Center.

21.6. DescribeBandwidthLimitation

You can call this operation to query the maximum public bandwidth that can be purchased, upgraded, or downgraded for various instance types.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeBandwidthLimitation	The operation that you want to perform. Set the value to DescribeBandwidthLimitation.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
InstanceType	String	No	ecs.g5.large	The instance type. For more information about the values, see Instance families. **Note** This parameter is required.

Parameter	Type	Required	Example	Description
InstanceChargeType	String	No	PrePaid	The billing method of the instance. For more information, see Billing overview. Valid values: • PrePaid: subscription • PostPaid: pay-as-you-go Default value: PostPaid.
SpotStrategy	String	No	NoSpot	The preemption policy for the preemptible or pay-as-you-go instance. Valid values: • NoSpot: The instance is a regular pay-as-you-go instance. • SpotWithPriceLimit: The instance is a preemptible instance with user-defined maximum hourly prices. • SpotAsPriceGo: The system automatically offers a bid, which is not higher than the pay-as-you-go price for the same instance type. Default value: NoSpot. Note This parameter takes effect only when the InstanceChargeType parameter is set to PostPaid.
ResourceId	String	No	i-bp67acfmxazb4ph***	The ID of the resource. Note This parameter is required when the OperationType parameter is set to Upgrade or Downgrade.
OperationType	String	No	Upgrade	Specifies the operation for which to query the maximum public bandwidth. Valid values: • Upgrade: upgrades the public bandwidth. • Downgrade: downgrades the public bandwidth. • Create: creates an ECS instance. Default value: Create.

Response parameters

Parameter	Type	Example	Description
Bandwidths	Array of Bandwidth		Details about the maximum public bandwidth.
Bandwidth			
InternetChargeType	String	PayByTraffic	The billing method for network usage. Valid values: • PayByBandwidth • PayByTraffic
Max	Integer	100	The maximum public bandwidth.
Min	Integer	0	The minimum public bandwidth.
Unit	String	Mbps	The unit of the public bandwidth.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeBandwidthLimitation
&RegionId=cn-hangzhou
&InstanceType=ecs.g5.large
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeBandwidthLimitationResponse>
      <Bandwidths>
            <Bandwidth>
                  <Max>100</Max>
                  <InternetChargeType>PayByBandwidth</InternetChargeType>
                  <Unit>Mbps</Unit>
                  <Min>0</Min>
            </Bandwidth>
            <Bandwidth>
                  <Max>100</Max>
                  <InternetChargeType>PayByTraffic</InternetChargeType>
                  <Unit>Mbps</Unit>
                  <Min>0</Min>
            </Bandwidth>
      </Bandwidths>
      <RequestId>226CB38E-29E3-423E-85DD-DCD1C99832B0</RequestId>
</DescribeBandwidthLimitationResponse>
```

`JSON` format

```
{
    "Bandwidths": {
        "Bandwidth": [
            {
                "Max": 100,
                "InternetChargeType": "PayByBandwidth",
                "Unit": "Mbps",
                "Min": 0
            },
            {
                "Max": 100,
                "InternetChargeType": "PayByTraffic",
                "Unit": "Mbps",
                "Min": 0
            }
        ]
    },
    "RequestId": "226CB38E-29E3-423E-85DD-DCD1C99832B0"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	Invalid.InstanceChargeType	The specified InstanceChargeType is not valid.	The error message returned because the specified InstanceChargeType parameter is invalid.
404	Invalid.NetworkCategory	The specified NetworkCategory is not valid.	The error message returned because the specified NetworkCategory parameter is invalid.
404	Invalid.SpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
404	Invalid.IoOptimized	The specified IoOptimized is not valid.	The error message returned because the specified IoOptimized parameter is invalid.
404	Invalid.ResourceId	The specified ResourceId is not valid.	The error message returned because the specified ResourceId parameter is invalid.

HTTP status code	Error code	Error message	Description
404	Invalid.InstancePayType	The specified InstancePayType is not valid.	The error message returned because the specified InstanceChargeType parameter is invalid.
400	InvalidInstanceType.ValueNot Supported	The specified InstanceType beyond the permitted range.	The error message returned because the specified InstanceType parameter is invalid.

For a list of error codes, visit the API Error Center.

21.7. DescribeClassicLinkInstances

You can call this operation to query one or more classic network-type instances that are connected with VPCs.

Description

When you call this operation, take note of the following items:

- This operation applies only to instances in the classic network.
- You can query a maximum of 100 classic network-type instances at a time.
- At least one of `VpcId` and `InstanceId` must be specified.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeClassicLinkInstances	The operation that you want to perform. Set the value to DescribeClassicLinkInstances.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	No	vpc-bp1vwnn14rqpyiczj****	The ID of the VPC. The ClassicLink feature must be enabled for the specified VPC. For more information, see Establish a ClassicLink connection.
InstanceId	String	No	i-bp1a5zr3u7nq9cxh****	The ID of the instance. You can specify a maximum of 100 instance IDs in a single request. Separate multiple IDs with commas (,).
PageNumber	String	No	1	The number of the page to return. Pages start from page 1. Default value: 1
PageSize	String	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10

Response parameters

Parameter	Type	Example	Description
Links	Array of Link		The details about the ClassicLink connections between the classic network-type instances and the VPC.
Link			

Parameter	Type	Example	Description
InstanceId	String	i-test	The ID of the instance.
VpcId	String	vpc-test	The ID of the VPC.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of connections.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeClassicLinkInstances
&RegionId=cn-hangzhou
&VpcId=vpc-bp1vwnn14rqpyiczj****
&InstanceId=i-bp1a5zr3u7nq9cxh****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeClassicLinkInstancesResponse>
      <PageNumber>1</PageNumber>
      <Links>
            <Link>
                  <InstanceId>i-bp1a5zr3u7nq9cxh****</InstanceId>
                  <VpcId>vpc-bp1vwnn14rqpyiczj****</VpcId>
            </Link>
            <Link>
                  <InstanceId>i-bp1a5zr3u7nq9abc****</InstanceId>
                  <VpcId>vpc-bp1vwnn14rqpyiczj****</VpcId>
            </Link>
      </Links>
      <TotalCount>2</TotalCount>
      <PageSize>10</PageSize>
      <RequestId>B154D309-F3E1-4AB7-BA94-FEFCA8B89001</RequestId>
</DescribeClassicLinkInstancesResponse>
```

`JSON` format

```
{
    "PageNumber":1,
    "Links":{
        "Link":[{
            "InstanceId":"i-bp1a5zr3u7nq9cxh****",
            "VpcId":"vpc-bp1vwnn14rqpyiczj****"
            },
           {
           "InstanceId": "i-bp1a5zr3u7nq9abc****",
           "VpcId": "vpc-bp1vwnn14rqpyiczj****"
           }]
    },
    "TotalCount":2,
    "PageSize":10,
    "RequestId":"B154D309-F3E1-4AB7-BA94-FEFCA8B89001"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidInstanceId.NotFound	The InstanceId provided does not exist in our records.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.
403	InvalidParameter.ToManyInstanceIds	No more than 100 InstanceIds can be specified.	The error message returned because the maximum number of instance IDs that can be specified has been reached.
403	InvalidParameter.InvalidInstanceIdAndVpcId	The parameter InstanceId and VpcId are not allowed to be empty at the same time.	The error message returned because the InstanceId and VpcId parameters cannot be empty at the same time.
403	InvalidInstanceId.NotBelong	The specified instance is not belong to you.	The error message returned because the specified instance does not exist in your account.
403	InvalidVpc.NotBelong	The specified vpc is not belong to you.	The error message returned because the specified VPC does not exist in your account.

For a list of error codes, visit the API Error Center.

21.8. ModifyInstanceNetworkSpec

Modifies the bandwidth configurations of an Elastic Compute Service (ECS) instance. You can modify the bandwidth configurations of an instance to improve network performance.

Description

When you call this operation, take note of the following items:

- As of November 27, 2020, the maximum bandwidth value available for you to create ECS instances or change the configurations of ECS instances is subject to the throttling policy of your account. To increase the maximum bandwidth value, submit a ticket. The following throttling policies apply:
  - In a single region, the sum of actual maximum bandwidths of all ECS instances that use the pay-by-traffic billing method for network usage cannot exceed 5 Gbit/s.
  - In a single region, the sum of actual maximum bandwidths of all ECS instances that use the pay-by-bandwidth billing method for network usage cannot exceed 50 Gbit/s.
- If you upgrade the outbound public bandwidth (InternetMaxBandwidthOut) of a subscription (PrePaid) instance from 0 Mbit/s when you modify the bandwidth configurations of the instance, a public IP address is automatically assigned to the instance.
- If you upgrade the outbound public bandwidth (InternetMaxBandwidthOut) of a pay-as-you-go (PostPaid) instance from 0 Mbit/s when you modify the bandwidth configurations of the instance, no public IP address is assigned to the instance. You must call the AllocatePublicIpAddress operation to assign a public IP address to the instance.
- An instance in the classic network must be in the Stopped state before you can upgrade its outbound public bandwidth (InternetMaxBandwidthOut) from 0 Mbit/s.
- After the bandwidth is upgraded, AutoPay is set to true by default and the payment is automatically made. Make sure that you have sufficient balance in your account. Otherwise, your order becomes invalid and must be canceled. If your account balance is insufficient, you can set AutoPay to false. In this case, when you call the ModifyInstanceNetworkSpec operation, an unpaid order is generated. Then, you can log on to the ECS console to pay for the order.
- The price difference is refunded to the payment account that you used. Used coupons cannot be refunded.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceNetworkSpec	The operation that you want to perform. Set the value to ModifyInstanceNetworkSpec.
InstanceId	String	Yes	i-bp67acfmxazb4****	The ID of the instance for which you want to modify bandwidth configurations.

Parameter	Type	Required	Example	Description
InternetMaxBandwidthOut	Integer	No	10	The maximum outbound public bandwidth. Unit: Mbit/s. Valid values: 0 to 100.
InternetMaxBandwidthIn	Integer	No	10	The maximum inbound public bandwidth. Unit: Mbit/s. Valid values: • When the purchased outbound public bandwidth is less than or equal to 10 Mbit/s, the valid values of InternetMaxBandwidthIn are 1 to 10, and the default value is 10. • When the purchased outbound public bandwidth is greater than 10 Mbit/s, the valid values of InternetMaxBandwidthIn are 1 to the `InternetMaxBandwidthOut` value, and the default value is the `InternetMaxBandwidthOut` value.
NetworkChargeType	String	No	PayByTraffic	The billing method for network usage. Valid values: • PayByBandwidth: pay-by-bandwidth • PayByTraffic: pay-by-traffic **Note** When the **pay-by-traffic** billing method is used, the maximum inbound and outbound bandwidths are both the upper limits of bandwidths instead of guaranteed performance. When demands exceed resource supplies, these maximum bandwidths may be limited. If you want guaranteed bandwidths for your instances, use the **pay-by-bandwidth** billing method.
AllocatePublicIp	Boolean	No	false	Specifies whether to assign a public IP address. Default value: false.
StartTime	String	No	2017-12-05T22:40Z	The start time of the temporary bandwidth upgrade. Specify the time in the ISO 8601 standard in the yyyy-MM-ddThh:mmZ format. The time must be in UTC and accurate to the **minute** (mm).
EndTime	String	No	2017-12-06T22Z	The end time of the temporary bandwidth upgrade. Specify the time in the ISO 8601 standard in the yyyy-MM-ddThhZ format. The time must be in UTC and accurate to **hours** (hh). **Note** The interval between the end time and the start time of the temporary bandwidth upgrade must be greater than or equal to 3 hours.

Parameter	Type	Required	Example	Description
AutoPay	Boolean	No	true	Specifies whether to enable automatic payment. Valid values: • true: enables automatic payment. After bandwidth configurations are upgraded, the payment is automatically made. Make sure that you have sufficient balance in your account when you set AutoPay to true. If your account balance is insufficient, your order cannot be paid in the ECS console and becomes invalid. You must cancel the order. • false: does not enable automatic payment. After bandwidth configurations are upgraded, an order is generated but is not paid. If your account balance is insufficient, you can set AutoPay to false. In this case, when you call the ModifyInstanceNetworkSpec operation, an unpaid order is generated. You can then log on to the ECS console to pay for the order. Default value: true.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but make sure that it is unique among different requests. The **ClientToken** value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example	Description
OrderId	String	123457890	The ID of the generated order.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceNetworkSpec
&InstanceId=i-bp67acfmxazb4p****
&InternetMaxBandwidthOut=10
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyInstanceNetworkSpecResponse>
        <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
        <OrderId>123457890</OrderId>
</ModifyInstanceNetworkSpecResponse>
```

`JSON` format

```
{
    "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368",
    "OrderId": "123457890"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
400	InvalidInternetMaxBandwidthIn.ValueNotSupported	The specified InternetMaxBandwidthIn is beyond the permitted range.	The error message returned because the specified InternetMaxBandwidthIn parameter is not within the allowed range.
400	InvalidInternetMaxBandwidthOut.ValueNotSupported	The specified InternetMaxBandwidthOut is beyond the permitted range.	The error message returned because the specified InternetMaxBandwidthOut parameter is not within the allowed range.
403	IncorrectInstanceStatus	The current status of the instance does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance and try again.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	ChargeTypeViolation	The operation is not permitted due to billing method of the instance.	The error message returned because the billing method of the instance does not support the operation.
403	OperationDenied	The operation is denied due to the instance is PrePaid.	The error message returned because the instance is a subscription instance and does not support the operation.
400	OperationDenied	Specified instance is in VPC.	The error message returned because the instance resides in a virtual private cloud (VPC).
400	InvalidParameter.Bandwidth	%s	The error message returned because the specified bandwidth is invalid.
400	InvalidParameter.Conflict	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
400	InvalidStartTime.ValueNotSupported	%s	The error message returned because the end time is earlier than the start time.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned because you have overdue payments within your account.
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is invalid.	The error message returned because the specified NetworkChargeType parameter is invalid.
400	DecreasedBandwidthNotAllowed	%s	The error message returned because the bandwidth cannot be downgraded.
400	BandwidthUpgradeDenied.EipBoundInstance	The specified VPC instance has bound EIP, temporary bandwidth upgrade is denied.	The error message returned because the instance is associated with an elastic IP address and cannot have its bandwidth temporarily upgraded.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidInstance.UnPaidOrder	The specified Instance has unpaid order.	The error message returned because you have unpaid orders for the specified instance. Pay for the orders and try again.

HTTP status code	Error code	Error message	Description
400	Throttling	Request was denied due to request throttling, please try again after 5 minutes.	The error message returned because your request is throttled. Try again 5 minutes later.
400	InvalidAction	Specified action is not valid.	The error message returned because the operation is invalid.
400	IpAllocationError	Allocate public ip failed.	The error message returned because a public IP address failed to be assigned.
400	InvalidParam.AllocatePublicIp	The specified param AllocatePublicIp is invalid.	The error message returned because the specified AllocatePublicIp parameter is invalid.
400	InstanceDowngrade.QuotaExceed	Quota of instance downgrade is exceed.	The error message returned because the maximum number of configuration downgrades allowed for the instance has been reached.
400	InvalidBandwidth.ValueNotSupported	Instance upgrade bandwidth of temporary not allow less then existed.	The error message returned because the new bandwidth specified for the temporary bandwidth upgrade is lower than the current bandwidth.
403	InvalidInstance.InstanceNotSupported	The special vpc instance with eip not need bandwidth.	The error message returned because the instance is located in a VPC and associated with an elastic IP address and you cannot specify a public bandwidth for the instance.
400	InvalidInstanceStatus	The specified instance status does not support this action.	The error message returned because the operation is not supported while the instance is in the current state.
403	InvalidInstanceStatus	The current status of the instance does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidInstance.UnPaidOrder	Unpaid order exists in your account, please complete or cancel the payment in the expense center.	The error message returned because you have unpaid orders in your account. Pay for the orders and try again.
400	OperationDenied	After downgrade, you cannot upgrade or downgrade your instances again in the remaining time of the current billing cycle.	The error message returned because you have downgraded the configurations of the instance and cannot upgrade or downgrade the configurations again until a new billing cycle starts.
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified InternetChargeType parameter is invalid.
400	LastOrderProcessing	The previous order is still processing, please try again later.	The error message returned because the order is being processed. Try again later.
400	OperationDenied	The current user does not support this operation.	The error message returned because your account does not support the operation.
403	NAT_PUBLIC_IP_BINDING_FAILED	Binding nat public ip failed	The error message returned because the public IP address failed to be associated with the gateway.
403	InvalidInstance.EipNotSupport	The specified instance with eip is not supported, please unassociate eip first.	The error message returned because the operation is not supported while an elastic IP address is associated with the instance. Disassociate the elastic IP address first.
403	OperationDenied.UnpaidOrder	The specified instance has unpaid order.	The error message returned because you have unpaid orders for the specified instance. You can log on to the ECS console to pay for the orders.
403	InvalidNetworkType.ValueNotSupported	The specified parameter NetworkType is not valid.	The error message returned because the specified network type is invalid.

HTTP status code	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.

For a list of error codes, visit the API Error Center.

22.Elastic network interfaces

22.1. CreateNetworkInterface

Creates an elastic network interface (ENI).

Description

- An ENI enters the Available (Available) state after it is created.
- An ENI can be bound only to a single instance of the Virtual Private Cloud (VPC) type within the same zone.
- An ENI can be bound only to a single instance. Before you can bind an ENI to another instance, you must unbind the ENI from the current instance.
- When an ENI is bound to another instance, the attributes of the ENI remain unchanged and the data traffic is redirected to that instance.
- If you want to assign IPv6 addresses when you create an ENI, make sure that IPv6 has been enabled for the vSwitch with which to associate the ENI. For more information, see What is an IPv6 gateway?
- By default, up to 100 ENIs can be created per region per Alibaba Cloud account. To increase this quota, submit a ticket.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateNetworkInterface	The operation that you want to perform. Set the value to **CreateNetworkInterface**.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which to create the ENI. You can call the DescribeRegions operation to query the most recent region list.
ResourceGroupId	String	No	rg-bp67acfmxazb4ph****	The ID of the resource group to which to assign the ENI. You can call the ListResourceGroups operation to query the most recent resource group list.
VSwitchId	String	Yes	vsw-bp1s5fnvk4gn2tws03****	The ID of the vSwitch with which to associate the ENI. Private IP addresses are assigned to the ENI from within the CIDR block of the vSwitch.
PrimaryIpAddress	String	No	172.17.**.**	The primary private IP address to assign to the ENI. The specified IP address must be an idle IP address within the CIDR block of the vSwitch with which to associate the ENI. If this parameter is not specified, an idle IP address is assigned from within the vSwitch CIDR block at random.
SecurityGroupId	String	No	sg-bp1fg655nh68xyz9i****	The ID of the security group to which to assign the ENI. The security group and the ENI must belong to the same VPC. **Note** You must specify `SecurityGroupId` or `SecurityGroupIds.N` but not both.
NetworkInterfaceName	String	No	testNetworkInterfaceName	The name of the ENI. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (.), underscores (_), and hyphens (-). This parameter is empty by default.

Parameter	Type	Required	Example	Description
Description	String	No	testDescription	The description of the ENI. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`. This parameter is empty by default.
SecondaryPrivateIpAddressCount	Integer	No	1	The number of private IP addresses to be automatically created by ECS.
QueueNumber	Integer	No	1	The number of queues supported by the ENI. Valid values: 1 to 2048. When you bind an ENI to an instance, make sure that the value of this parameter for the ENI is smaller than the maximum number of queues per ENI allowed for the instance type. To view the maximum number of queues per ENI allowed for an instance type, you can call the DescribeInstanceTypes operation to query the `MaximumQueueNumberPerEni` parameter. By default, this parameter is empty. If you do not specify this parameter for the ENI, the default number of queues per ENI for the instance type of an instance is used when you bind the ENI to the instance. To view the default number of queues per ENI for an instance type, you can call the DescribeInstanceTypes operation to query the `SecondaryEniQueueNumber` parameter.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
NetworkInterfaceTrafficMode	String	No	Standard	The communication mode of the ENI. Valid values: • Standard: uses the TCP communication mode. • HighPerformance: enables the Elastic RDMA Interface (ERI) and uses the remote direct memory access (RDMA) communication mode. **Note** A value of HighPerformance supports only the c7re RDMA-enhanced instance family. The maximum number of ENIs in RDMA mode that can be bound to a c7re instance is determined based on the instance type. The c7re instance family is in invitational preview in Beijing Zone K. For more information, see Instance families. Default value: Standard.
Ipv6AddressCount	Integer	No	1	The number of IPv6 addresses to generate at random for the ENI. Valid values: 1 to 10. **Note** To assign IPv6 addresses to the ENI, you must specify `Ipv6Addresses.N` or `Ipv6AddressCount` but not both.
Tag.N.Key	String	No	TestKey	The key of tag N to add to the ENI. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain `http://` or `https://`.

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	TestValue	The value of tag N to add to the ENI. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length. It cannot start with acs: or contain `http://` or `https://`.
SecurityGroupIds.N	String	No	sg-bp1fg655nh68xyz9i****	The ID of security group N to which to assign the ENI. The security group and the ENI must belong to the same VPC. The valid values of N are determined based on the maximum number of security groups to which an ENI can be assigned. For more information, see Limits. **Note** You must specify `SecurityGroupId` or `SecurityGroupIds.N` but not both.
PrivateIpAddress.N	String	No	172.17.**.**	Secondary private IP address N to assign to the ENI. This IP address must be an idle IP address within the CIDR block of the vSwitch with which to associate the ENI. Valid values of N: 0 to 10. **Note** To assign secondary private IP addresses to the ENI, you must specify `PrivateIpAddress.N` or `SecondaryPrivateIpAddressCount` parameters but not both.
Ipv6Address.N	String	No	2001:db8:1234:1a00::****	IPv6 address N to assign to the ENI. Valid values of N: 1 to 10. Example: Ipv6Address.1=2001:db8:1234:1a00::**** **Note** To assign IPv6 addresses to the ENI, you must specify `Ipv6Addresses.N` or `Ipv6AddressCount` but not both.

Response parameters

Parameter	Type	Example	Description
Status	String	Available	The state of the ENI.
Type	String	Secondary	The type of the ENI.
VpcId	String	vpc-bp1j7w3gc1cexjqd****	The ID of the VPC to which the ENI belongs.
NetworkInterfaceName	String	my-eni-name	The name of the ENI.
MacAddress	String	00:16:3e:12:**:**	The media access control (MAC) address of the ENI.
NetworkInterfaceId	String	eni-bp14v2sdd3v8htln****	The ID of the ENI.
ServiceID	Long	12345678910	The ID of the distributor to which the ENI belongs.
OwnerId	String	123456****	The ID of the account to which the ENI belongs.

Parameter	Type	Example	Description
ServiceManaged	Boolean	true	Indicates whether the user is an Alibaba Cloud service or a distributor.
VSwitchId	String	vsw-bp16usj2p27htro3****	The ID of the vSwitch with which the ENI is associated.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Description	String	testDescription	The description of the ENI.
ResourceGroupId	String	rg-2ze88m67qx5z****	The ID of the resource group to which the ENI belongs.
ZoneId	String	cn-hangzhou-e	The zone ID of the ENI.
PrivateIpAddress	String	172.17.**.**	The private IP address of the ENI.
SecurityGroupIds	Array of String	sg-bp18kz60mefsicfg****	The IDs of the security groups to which the ENI belongs.
PrivateIpSets	Array of PrivateIpSet		Private IP addresses of the ENI.
PrivateIpSet			
PrivateIpAddress	String	172.17.**.**	The private IP address of the instance to which the ENI is bound.
Primary	Boolean	true	Indicates whether the IP address is the primary private IP address.
Tags	Array of Tag		The tags of the ENI.
Tag			
TagValue	String	TestValue	The tag value of the ENI.
TagKey	String	TestKey	The tag key of the ENI.
Ipv6Sets	Array of Ipv6Set		The IPv6 addresses of the ENI.
Ipv6Set			
Ipv6Address	String	2001:db8:1234:1a00::****	The IPv6 address.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateNetworkInterface
&RegionId=cn-hangzhou
&SecurityGroupIds.1=sg-bp18kz60mefsicfg****
&VSwitchId=vsw-bp1s5fnvk4gn2tws03****
&Tag.1.Key=TestKey
&Tag.1.Value=TestValue
&ResourceGroupId=rg-bp67acfmxazb4ph****
&PrimaryIpAddress=172.17.**.**
&NetworkInterfaceName=testNetworkInterfaceName
&Description=testDescription
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&Ipv6AddressCount=1
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateNetworkInterfaceResponse>
    <Description>testDescription</Description>
    <Status>Available</Status>
    <PrivateIpAddress>172.17.**.**</PrivateIpAddress>
    <ServiceManaged>false</ServiceManaged>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <ResourceGroupId>rg-2ze88m67qx5z****</ResourceGroupId>
    <ZoneId>cn-hangzhou-e</ZoneId>
    <VSwitchId>vsw-bp16usj2p27htro3****</VSwitchId>
    <NetworkInterfaceName>my-eni-name</NetworkInterfaceName>
    <MacAddress>00:16:3e:12:**:**</MacAddress>
    <NetworkInterfaceId>eni-bp14v2sdd3v8htln****</NetworkInterfaceId>
    <SecurityGroupIds>
        <SecurityGroupId>sg-bp18kz60mefsicfg****</SecurityGroupId>
    </SecurityGroupIds>
    <Type>Secondary</Type>
    <Ipv6Sets>
        <Ipv6Set>
            <Ipv6Address>2001:db8:1234:1a00::****</Ipv6Address>
        </Ipv6Set>
    </Ipv6Sets>
    <VpcId>vpc-bp1j7w3gc1cexjqd****</VpcId>
    <OwnerId>123456****</OwnerId>
    <Tags>
        <Tag>
            <TagKey>TestKey</TagKey>
            <TagValue>TestValue</TagValue>
        </Tag>
    </Tags>
    <PrivateIpSets>
        <PrivateIpSet>
            <PrivateIpAddress>172.17.**.**</PrivateIpAddress>
            <Primary>true</Primary>
        </PrivateIpSet>
    </PrivateIpSets>
</CreateNetworkInterfaceResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "Description" : "testDescription",
  "Status" : "Available",
  "PrivateIpAddress" : "172.17.**.**",
  "ServiceManaged" : false,
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "ResourceGroupId" : "rg-2ze88m67qx5z****",
  "ZoneId" : "cn-hangzhou-e",
  "VSwitchId" : "vsw-bp16usj2p27htro3****",
  "NetworkInterfaceName" : "my-eni-name",
  "MacAddress" : "00:16:3e:12:**:**",
  "NetworkInterfaceId" : "eni-bp14v2sdd3v8htln****",
  "SecurityGroupIds" : {
    "SecurityGroupId" : [ "sg-bp18kz60mefsicfg****" ]
  },
  "Type" : "Secondary",
  "Ipv6Sets" : {
    "Ipv6Set" : [ {
      "Ipv6Address" : "2001:db8:1234:1a00::****"
    } ]
  },
  "VpcId" : "vpc-bp1j7w3gc1cexjqd****",
  "OwnerId" : "123456****",
  "Tags" : {
    "Tag" : [ {
      "TagKey" : "TestKey",
      "TagValue" : "TestValue"
    } ]
  },
  "PrivateIpSets" : {
    "PrivateIpSet" : [ {
      "PrivateIpAddress" : "172.17.**.**",
      "Primary" : true
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	UnsupportedParameter	%s	The error message returned because a specified parameter is not supported.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceID.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI cannot be unbound from the instance.
400	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region for the moment.

HTTP status code	Error code	Error message	Description
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	JoinedGroupLimitExceed	%s	The error message returned because the maximum number of security groups to which the specified resource can be assigned has been exceeded. For more information, see the return value of the %s placeholder in the error message.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address is already in use. Try another IP address.
400	InvalidParameter.Conflict	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or because your AccessKey pair has expired.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Contact the owner of the Alibaba Cloud account for authorization.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the operation is invalid. Check whether the VPC in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the network type of the security group is not VPC.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the operation is not supported while the ENI is of the current type.
403	InvalidVSwitchId.IpNotEnough	%s	The error message returned because available IP addresses within the CIDR block of the specified vSwitch are insufficient.

HTTP status code	Error code	Error message	Description
403	InvalidVSwitchId.IpInvalid	%s	The error message returned because the specified private IP address is invalid.
403	QuotaExceed.Tags	%s	The error message returned because the maximum number of tags has been reached.
403	InvalidIp.Address	%s	The error message returned because the specified IPv6 address is invalid.
403	InvalidIp.IpRepeated	%s	The error message returned because the specified IP address already exists.
403	MaxEniPrivateIpsCountExceeded	%s	The error message returned because the maximum number of secondary private IP addresses that can be assigned to the ENI has been reached. For more information, see the return value of the %s placeholder in the error message.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because you cannot modify security groups managed by cloud services.
403	InvalidParameter.InvalidEniQueueNumber	%s	The error message returned because the specified NetworkInterfaceQueueNumber parameter is invalid. For more information, see the return value of the %s placeholder in the error message.
403	InvalidOperation.MaxEniQueueNumberExceeded	%s	The error message returned because the maximum number of queues per ENI has been reached. For more information, see the return value of the %s placeholder in the error message.
403	InvalidOperation.ExceedInstanceTypeQueueNumber	%s	The error message returned because the maximum number of queues for all ENIs on an instance has been reached. For more information, see the return value of the %s placeholder in the error message.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified vSwitch ID does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified resource group does not exist.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

22.2. AttachNetworkInterface

Binds an elastic network interface (ENI) to an Elastic Compute Service (ECS) instance in a virtual private cloud (VPC).

Description

When you call this operation, take note of the following items:

- The ENI must be in the **Available** (`Available`) state. Each ENI can be bound to a single instance.

- The instance must be in the Running (Running) or Stopped (Stopped) state. When you bind ENIs to instances of some instance types, the instances must be in the Stopped (Stopped) state. For more information, see the "Instance types of the ECS instances that must be in the Stopped (Stopped) state" section in Bind an ENI.

> **Note** If the last start time of the instance (including the last start time of the instance if it is newly purchased, the last restart time of the instance, and the last reactivation time of the instance) is before April 1, 2018 and the instance stays in the Running state, you must call the RebootInstance operation to restart the instance. Otherwise, the ENI cannot be bound to the instance.

- You can bind multiple ENIs to a single instance. For more information, see ENI overview.
- The instance must be in the same zone and the same VPC as the vSwitch to which the ENI is connected.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachNetworkInterface	The operation that you want to perform. Set the value to **AttachNetworkInterface**.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
NetworkInterfaceId	String	Yes	eni-bp17pdijfczax1huji****	The ID of the ENI.
InstanceId	String	Yes	i-bp16qstyvxj9gpqw****	The ID of the instance.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AttachNetworkInterface
&RegionId=cn-hangzhou
&InstanceId=i-bp16qstyvxj9gpqw****
&NetworkInterfaceId=eni-bp17pdijfczax1huji****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<AttachNetworkInterfaceResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</AttachNetworkInterfaceResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	UnsupportedParameter	%s	The error message returned because a specified parameter is not supported.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceID.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidRegion	%s	The error message returned because the specified RegionId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI cannot be unbound from the instance.
400	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.
400	InvalidOperation.InvalidGeneration	%s	The error message returned because the operation is invalid.
400	InvalidParams.EniId	%s	The error message returned because the specified NetworkInterfaceId parameter is invalid.
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or because your AccessKey pair has expired.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Contact the owner of the Alibaba Cloud account for authorization.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because this operation is invalid. Check whether the VPC in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.

HTTP status code	Error code	Error message	Description
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the network type of the security group is not VPC.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the operation is not supported while the ENI is of the current type.
403	InvalidInstanceId.NotFound	%s	The error message returned because the specified InstanceId parameter does not exist.
403	InvalidEni.NotSameVpc	%s	The error message returned because the specified resource and the specified ENI do not belong to the same VPC. For more information, see the return value of the %s placeholder in the error message.
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned because the maximum number of IPv4 addresses has been reached.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.
403	InvalidOperation.Ipv6NotSupport	%s	The error message returned because IPv6 does not support the operation.
403	InvalidOperation.HotPlugNotSupport	%s	The error message returned because the operation is not supported while the specified resource is running. For more information, see the return value of the %s placeholder in the error message.
403	InvalidOperation.InvalidTrunkEniStatus	%s	The error message returned because the operation is not supported while the specified ENI is in trunk mode. For more information, see the return value of the %s placeholder in the error message.
403	InvalidOperation.InstanceTypeNotSupportEniTrunking	%s	The error message returned because this operation is not supported. For more information, see the return value of the %s placeholder in the error message.
403	InvalidOperation.EniTypeNotSupportTrunking	%s	The error message returned because the type of the ENI does not support operations related to the trunk mode. For more information, see the return value of the %s placeholder in the error message.
403	InvalidParameter.EniNotBelongTrunk	%s	The error message returned because the specified ENI is not in trunk mode. For more information, see the return value of the %s placeholder in the error message.
403	InvalidParameter.EniNotBelongEcs	%s	The error message returned because the specified ENI is not bound to the specified ECS instance. For more information, see the return value of the %s placeholder in the error message. You can call the DescribeInstances operation to query the IDs of the ENIs bound to the specified ECS instance.
403	InvalidParameter.InvalidEniQueueNumber	%s	The error message returned because the specified NetworkInterface.N.QueueNumber parameter is invalid. For more information, see the return value of the %s placeholder in the error message.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.MaxEniQueueNumberExceeded	%s	The error message returned because the maximum number of queues per ENI has been reached. For more information, see the return value of the %s placeholder in the error message.
403	InvalidOperation.ExceedInstanceTypeQueueNumber	%s	The error message returned because the maximum number of queues for all ENIs on an instance has been reached. For more information, see the return value of the %s placeholder in the error message.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified InstanceId parameter does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId parameter does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitchId parameter does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.

For a list of error codes, visit the API Error Center.

22.3. AssignPrivateIpAddresses

Assigns one or more secondary private IP addresses to an elastic network interface (ENI). You can specify available private IP addresses within the CIDR block of the vSwitch that is connected to the ENI. Alternatively, you can specify a number of private IP addresses to automatically assign from the CIDR block of the vSwitch to the ENI.

Description

- The ENI to which you want to assign private IP addresses must be in the Available (Available) or Bound (InUse) state.
- When you perform operations on the primary ENI, the instance to which the ENI is bound must be in the Running or Stopped state.
- When an ENI is in the Available state, up to 10 secondary private IP addresses can be assigned to it. When an ENI is bound to an instance, the number of private IP addresses that can be assigned to the ENI is subject to the instance type. For more information, see Instance families.
- After the operation is called, you can obtain the private IP addresses assigned to the ENI from the response.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AssignPrivateIpAddresses	The operation that you want to perform. Set the value to **AssignPrivateIpAddresses**.
RegionId	String	Yes	cn-hangzhou	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.
NetworkInterfaceId	String	Yes	eni-bp67acfmxazb4p****	The ID of the ENI.
SecondaryPrivateIpAddressCount	Integer	No	1	The number of private IP addresses to be automatically assigned from within the CIDR block of the vSwitch. To assign secondary private IP addresses, you must specify `PrivateIpAddress.N` or `SecondaryPrivateIpAddressCount` but not both.

Parameter	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
PrivateIpAddress.N	String	No	10.1.**.**	Secondary private IP address N, which is selected from within the CIDR block of the vSwitch. Valid values of N: • When the ENI is in the Available (`Available`) state, the valid values of N are 1 to 10. • When the ENI is in the Bound (`InUse`) state, the valid values of N are subject to the instance type. For more information, see Instance families. **Note** To assign secondary private IP addresses, you must specify `PrivateIpAddress.N` or `SecondaryPrivateIpAddressCount` but not both.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
AssignedPrivateIpAddressesSet	Object		Details about the ENI.
NetworkInterfaceId	String	eni-bp125p95hhdhn3ot****	The ID of the ENI.
PrivateIpSet	Array of String	["192.168.**.**"]	The private IP addresses assigned.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AssignPrivateIpAddresses
&NetworkInterfaceId=eni-bp67acfmxazb4p****
&RegionId=cn-hangzhou
&PrivateIpAddress.1=10.1.**.**
&PrivateIpAddress.2=10.1.**.**
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<AssignPrivateIpAddressesResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <AssignedPrivateIpAddressesSet>
        <PrivateIpSet>
            <PrivateIpAddress>192.168.**.**</PrivateIpAddress>
        </PrivateIpSet>
        <NetworkInterfaceId>eni-bp125p95hhdhn3ot****</NetworkInterfaceId>
    </AssignedPrivateIpAddressesSet>
</AssignPrivateIpAddressesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "AssignedPrivateIpAddressesSet" : {
    "PrivateIpSet" : {
      "PrivateIpAddress" : [ "192.168.**.**" ]
    },
    "NetworkInterfaceId" : "eni-bp125p95hhdhn3ot****"
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	Throttling	Request was denied due to request throttling.	The error message returned because the request is denied due to throttling. Try again later.
400	UnsupportedParameter	%s	The error message returned because a specified parameter is not supported.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceID.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI cannot be unbound from the instance.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.
400	InvalidAction	%s	The error message returned because the operation is invalid.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address is already in use. Try another IP address.
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or because your AccessKey has expired.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
403	Forbidden.SubUser	%s	The error message returned because your account is not authorized to manage this resource. Contact the owner of the Alibaba Cloud account for authorization.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.

HTTP status code	Error code	Error message	Description
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the operation is invalid. Check whether the virtual private cloud (VPC) in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the network type of the security group is not VPC.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the operation is not supported while the ENI is of the current type.
403	InvalidVSwitchId.IpNotEnough	%s	The error message returned because available IP addresses within the CIDR block of the specified vSwitch are insufficient.
403	InvalidVSwitchId.IpInvalid	%s	The error message returned because the specified private IP address is invalid.
403	InvalidIp.IpAssigned	%s	The error message returned because the specified IP address is already assigned.
403	MaxEniPrivateIpsCountExceeded	%s	The error message returned because the maximum number of secondary private IP addresses that can be assigned to the ENI has been reached. For more information, see the return value of the %s placeholder in the error message.
403	Operation.Conflict	%s	The error message returned because this operation conflicts with another operation in progress. Try again later.
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned because the maximum number of IPv4 addresses has been reached.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.
403	InvalidIp.IpRepeated	%s	The error message returned because the specified IP address already exists.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId parameter does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified vSwitch does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance does not exist.

For a list of error codes, visit the API Error Center.

22.4. UnassignPrivateIpAddresses

Unassigns one or more secondary private IP addresses from an elastic network interface (ENI).

Description

- The ENI from which to unassign secondary private IP addresses must be in the **Available** (Available) or **InUse** (InUse) state.
- If the ENI is a primary ENI, the Elastic Compute Service (ECS) instance to which the ENI is bound must be in the **Running** (Running) or **Stopped** (Stopped) state.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UnassignPrivateIpAddresses	The operation that you want to perform. Set the value to **UnassignPrivateIpAddresses**.
RegionId	String	Yes	cn-hangzhou	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.
NetworkInterfaceId	String	Yes	eni-bp67acfmxazb4ph****	The ID of the ENI.
PrivateIpAddress.N	String	Yes	192.168.**.**	The secondary private IP addresses to be unassigned. Valid values of N: 1 to 10.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=UnassignPrivateIpAddresses
&NetworkInterfaceId=eni-bp67acfmxazb4ph****
&PrivateIpAddress.1=192.168.**.**
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<UnassignPrivateIpAddressesResponse>
    <RequestId>04F0F334-1335-436C-A1D7-6C044FE70008</RequestId>
</UnassignPrivateIpAddressesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "04F0F334-1335-436C-A1D7-6C044FE70008"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	UnsupportedParameter	%s	The error message returned because a specified parameter is not supported.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceID.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI cannot be unbound from the instance.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.
400	InvalidAction	%s	The error message returned because the operation is invalid.
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or because your AccessKey pair has expired.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Contact the owner of the Alibaba Cloud account for authorization.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the operation is invalid. Check whether the virtual private cloud (VPC) in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the network type of the security group is not VPC.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.InvalidEniType	%s	The error message returned because the operation is not supported while the ENI is of the current type.
403	InvalidVSwitchId.IpInvalid	%s	The error message returned because the specified private IP address is invalid.
403	InvalidIp.IpUnassigned	%s	The error message returned because the specified IP address is not assigned.
403	Operation.Conflict	%s	The error message returned because this operation conflicts with another operation in progress. Try again later.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId parameter does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified vSwitchId does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group does not exist.
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance does not exist.

For a list of error codes, visit the API Error Center.

22.5. DetachNetworkInterface

You can call this operation to unbind an elastic network interface (ENI) from an ECS instance.

Description

When you call this operation, take note of the following items:

- The primary ENIs of ECS instances cannot be unbound.
- The ENI must be in the Detaching (Detaching) or InUse (InUse) state.
- The instance must be in the Running (Running) or Stopped (Stopped) state.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer automatically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DetachNetworkInterface	The operation that you want to perform. Set the value to DetachNetworkInterface.
InstanceId	String	Yes	i-bp67acfmxazb4p****	The ID of the instance.
NetworkInterfaceId	String	Yes	eni-bp67acfmxazb4p****	The ID of the ENI.
RegionId	String	Yes	cn-hangzhou	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DetachNetworkInterface
&InstanceId=i-bp67acfmxazb4p****
&NetworkInterfaceId=eni-bp67acfmxazb4p****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DetachNetworkInterfaceResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DetachNetworkInterfaceResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or your AccessKey pair has expired.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
400	UnsupportedParameter	%s	The error message returned because a specific parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Contact the owner of the Alibaba Cloud account for authorization.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceID.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidRegion	%s	The error message returned because the specified RegionId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.

HttpCode	Error code	Error message	Description
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because you cannot unbind the primary ENI from the instance.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId parameter does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified vSwitch ID does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned when the specified security group ID does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the operation is invalid. Check whether the VPC in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the security group is not of the VPC type.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the ENI type does not support this operation.
400	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.
400	InvalidParams.EniId	%s	The error message returned because the specified NetworkInterfaceId parameter is invalid.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.
403	InvalidOperation.EniLinked	%s	The error message returned because the operation is not supported while the ENI is linked to another ENI. You must disassociate the EIP before you can unbind the EIP from an instance.
403	InvalidInstanceId.NotFound	%s	The error message returned because the specified InstanceId parameter does not exist.

For a list of error codes, visit the API Error Center.

22.6. DescribeNetworkInterfaces

Queries the details of one or more elastic network interfaces (ENIs).

Description

The `DescribeNetworkInterfaces` operation supports paged query. During a paged query, when you call the DescribeNetworkInterfaces operation to retrieve the first page of results, set `MaxResults` to specify the maximum number of entries to return in the call. The return value of `NextToken` is a pagination token, which can be used in the next call to retrieve a new page of results. When you call the DescribeNetworkInterfaces operation to retrieve a new page of results, set `NextToken` to the `NextToken` value returned in the previous call and set `MaxResults` to specify the maximum number of entries to return in this call.

> **Note** If you specify `MaxResults` or `NextToken`, the system uses the preceding paged query method to return results. Otherwise, the system uses a paged query method defined by `PageNumber` and `PageSize` to return results.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeNetworkInterfaces	The operation that you want to perform. Set the value to **DescribeNetworkInterfaces**.
RegionId	String	Yes	cn-hangzhou	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the ENI belongs. If this parameter is specified to query resources, up to 1,000 ENIs that belong to the specified resource group can be displayed in the response.
VSwitchId	String	No	vsw-bp16usj2p27htro3****	The ID of the vSwitch to which the ENI is connected.
VpcId	String	No	vsw-bp16usj2p27htro3****	The ID of the virtual private cloud (VPC) to which the ENI belongs.
PrimaryIpAddress	String	No	192.168.**.**	The primary private IPv4 address of the ENI.
SecurityGroupId	String	No	sg-bp144yr32sx6ndw****	The ID of the security group to which the secondary ENI belongs. • To query the details of secondary ENIs based on the ID of a security group, specify this parameter. • To query the details of primary ENIs based on the ID of a security group, call the DescribeInstances operation and specify the `SecurityGroupId` parameter.
NetworkInterfaceName	String	No	test-eni-name	The name of the ENI.
Type	String	No	Secondary	The type of the ENI. Valid values: • Primary • Secondary This parameter is empty by default, which indicates that both primary and secondary ENIs are queried.
InstanceId	String	No	i-bp1e2l6djkndyuli****	The ID of the Elastic Compute Service (ECS) instance to which the ENI is bound.
ServiceManaged	Boolean	No	true	Specifies whether the user is an Alibaba Cloud service or a distributor.

Parameter	Type	Required	Example	Description
Status	String	No	Available	The state of the ENI. Valid values: • Available: The ENI is not bound to an instance. • Attaching: The ENI is being bound to an instance. • InUse: The ENI is bound to an instance. • Detaching: The ENI is being unbound from an instance. • Deleting: The ENI is being deleted. This parameter is empty by default, which indicates that ENIs in all states are queried.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1. **Note** This parameter will be removed in the future. We recommend that you use the NextToken and MaxResults parameters for a paged query.
PageSize	Integer	No	100	The number of entries to return on each page. Maximum value: 1,000. Default value: 10. **Note** This parameter will be removed in the future. We recommend that you use the NextToken and MaxResults parameters for a paged query.
NextToken	String	No	AAAAAdDWBF2****	The query token. Set the value to the `NextToken` value returned in the last call to the DescribeNetworkInterfaces operation. For more information about how to check the responses returned by this operation, see the preceding "Description" section.
MaxResults	Integer	No	50	The maximum number of entries to return on each page. Valid values: 10 to 500. Default value: • If this parameter is not specified or if this parameter is set to a value less than 10, the default value is 10. • If this parameter is set to a value greater than 500, the default value is 500.
Tag.N.Key	String	No	TestKey	The key of tag N of the ENI. Valid values of N: 1 to 20.
Tag.N.Value	String	No	TestValue	The value of tag N of the ENI. Valid values of N: 1 to 20. If a single tag is specified to query resources, up to 1,000 ENIs that have this tag added can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 ENIs that have all these tags added can be displayed in the response. To query more than 1,000 ENIs that have specified tags added, call the ListTagResources operation.
PrivateIpAddress.N	String	No	192.168.**.**	Secondary private IPv4 address N of the ENI. Valid values of N: 1 to 100.
NetworkInterfaceId.N	String	No	eni-bp125p95hhdhn3ot****	The ID of the ENI N. Valid values of N: 1 to 100.

Parameter	Type	Required	Example	Description
Ipv6Address.N	String	No	2408:4321:180:1701:94c7:bc38:3bfa:****	IPv6 address N of the ENI. You can specify multiple IPv6 addresses. Valid values of N: 1 to 100.

Response parameters

Parameter	Type	Example	Description
NextToken	String	AAAAAdDWBF2****	The query token returned in this call.
PageSize	Integer	1	The number of entries returned per page. **Note** This parameter will be removed in the future. We recommend that you use the NextToken and MaxResults parameters for a paged query.
PageNumber	Integer	1	The page number of the returned page. **Note** This parameter will be removed in the future. We recommend that you use the NextToken and MaxResults parameters for a paged query.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of ENIs. **Note** If you specify the `NextToken` and `MaxResults` parameters for a paged query, the value of the `TotalCount` response parameter is invalid.
NetworkInterfaceSets	Array of NetworkInterfaceSet		Details about the ENIs.
NetworkInterfaceSet			
CreationTime	String	2019-12-25T12:31:31Z	The time when the ENI was created.
VpcId	String	vpc-bp1j7w3gc1cexjqd****	The ID of the VPC to which the ENI belongs.
Type	String	Secondary	The type of the ENI.
Status	String	Available	The state of the ENI.
NetworkInterfaceTrafficMode	String	Standard	The communication model of the ENI. Valid values: • Standard: The TCP communication mode is used. • HighPerformance: The Elastic RDMA Interface (ERI) is enabled and the remote direct memory access (RDMA) communication mode is used. **Note** ERI can be enabled for instances only of the c7re RDMA-enhanced instance family. The HighPerformance value is returned only within Beijing Zone K.
NetworkInterfaceName	String	my-eni-name	The name of the ENI.

Parameter	Type	Example	Description
MacAddress	String	00:16:3e:12:**:**	The media access control (MAC) address of the ENI.
QueuePairNumber	Integer	0	**Note** This parameter is in invitational preview and is unavailable.
NetworkInterfaceId	String	eni-bp125p95hhdhn3ot****	The ID of the ENI.
ServiceID	Long	12345678910	The ID of the distributor to which the ENI belongs.
InstanceId	String	i-bp1e2l6djkndyuli****	The ID of the instance to which the ENI is bound. **Note** If the ENI that are managed and controlled by other Alibaba Cloud services, no instance ID is returned.
OwnerId	String	123456****	The ID of the account to which the ENI belongs.
ServiceManaged	Boolean	true	Indicates whether the user is an Alibaba Cloud service or a distributor.
VSwitchId	String	vsw-bp16usj2p27htro3****	The ID of the vSwitch to which the ENI is connected.
Description	String	DescriptionTest	The description of the ENI.
ResourceGroupId	String	rg-2ze88m67qx5z****	The ID of the resource group to which the ENI belongs.
ZoneId	String	cn-hangzhou-e	The zone ID of the ENI.
PrivateIpAddress	String	172.17.**.**	The private IP address of the ENI.
QueueNumber	Integer	8	The number of queues supported by the ENI. • If the ENI is a secondary ENI in the InUse (InUse) state and the number of queues supported by this ENI has never been modified, the default number of queues per secondary ENI that the instance type supports is returned. • If the number of queues supported by the secondary ENI has been modified, the new number of queues is returned. • If the ENI is a secondary ENI in the Available (Available) state and the number of queues supported by this ENI has never been modified, an empty value is returned. • If the ENI is a primary ENI, the default number of queues per primary ENI that the instance type supports is returned.
PrivateIpSets	Array of PrivateIpSet		Private IP addresses of the ENI.
PrivateIpSet			
PrivateIpAddress	String	172.17.**.**	The private IP address of the instance to which the ENI is bound.
Primary	Boolean	true	Indicates whether the IP address is the primary private IP address. Valid values: • true • false

Parameter	Type	Example	Description
AssociatedPublicIp	Object		The elastic IP address (EIP) associated with the ENI.
PublicIpAddress	String	116.62.**.**	The EIP of the ENI.
AllocationId	String	null	**Note** This parameter is in invitational preview and is unavailable.
Ipv6Sets	Array of Ipv6Set		The IPv6 addresses assigned to the ENI.
Ipv6Set			
Ipv6Address	String	2408:4321:180:1701:94c7:bc38:3bfa:****	The IPv6 address assigned to the ENI.
Tags	Array of Tag		The tags of the ENI.
Tag			
TagValue	String	TestValue	The tag value of the ENI.
TagKey	String	TestKey	The tag key of the ENI.
SecurityGroupIds	Array of String	sg-bp18kz60mefsicfg****	The IDs of the security groups to which the ENI belongs.
AssociatedPublicIp	Object		The EIP associated with the secondary private IP address of the ENI.
PublicIpAddress	String	116.62.**.**	The EIP of the ENI.
AllocationId	String	null	**Note** This parameter is in invitational preview and is unavailable.
Attachment	Object		**Note** This parameter is in invitational preview and is unavailable.
DeviceIndex	Integer	0	**Note** This parameter is in invitational preview and is unavailable.
InstanceId	String	null	**Note** This parameter is in invitational preview and is unavailable.
TrunkNetworkInterfaceId	String	null	**Note** This parameter is in invitational preview and is unavailable.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeNetworkInterfaces
&RegionId=cn-hangzhou
&PrivateIpAddress.1=192.168.**.**
&PrivateIpAddress.2=192.168.**.**
&NextToken=AAAAAdDWBF2****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeNetworkInterfacesResponse>
    <TotalCount>2</TotalCount>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <PageSize>1</PageSize>
    <NextToken>AAAAAdDWBF2****</NextToken>
    <PageNumber>1</PageNumber>
    <NetworkInterfaceSets>
        <NetworkInterfaceSet>
            <Status>Available</Status>
            <NetworkInterfaceTrafficMode>Standard</NetworkInterfaceTrafficMode>
            <ServiceManaged>false</ServiceManaged>
            <PrivateIpAddress>172.17.**.**</PrivateIpAddress>
            <ZoneId>cn-hangzhou-e</ZoneId>
            <ResourceGroupId>rg-aek2boynwys****</ResourceGroupId>
            <InstanceId>i-wz91t9p4j9xsw2pn****</InstanceId>
            <VSwitchId>vsw-bp16usj2p27htro3****</VSwitchId>
            <NetworkInterfaceId>eni-bp125p95hhdhn3ot****</NetworkInterfaceId>
            <MacAddress>00:16:3e:12:**:**</MacAddress>
            <SecurityGroupIds>
                <SecurityGroupId>sg-bp18kz60mefsicfg****</SecurityGroupId>
            </SecurityGroupIds>
            <Type>Secondary</Type>
            <Ipv6Sets>
                <Ipv6Set>
                    <Ipv6Address>2408:4321:180:1701:94c7:bc38:3bfa:****</Ipv6Address>
                </Ipv6Set>
            </Ipv6Sets>
            <VpcId>vpc-bp1j7w3gc1cexjqd****</VpcId>
            <OwnerId>123456****</OwnerId>
            <NetworkInterfaceName>my-eni-name</NetworkInterfaceName>
            <AssociatedPublicIp/>
            <CreationTime>2019-12-25T12:31:31Z</CreationTime>
            <Tags>
                <Tag>
                    <TagKey>TestKey</TagKey>
                    <TagValue>TestValue</TagValue>
                </Tag>
            </Tags>
            <PrivateIpSets>
                <PrivateIpSet>
                    <PrivateIpAddress>172.17.**.**</PrivateIpAddress>
                    <AssociatedPublicIp/>
                    <Primary>true</Primary>
                </PrivateIpSet>
            </PrivateIpSets>
        </NetworkInterfaceSet>
    </NetworkInterfaceSets>
</DescribeNetworkInterfacesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalCount" : 2,
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "PageSize" : 1,
  "NextToken" : "AAAAAdDWBF2****",
  "PageNumber" : 1,
  "NetworkInterfaceSets" : {
    "NetworkInterfaceSet" : [ {
      "Status" : "Available",
      "NetworkInterfaceTrafficMode" : "Standard",
      "ServiceManaged" : false,
      "PrivateIpAddress" : "172.17.**.**",
      "ZoneId" : "cn-hangzhou-e",
      "ResourceGroupId" : "rg-aek2boynwys****",
      "InstanceId" : "i-wz91t9p4j9xsw2pn****",
      "VSwitchId" : "vsw-bp16usj2p27htro3****",
      "NetworkInterfaceId" : "eni-bp125p95hhdhn3ot****",
      "MacAddress" : "00:16:3e:12:**:**",
      "SecurityGroupIds" : {
        "SecurityGroupId" : [ "sg-bp18kz60mefsicfg****" ]
      },
      "Type" : "Secondary",
      "Ipv6Sets" : {
        "Ipv6Set" : [ {
          "Ipv6Address" : "2408:4321:180:1701:94c7:bc38:3bfa:****"
        } ]
      },
      "VpcId" : "vpc-bp1j7w3gc1cexjqd****",
      "OwnerId" : "123456****",
      "NetworkInterfaceName" : "my-eni-name",
      "AssociatedPublicIp" : { },
      "CreationTime" : "2019-12-25T12:31:31Z",
      "Tags" : {
        "Tag" : [ {
          "TagKey" : "TestKey",
          "TagValue" : "TestValue"
        } ]
      },
      "PrivateIpSets" : {
        "PrivateIpSet" : [ {
          "PrivateIpAddress" : "172.17.**.**",
          "AssociatedPublicIp" : { },
          "Primary" : true
        } ]
      }
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	UnsupportedParameter	%s	The error message returned because a specified parameter is not supported.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceID.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.

HTTP status code	Error code	Error message	Description
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI cannot be unbound from the instance.
400	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.
400	InvalidRegionId.MalFormed	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or because your AccessKey pair has expired.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Contact the owner of the Alibaba Cloud account for authorization.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the operation is invalid. Check whether the VPC in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the network type of the security group is not VPC.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the operation is not supported while the ENI is of the current type.
403	InvalidVpc.Empty	%s	The error message returned because no vSwitches exist in the specified VPC. For more information, see the return value of the %s placeholder in the error message.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified InstanceId parameter does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId parameter does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitchId parameter does not exist.

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified SecurityGroupId parameter does not exist.

For a list of error codes, visit the API Error Center.

22.7. ModifyNetworkInterfaceAttribute

Modifies the name, description, and security group of an elastic network interface (ENI).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyNetworkInterfaceAttribute	The operation that you want to perform. Set the value to ModifyNetworkInterfaceAttribute.
NetworkInterfaceId	String	Yes	eni-bp67acfmxazb4p****	The ID of the ENI.
RegionId	String	Yes	cn-hangzhou	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId.N	RepeatList	No	sg-bp67acfmxazb4p****	The ID of security group N to which the ENI finally belongs. If a security group to which the ENI has belonged is in the ID list, that security group is removed from the list. Valid values of N: 1, 2, 3, 4, and 5. **Note** After you modify the security group, the modification takes effect after a short delay.
NetworkInterfaceName	String	No	eniTestName	The name of the ENI. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with `http://` or `https://`. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
QueueNumber	Integer	No	8	The number of queues per ENI. Valid values: 1 to 2048. • You can modify the number of queues supported only by the secondary ENI. • You can modify the number of queues supported by the secondary ENI only when the ENI is in the `Available` state, or the secondary ENI is bound (`InUse`) to an instance that is in the `Stopped` state. • The number of queues supported by the secondary ENI cannot exceed the maximum number of queues per ENI allowed for the instance type. The total number of queues for all ENIs on the instance cannot exceed the queue quota allowed for the instance type. To learn the maximum number of queues per ENI and the queue quota allowed for an instance type, you can call the DescribeInstanceTypes operation to query the `MaximumQueueNumberPerEni` and `TotalEniQueueQuantity` parameters.

Parameter	Type	Required	Example	Description
Description	String	No	testDescription	The description of the ENI. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`. This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyNetworkInterfaceAttribute
&NetworkInterfaceId=eni-bp67acfmxazb4p****
&RegionId=cn-hangzhou
&SecurityGroupId.1=sg-bp67acfmxazb4p****
&NetworkInterfaceName=eniTestName
&Description=testDescription
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DetachNetworkInterfaceResponse>
        <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
</DetachNetworkInterfaceResponse>
```

`JSON` format

```
{
    "RequestId":"04F0F334-1335-436C-A1D7-6C044FExxxxx"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or because your AccessKey pair has expired.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because Resource Access Management (RAM) users are not authorized to perform this operation.
400	UnsupportedParameter	%s	The error message returned because a specific parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Contact the owner of the Alibaba Cloud account for authorization.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceID.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.

HttpCode	Error code	Error message	Description
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI cannot be unbound from the instance.
400	InvalidParams.EniId	%s	The error message returned because the specified NetworkInterfaceId parameter is invalid.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified InstanceId parameter does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitchId parameter does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because this operation is invalid. Check whether the virtual private cloud (VPC) in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the network type of the security group is not VPC.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the operation is not supported while the ENI is of the current type.
400	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.
403	InvalidOperation.ResourceManagedByCloudProduct	%s	The error message returned because the security groups managed by cloud services cannot be modified.
403	InvalidParameter.InvalidEniQueueNumber	%s	The error message returned because the specified NetworkInterface.N.QueueNumber parameter is invalid. For more information, see the return value of the %s placeholder in the error message.

HttpCode	Error code	Error message	Description
403	InvalidOperation.MaxEniQueueNumberExceeded	%s	The error message returned because the maximum number of queues per ENI has been reached. For more information, see the return value of the %s placeholder in the error message.
403	InvalidOperation.ExceedInstanceTypeQueueNumber	%s	The error message returned because the maximum number of queues for all ENIs on an instance has been reached. For more information, see the return value of the %s placeholder in the error message.

For a list of error codes, visit the API Error Center.

22.8. AssignIpv6Addresses

Assigns one or more IPv6 addresses to an elastic network interface (ENI).

Description

You can specify IPv6 addresses within the CIDR block of the vSwitch with which the ENI is associated, or specify the number of IPv6 addresses to automatically assign. Take note of the following items:

- IPv6 must be enabled for the vSwitch with which the ENI is associated. For more information, see Enable IPv6 for a vSwitch.
- The ENI must be in the Available (Available) or Bound (InUse) state.
- The Elastic Compute Service (ECS) instance to which the primary ENI is bound must be in the Running (Running) or Stopped (Stopped) state.
- The maximum number of IPv6 addresses that can be assigned to an ENI varies per instance type.
  - If the ENI is in the Available (Available) state, it can be assigned a maximum of 10 IPv6 addresses.
  - If the ENI is already bound to an ECS instance, the maximum number of IPv6 addresses that can be assigned to the ENI is determined based on the instance type. For more information, see Instance families.
- After the operation is called, you can obtain the IPv6 addresses assigned to the ENI from the response.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AssignIpv6Addresses	The operation that you want to perform. Set the value to **AssignIpv6Addresses**.
RegionId	String	Yes	cn-hangzhou	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.
NetworkInterfaceId	String	Yes	eni-bp1iqejowblx6h8j****	The ID of the ENI.
Ipv6AddressCount	Integer	No	1	The number of IPv6 addresses to randomly generate for the ENI. Valid values: 1 to 10. **Note** You must specify `Ipv6Addresses.N` or `Ipv6AddressCount` but not both.

Parameter	Type	Required	Example	Description
Ipv6Address.N	String	No	2001:db8:1234:1a00::****	IPv6 address N to assign to the ENI. Valid values of N: 1 to 10. Example: Ipv6Address.1=2001:db8:1234:1a00::**** **Note** You must specify `Ipv6Addresses.N` or `Ipv6AddressCount` but not both.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
NetworkInterfaceId	String	eni-bp1iqejowblx6h8j****	The ID of the ENI.
Ipv6Sets	Array of String	2001:db8:1234:1a00::****	The IPv6 addresses assigned to the ENI.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AssignIpv6Addresses
&NetworkInterfaceId=eni-bp1iqejowblx6h8j****
&RegionId=cn-hangzhou
&Ipv6Address.1=2001:db8:1234:1a00::****
&Ipv6Address.2=2001:db8:1234:1a01::****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<AssignIpv6AddressesResponse>
    <Ipv6Sets>
        <Ipv6Address>2001:db8:1234:1a00::****</Ipv6Address>
        <Ipv6Address>2001:db8:1234:1a01::****</Ipv6Address>
    </Ipv6Sets>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <NetworkInterfaceId>eni-bp1iqejowblx6h8j****</NetworkInterfaceId>
</AssignIpv6AddressesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "Ipv6Sets" : {
    "Ipv6Address" : [ "2001:db8:1234:1a00::****", "2001:db8:1234:1a01::****" ]
  },
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "NetworkInterfaceId" : "eni-bp1iqejowblx6h8j****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	UnsupportedParameter	%s	The error message returned because a specified parameter is not supported.

HTTP status code	Error code	Error message	Description
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceID.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParams.EniId	%s	The error message returned because the specified NetworkInterfaceId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address is already in use. Try another IP address.
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support the operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or because your AccessKey pair has expired.
403	Forbedden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
403	Forbbiden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Contact the owner of the corresponding Alibaba Cloud account for authorization.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the ENI type does not support the operation.
403	MaxEniIpv6IpsCountExceeded	%s	The error message returned because the maximum number of IPv6 addresses that can be assigned to the ENI has been reached.
403	InvalidIp.IpUnassigned	%s	The error message returned because the specified IP address is not assigned.
403	InvalidIp.IpRepeated	%s	The error message returned because the specified IP address already exists.
403	InvalidIp.IpAssigned	%s	The error message returned because the specified IP address is already assigned.
403	InvalidIp.Address	%s	The error message returned because the specified IPv6 address is invalid.
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned because the maximum number of IPv4 addresses has been reached.
403	InvalidOperation.Ipv6CountExceeded	%s	The error message returned because the maximum number of IPv6 addresses has been reached.
403	InvalidOperation.Ipv6NotSupport	%s	The error message returned because IPv6 addresses do not support the current operation.

HTTP status code	Error code	Error message	Description
403	InvalidVSwitch.Ipv6NotTurnOn	%s	The error message returned because the IPv6 feature is not enabled for your current vSwitch. Enable the feature and try again.
403	InvalidVSwitchId.IpInvalid	%s	The error message returned because the specified private IP address is invalid.
403	Forbidden.RegionId	%s	The error message returned because the service is not available in the current region.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances that can be added to the security group has been reached.
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId parameter does not exist.

For a list of error codes, visit the API Error Center.

22.9. UnassignIpv6Addresses

Unassign one or more IPv6 addresses from an elastic network interface (ENI).

Description

When you call this operation, take note of the following items:

- The ENI must be in the **Available** (Available) or **Bound** (InUse) state.
- The Elastic Compute Service (ECS) instance to which the primary ENI is bound must be in the **Running** (Running) or **Stopped** (Stopped) state.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UnassignIpv6Addresses	The operation that you want to perform. Set the value to **UnassignIpv6Addresses**.
RegionId	String	Yes	cn-hangzhou	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.
NetworkInterfaceId	String	Yes	eni-bp14v2sdd3v8ht****	The ID of the ENI.
Ipv6Address.N	String	Yes	2001:db8:1234:1a00::***	IPv6 address N to unassign from the ENI. Valid values of N: 1 to 10.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=UnassignIpv6Addresses
&Ipv6Address.1=2001:db8:1234:1a00::***
&NetworkInterfaceId=eni-bp14v2sdd3v8ht****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<UnassignIpv6AddressesResponse>
    <RequestId>48285314-3192-47FE-B4C8-9D51E7Fxxxxx</RequestId>
</UnassignIpv6AddressesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "48285314-3192-47FE-B4C8-9D51E7Fxxxxx"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	UnsupportedParameter	%s	The error message returned because a specified parameter is not supported.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceID.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or because your AccessKey pair has expired.
403	Forbedden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
403	Forbbiden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Contact the owner of the Alibaba Cloud account for authorization.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the operation is not supported while the ENI is of the current type.
403	InvalidIp.IpUnassigned	%s	The error message returned because the specified IP address is not assigned.

HTTP status code	Error code	Error message	Description
403	InvalidIp.IpRepeated	%s	The error message returned because the specified IP address already exists.
403	InvalidIp.Address	%s	The error message returned because the specified IPv6 address is invalid.
403	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId parameter does not exist.

For a list of error codes, visit the API Error Center.

22.10. DeleteNetworkInterface

You can call this operation to delete an elastic network interface (ENI).

Description

- The ENI must be in the Available state.
- If the ENI is bound to an ECS instance, you must unbind the ENI from the ECS instance (DetachNetworkInterface) before you can delete the ENI.
- After an ENI is deleted:
  - The primary private IP address of the ENI is automatically released.
  - The ENI is automatically removed from its security groups.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer automatically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteNetworkInterface	The operation that you want to perform. Set the value to DeleteNetworkInterface.
NetworkInterfaceId	String	Yes	eni-bp14v2sdd3v8htln****	The ID of the ENI.
RegionId	String	Yes	cn-hangzhou	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	F3CD6886-D8D0-4FEE-B93E-1B73239673DE	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteNetworkInterface
&NetworkInterfaceId=eni-bp14v2sdd3v8htln****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteNetworkInterfaceResponse>
      <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</DeleteNetworkInterfaceResponse>
```

`JSON` format

```
{
    "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because your account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or your AccessKey pair has expired.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
400	UnsupportedParameter	%s	The error message returned because a specific parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Contact the owner of the Alibaba Cloud account for authorization.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
400	InvalidInstanceID.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because you cannot unbind the primary ENI from the instance.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified NetworkInterfaceId parameter does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified vSwitch ID does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned when the specified security group ID does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.

HttpCode	Error code	Error message	Description
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the operation is invalid. Check whether the VPC in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the security group is not of the VPC type.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the ENI type does not support this operation.
400	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.
400	InvalidParams.EniId	%s	The error message returned because the specified NetworkInterfaceId parameter is invalid.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because the operation is invalid.

For a list of error codes, visit the API Error Center.

23.System event

23.1. CreateSimulatedSystemEvents

You can call this operation to schedule simulated system events for one or more ECS instances. The simulated system events do not actually occur or affect ECS instances.

Description

You can use the ECS console, call the DescribeInstanceHistoryEvents operation, or use Cloud Monitor to view the scheduled simulated system events.

The following section describes the lifecycle of a simulated system event:

- Scheduled: The status of the simulated system event is automatically changed to Scheduled after it is scheduled.
- Executed: The status of the simulated system event is automatically changed to Executed at the scheduled time specified by the NotBefore parameter if no manual intervention is involved.
- Canceled: The status of the simulated system event is changed to Canceled if you cancel the event by calling the CancelSimulatedSystemEvents operation.
- Avoided: The status of the simulated system event generated from maintenance-triggered instance restart can be changed to Avoided if you restart the instance before the scheduled time of the simulated system event. The maintenance-triggered instance restart is indicated by the SystemMaintenance.Reboot value. For more information, see RebootInstance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateSimulatedSystemEvents	The operation that you want to perform. Set the value to CreateSimulatedSystemEvents.
EventType	String	Yes	SystemMaintenance.Reboot	The type of the system event. Valid values: • SystemMaintenance.Reboot: The instance is restarted due to system maintenance. • SystemFailure.Reboot: The instance is restarted due to a system failure. • InstanceFailure.Reboot: The instance is restarted due to an instance failure. • SystemMaintenance.Stop: The instance is stopped due to system maintenance. • SystemMaintenance.Redeploy: The instance is redeployed due to system maintenance. • SystemFailure.Redeploy: The instance is redeployed due to a system failure. • SystemFailure.Stop: The instance is stopped due to a system failure. • InstanceFailure.Reboot: The instance is restarted due to an instance failure.
InstanceId.N	RepeatList	Yes	i-bp1gtjxuuvwj17zr****	The ID of instance N. Valid values of N: 1 to 100. Specify multiple values in the repeated list format.
NotBefore	String	Yes	2018-12-01T06:32:31Z	The start time of the scheduled event execution. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. **Note** For exception events due to system failures or instance failures, the simulated events of these exception events enter the Executing (`Executing`) state when the simulated events are created. The value of `NotBefore` is the time when the simulated events enter the Executed (`Executed`) state.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the event. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
EventIdSet	List	" EventId " : [" e-bp16helosl7v0ooj**** "]	The list of simulated event IDs.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateSimulatedSystemEvents
&EventType=SystemMaintenance.Reboot
&InstanceId.1=i-bp1gtjxuuvwj17zr****
&NotBefore=2018-12-01T06:32:31Z
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateSimulatedSystemEventsResponse>
      <EventIdSet>
            <EventId>e-bp191hqye34x****</EventId>
            <EventId>e-bp191hqye34y****</EventId>
      </EventIdSet>
          <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
</CreateSimulatedSystemEventsResponse>
```

`JSON` format

```
{
    "EventIdSet":{
        "EventId":[
            "e-bp191hqye34x****",
            "e-bp191hqye34y****"
        ]
    },
    "RequestId":"679E9056-9B75-4306-8A72-A1DF93EBEF74"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
403	InvalidNotBefore.Passed	%s	The error message returned because the specified value of the NotBefore parameter is earlier than the current time.
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance does not exist.

HTTP status code	Error code	Error message	Description
403	SimulatedEventLimitExceeded	%s	The error message returned because the maximum number of simulated system events has been reached.
403	InstanceIdLimitExceeded	%s	The error message returned because the value of N in the InstanceId.N parameter is greater than 100.

For a list of error codes, visit the API Error Center.

23.2. DescribeInstancesFullStatus

You can call this operation to query the full status information of one or more ECS instances. The full status information includes the instance status and the status of an instance system event. The instance status is the lifecycle status of an instance. The status of an instance system event is the health status of a maintenance event.

Description

The response includes the instance status and the instance system events in the Scheduled state.

If a period is specified, all the events within the period are queried.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstancesFullStatus	The operation that you want to perform. Set the value to DescribeInstancesFullStatus.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId.N	RepeatList	No	i-bp67acfmxazb4p****	The ID of instance N. Valid values of N: 1 to 100. Specify multiple values in the repeated list format.
EventId.N	RepeatList	No	e-bp1hygp5b04o56l0****	The ID of system event N. Valid values of N: 1 to 100. Specify multiple values in the repeated list format.
Status	String	No	Running	The lifecycle status of the instance. Valid values: • Starting • Running • Stopped
HealthStatus	String	No	Maintaining	The health status of the instance. Valid values: • Impaired: The instance is impaired. • Warning: The instance performance may be degraded due to maintenance or technical issues. • Maintaining: The instance is undergoing maintenance. • Initializing: The instance is being initialized. • InsufficientData: The status cannot be determined due to insufficient data. • NotApplicable: The parameter is not applicable. All the values are case-sensitive.

Parameter	Type	Required	Example	Description
InstanceEventType.N	RepeatList	No	InstanceExpiration.Stop	The type of system event N. Valid values of N: 1 to 30. Specify multiple values in the repeated list format. Valid values: • SystemMaintenance.Reboot: The instance is restarted due to system maintenance. • SystemFailure.Reboot: The instance is restarted due to a system failure. • InstanceFailure.Reboot: The instance is restarted due to an instance failure. • InstanceExpiration.Stop: The instance is stopped due to subscription expiration. • InstanceExpiration.Delete: The instance is released due to subscription expiration. • AccountUnbalanced.Stop: The pay-as-you-go instance is stopped due to overdue payments. • AccountUnbalanced.Delete: The pay-as-you-go instance is released due to overdue payments.
EventType	String	No	InstanceExpiration.Stop	The type of the system event. This parameter takes effect only when the InstanceEventType.N parameter is not specified. Valid values: • SystemMaintenance.Reboot: The instance is restarted due to system maintenance. • SystemFailure.Reboot: The instance is restarted due to a system failure. • InstanceFailure.Reboot: The instance is restarted due to an instance failure. • InstanceExpiration.Stop: The instance is stopped due to subscription expiration. • InstanceExpiration.Delete: The instance is released due to subscription expiration. • AccountUnbalanced.Stop: The pay-as-you-go instance is stopped due to overdue payments. • AccountUnbalanced.Delete: The pay-as-you-go instance is released due to overdue payments.
NotBefore.Start	String	No	2017-12-07T00:00:00Z	The start time of the scheduled event execution. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
NotBefore.End	String	No	2017-11-30T00:00:00Z	The end time of the scheduled event execution. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
EventPublishTime.Start	String	No	2017-11-30T00:00:00Z	The start time of the period during which a system event is published. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
EventPublishTime.End	String	No	2017-12-07T00:00:00Z	The end time of the period during which a system event is published. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
InstanceFullStatusSet	Array of InstanceFullStatusType		Details about the instance full status data.
InstanceFullStatusType			
HealthStatus	Struct		The health status of the instance.
Code	Integer	64	The code of the health status.
Name	String	Warning	The name of the health status.
InstanceId	String	i-bp67acfmxazb4p****	The ID of the instance.
ScheduledSystemEventSet	Array of ScheduledSystemEventType		Details about the scheduled system events.
ScheduledSystemEventType			
EventCycleStatus	Struct		The status of the system event.
Code	Integer	24	The code of the system event status.
Name	String	Scheduled	The name of the system event status.
EventId	String	e-bp1hygp5b04o56l0****	The ID of the instance event.
EventPublishTime	String	2017-11-30T06:32:31Z	The time when the system event was published. The time is displayed in UTC.
EventType	Struct		The type of the system event. Valid values:
Code	Integer	1	The code of the system event type.
Name	String	SystemMaintenance.Reboot	The name of the system event type.
ExtendedAttribute	Struct		The extended attribute of system events for instances that have local disks attached.
Device	String	/dev/vdb	The device name of the local disk.
DiskId	String	d-bp67acfmxazb4p****	The ID of the local disk.
InactiveDisks	Array of InactiveDisk		Details about the inactive cloud disks or local disks that have been released but must be removed.
InactiveDisk			
CreationTime	String	2018-07-27T13:53:25Z	The time when the disk was created. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.

Parameter	Type	Example	Description
DeviceCategory	String	cloud_ssd	The category of the disk. Valid values: • cloud: basic disk. • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • cloud_essd: enhanced SSD (ESSD) • local_ssd_pro: I/O intensive local disk • local_hdd_pro: throughput intensive local disk • ephemeral: retired local disk • ephemeral_ssd: retired local SSD
DeviceSize	String	80	The size of the disk. Unit: GiB.
DeviceType	String	system	The type of the disk. Valid values: • system: system disk • data: data disk
ReleaseTime	String	2019-07-27T13:53:25Z	The time when the disk was released. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
ImpactLevel	String	100	The level of the system event impact.
NotBefore	String	2017-12-07T00:00:00Z	The scheduled execution time of the system event. The time is displayed in UTC.
Reason	String	A simulated event.	The reason for scheduling the system event.
Status	Struct		The lifecycle status of the instance.
Code	Integer	1	The code of the instance lifecycle status.
Name	String	Running	The name of the instance lifecycle status.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of the returned entries.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstancesFullStatus
&RegionId=cn-hangzhou
&InstanceId.1=i-bp67acfmxazb4p****
&EventId.1=e-bp1hygp5b04o56l0****
&Status=Running
&HealthStatus=Maintaining
&InstanceEventType.1=InstanceExpiration.Stop
&EventType=InstanceExpiration.Stop
&NotBefore.Start=2017-12-07T00:00:00Z
&NotBefore.End=2017-11-30T00:00:00Z
&EventPublishTime.Start=2017-11-30T00:00:00Z
&EventPublishTime.End=2017-12-07T00:00:00Z
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeInstancesFullStatusResponse>
      <TotalCount>1</TotalCount>
      <RequestId>7EBCB534-1CE5-46E7-92A6-507B1654CC03</RequestId>
      <PageSize>10</PageSize>
      <PageNumber>1</PageNumber>
      <InstanceFullStatusSet>
            <InstanceFullStatusType>
                  <Status>
                        <Code>1</Code>
                        <Name>Running</Name>
                  </Status>
                  <InstanceId>i-bp19cx17f2yx****</InstanceId>
                  <HealthStatus>
                        <Code>64</Code>
                        <Name>Warning</Name>
                  </HealthStatus>
                  <ScheduledSystemEventSet>
                        <ScheduledSystemEventType>
                              <EventCycleStatus>
                                    <Code>24</Code>
                                    <Name>Scheduled</Name>
                              </EventCycleStatus>
                              <EventPublishTime>2020-04-24T07:09:37Z</EventPublishTime>
                              <EventType>
                                    <Code>65</Code>
                                    <Name>SystemFailure.Reboot</Name>
                              </EventType>
                              <ExtendedAttribute></ExtendedAttribute>
                              <EventId>e-bp1hygp5b04o56l0****</EventId>
                              <NotBefore>2020-04-24T10:32:31Z</NotBefore>
                              <Reason>A simulated event. </Reason>
                        </ScheduledSystemEventType>
                  </ScheduledSystemEventSet>
            </InstanceFullStatusType>
      </InstanceFullStatusSet>
</DescribeInstancesFullStatusResponse>
```

`JSON` format

```
{
    "TotalCount": 1,
    "RequestId": "7EBCB534-1CE5-46E7-92A6-507B1654CC03",
    "PageSize": 10,
    "PageNumber": 1,
    "InstanceFullStatusSet": {
        "InstanceFullStatusType": [
            {
                "Status": {
                    "Code": 1,
                    "Name": "Running"
                },
                "InstanceId": "i-bp19cx17f2yx****",
                "HealthStatus": {
                    "Code": 64,
                    "Name": "Warning"
                },
                "ScheduledSystemEventSet": {
                    "ScheduledSystemEventType": [
                        {
                            "EventCycleStatus": {
                                "Code": 24,
                                "Name": "Scheduled"
                            },
                            "EventPublishTime": "2020-04-24T07:09:37Z",
                            "EventType": {
                                "Code": 65,
                                "Name": "SystemFailure.Reboot"
                            },
                            "ExtendedAttribute": {},
                            "EventId": "e-bp1hygp5b04o5610****",
                            "NotBefore": "2020-04-24T10:32:31Z",
                            "Reason": "A simulated event."
                        }
                    ]
                }
            }
        ]
    }
}
```


Error codes

HTTP status code	Error code	Error message	Description
404	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
403	InvalidParameter.TimeEndBeforeStart	%s	The error message returned because the specified parameter is invalid. Check whether the end time is earlier than the start time.
403	OperationDenied.NotInWhiteList	%s	The error message returned because you are not authorized to perform this operation. Try again when you are in the whitelist.
403	InstanceIdLimitExceeded	%s	The error message returned because the value set for N in the InstanceId.N parameter is more than 100.
403	EventIdLimitExceeded	%s	The error message returned because more than 100 system event IDs are specified.

For a list of error codes, visit the API Error Center.

23.3. DescribeInstanceHistoryEvents

Queries the system events of Elastic Compute Service (ECS) instances. By default, system events that are in the Executed, Avoided, Canceled, or Failed state can be queried by calling the DescribeInstanceHistoryEvents operation. You can specify the InstanceEventCycleStatus.N parameter to query system events in a specific state.

Description

- You can query system events that were finished within the last 30 days. The time range for querying unfinished system events is unlimited.
- You can also specify the InstanceEventCycleStatus.N parameter to query the system events that are in the Scheduled, Executing, or Inquiring state.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceHistoryEvents	The operation that you want to perform. Set the value to **DescribeInstanceHistoryEvents**.
RegionId	String	Yes	cn-hangzhou	The region ID of the resource. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	No	i-uf678mass4zvr9n1****	The ID of the instance. If this parameter is not specified, the system events of all instances within the specified region are queried.
EventCycleStatus	String	No	Executed	The lifecycle state of the system event. This parameter is valid only when the InstanceEventCycleStatus.N parameter is not specified. Valid values: • Scheduled • Avoided • Executing • Executed • Canceled • Failed • Inquiring

Parameter	Type	Required	Example	Description
EventType	String	No	SystemMaintenance.Reboot	The type of the system event. This parameter is valid only when the InstanceEventType.N parameter is not specified. Valid values: • SystemMaintenance.Reboot: The instance is restarted due to system maintenance. • SystemMaintenance.Redeploy: The instance is redeployed due to system maintenance. • SystemFailure.Reboot: The instance is restarted due to a system failure. • SystemFailure.Redeploy: The instance is redeployed due to a system failure. • SystemFailure.Delete: The instance is released due to an instance creation failure. • InstanceFailure.Reboot: The instance is restarted due to an instance failure. • InstanceExpiration.Stop: The instance is stopped due to subscription expiration. • InstanceExpiration.Delete: The instance is released due to subscription expiration. • AccountUnbalanced.Stop: The pay-as-you-go instance is stopped due to an overdue payment. • AccountUnbalanced.Delete: The pay-as-you-go instance is released due to an overdue payment. **Note** For more information, see Overview. The values of this parameter are applicable to only instance system events, but not to disk system events.
NotBefore.Start	String	No	2017-11-30T06:32:31Z	The start time of the scheduled execution period for the system event. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
NotBefore.End	String	No	2017-12-01T06:32:31Z	The end time of the scheduled execution period for the system event. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
EventPublishTime.Start	String	No	2017-11-30T06:32:31Z	The beginning of the time range in which to query published system events. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
EventPublishTime.End	String	No	2017-12-01T06:32:31Z	The end of the time range in which to query published system events. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. The value must be a positive integer. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.

Parameter	Type	Required	Example	Description
ResourceType	String	No	instance	The type of the resource. Valid values: • instance: ECS instance • ddh: dedicated host • managehost: physical machine in a smart hosting pool Default value: instance.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the resource belongs.
EventId.N	String	No	e-uf64yvznlao4jl2c****	The ID of system event N. Valid values of N: 1 to 100. Specify multiple event IDs in the repeated list form.
InstanceEventCycleStatus.N	String	No	Executed	The lifecycle state of system event N. Valid values of N: 1 to 7. Specify multiple states in the repeated list form. Valid values: • Scheduled • Avoided • Executing • Executed • Canceled • Failed • Inquiring
InstanceEventType.N	String	No	SystemMaintenance.Reboot	The type of system event N. Valid values of N: 1 to 30. Specify multiple types in the repeated list form. Valid values: • SystemMaintenance.Reboot: The instance is restarted due to system maintenance. • SystemMaintenance.Redeploy: The instance is redeployed due to system maintenance. • SystemFailure.Reboot: The instance is restarted due to a system failure. • SystemFailure.Redeploy: The instance is redeployed due to a system failure. • SystemFailure.Delete: The instance is released due to an instance creation failure. • InstanceFailure.Reboot: The instance is restarted due to an instance failure. • InstanceExpiration.Stop: The instance is stopped due to subscription expiration. • InstanceExpiration.Delete: The instance is released due to subscription expiration. • AccountUnbalanced.Stop: The pay-as-you-go instance is stopped due to an overdue payment. • AccountUnbalanced.Delete: The pay-as-you-go instance is released due to an overdue payment. **Note** For more information, see Overview. The values of this parameter are applicable to only instance system events, but not to disk system events.

Parameter	Type	Required	Example	Description
ResourceId.N	String	No	i-uf678mass4zvr9n1****	The ID of resource N. Valid values of N: 1 to 100. Specify multiple resource IDs in the repeated list form. Valid values: • When the `ResourceType` parameter is set to instance, the ResourceId.N parameter specifies the ID of instance N. • When the `ResourceType` parameter is set to ddh, the ResourceId.N parameter specifies the ID of dedicated host N. • When the `ResourceType` parameter is set to managedhost, the ResourceId.N parameter specifies the ID of physical machine N in a smart hosting pool. If this parameter is not specified, the system events of all resources of the resource type specified by `ResourceType` within the region specified by `RegionId` are queried. **Note** We recommend that you use the `ResourceId.N` parameter to specify one or more resource IDs. If you specify both the `ResourceId.N` and `InstanceId` parameters, the `ResourceId.N` parameter takes precedence by default.
Tag.N.Key	String	No	TestKey	The key of tag N of the resource.
Tag.N.Value	String	No	TestValue	The value of tag N of the resource.

Response parameters

Parameter	Type	Example	Description
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
PageNumber	Integer	1	The page number of the returned page.
TotalCount	Integer	2	The total number of instances.
InstanceSystemEventSet	Array of InstanceSystemEventType		Details about the instance system events.
InstanceSystemEventType			
EventId	String	e-uf64yvznlao4jl2c****	The ID of the system event.
EventPublishTime	String	2017-11-30T06:32:31Z	The time when the system event was published. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
EventFinishTime	String	2017-12-01T06:35:31Z	The time when the system event ended. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.

Parameter	Type	Example	Description
ResourceType	String	instance	The type of the resource. Valid values: • instance: ECS instance • ddh: dedicated host • managehost: physical machine in a smart hosting pool
ImpactLevel	String	100	The impact level of the system event.
NotBefore	String	2017-12-06T00:00:00Z	The scheduled start time of the system event. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
InstanceId	String	i-uf678mass4zvr9n1****	The ID of the instance.
Reason	String	System maintenance is scheduled due to ***.	The reason why the system event was scheduled.
EventType	Object		The type of the system event.
Name	String	InstanceExpiration.Stop	The name of the system event type.
Code	Integer	34	The code of the system event type.
EventCycleStatus	Object		The lifecycle state of the system event.
Name	String	Executed	The state name of the system event.
Code	Integer	0	The state code of the system event.
ExtendedAttribute	Object		The extended attribute of the system event.
Device	String	/dev/vda	The device name of the local disk.
DiskId	String	d-diskid1	The ID of the local disk.
InactiveDisks	Array of InactiveDisk		Details about the inactive cloud disks or local disks that have been released and must be removed.
InactiveDisk			
CreationTime	String	2018-11-30T06:32:31Z	The time when the disk was created. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
DeviceSize	String	80	The size of the disk. Unit: GiB.
DeviceCategory	String	cloud_efficiency	The category of the disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • cloud_essd: enhanced SSD (ESSD) • local_ssd_pro: I/O-intensive local disk • local_hdd_pro: throughput-intensive local disk • ephemeral: retired local disk • ephemeral_ssd: retired local SSD

Parameter	Type	Example	Description
DeviceType	String	data	The type of the disk. Valid values: • system: system disk • data: data disk
ReleaseTime	String	2019-11-30T06:32:31Z	The time when the disk was released. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
HostType	String	ddh	The type of the host. Valid values: • ddh: dedicated host • managehost: physical machine in a smart hosting pool
HostId	String	dh-bp1ewce1gk3iwv2****	The ID of the host.
MigrationOptions	Array of String	MigrationPlan	The migration solution of the instance. Valid value: MigrationPlan. Instances can be migrated only by using migration plans.
OnlineRepairPolicy	String	IsolateOnly	The online repair policy of the damaged disk. Valid value: IsolateOnly, which indicates that damaged disks are isolated but not repaired.
Rack	String	A01	The rack number of the cloud box.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceHistoryEvents
&RegionId=cn-hangzhou
&InstanceId=i-uf678mass4zvr9n1****
&EventId.1=e-uf64yvznlao4jl2c****
&InstanceEventCycleStatus.1=Executed
&EventCycleStatus=Executed
&InstanceEventType.1=SystemMaintenance.Reboot
&NotBefore.Start=2017-11-30T06:32:31Z
&NotBefore.End=2017-12-01T06:32:31Z
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeInstanceHistoryEventsResponse>
    <PageSize>10</PageSize>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <PageNumber>1</PageNumber>
    <TotalCount>2</TotalCount>
    <InstanceSystemEventSet>
        <EventId>e-uf64yvznlao4jl2c****</EventId>
        <EventPublishTime>2017-11-30T06:32:31Z</EventPublishTime>
        <EventFinishTime>2017-12-01T06:35:31Z</EventFinishTime>
        <ResourceType>instance</ResourceType>
        <ImpactLevel>100</ImpactLevel>
        <NotBefore>2017-12-06T00:00:00Z</NotBefore>
        <InstanceId>i-uf678mass4zvr9n1****</InstanceId>
        <Reason>System maintenance is scheduled due to ***.</Reason>
        <EventType>
            <Name>InstanceExpiration.Stop</Name>
            <Code>34</Code>
        </EventType>
        <EventCycleStatus>
            <Name>Executed</Name>
            <Code>0</Code>
        </EventCycleStatus>
        <ExtendedAttribute>
            <Device>/dev/vda</Device>
            <DiskId>d-diskid1</DiskId>
            <InactiveDisks>
                <CreationTime>2018-11-30T06:32:31Z</CreationTime>
                <DeviceSize>80</DeviceSize>
                <DeviceCategory>cloud_efficiency</DeviceCategory>
                <DeviceType>data</DeviceType>
                <ReleaseTime>2019-11-30T06:32:31Z</ReleaseTime>
            </InactiveDisks>
            <HostType>ddh</HostType>
            <HostId>dh-bp1ewce1gk3iwv2****</HostId>
            <MigrationOptions>MigrationOptions</MigrationOptions>
            <OnlineRepairPolicy>IsolateOnly</OnlineRepairPolicy>
            <Rack>cb-f8z7yvzgwfkl90h****0</Rack>
        </ExtendedAttribute>
    </InstanceSystemEventSet>
</DescribeInstanceHistoryEventsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "PageSize" : 10,
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "PageNumber" : 1,
  "TotalCount" : 2,
  "InstanceSystemEventSet" : [ {
    "EventId" : "e-uf64yvznlao4jl2c****",
    "EventPublishTime" : "2017-11-30T06:32:31Z",
    "EventFinishTime" : "2017-12-01T06:35:31Z",
    "ResourceType" : "instance",
    "ImpactLevel" : "100",
    "NotBefore" : "2017-12-06T00:00:00Z",
    "InstanceId" : "i-uf678mass4zvr9n1****",
    "Reason" : "System maintenance is scheduled due to ***.",
    "EventType" : {
      "Name" : "InstanceExpiration.Stop",
      "Code" : 34
    },
    "EventCycleStatus" : {
      "Name" : "Executed",
      "Code" : 0
    },
    "ExtendedAttribute" : {
      "Device" : "/dev/vda",
      "DiskId" : "d-diskid1",
      "InactiveDisks" : [ {
        "CreationTime" : "2018-11-30T06:32:31Z",
        "DeviceSize" : "80",
        "DeviceCategory" : "cloud_efficiency",
        "DeviceType" : "data",
        "ReleaseTime" : "2019-11-30T06:32:31Z"
      } ],
      "HostType" : "ddh",
      "HostId" : "dh-bp1ewce1gk3iwv2****",
      "MigrationOptions" : [ "MigrationOptions" ],
      "OnlineRepairPolicy" : "IsolateOnly",
      "Rack" : "cb-f8z7yvzgwfkl90h****0"
    }
  } ]
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
403	EventIdLimitExceeded	%s	The error message returned because more than 100 event IDs are specified.
403	InvalidParameter.TimeEndBeforeStart	%s	The error message returned because a specified parameter is invalid. Make sure that the end time is later than the start time.
403	OperationDenied.NotInWhiteList	%s	The error message returned because you are not authorized to perform this operation. Try again after you have been authorized.
404	MissingParameter	%s	The error message returned because a required parameter is not specified.

For a list of error codes, visit the API Error Center.

23.4. DescribeDisksFullStatus

Queries the full status information of one or more Elastic Block Storage (EBS) devices.

Description

- The full status information of an EBS device includes the lifecycle status specified by the `Status` parameter, health status specified by the `HealthStatus` parameter, and event type specified by the `EventType` parameter of the EBS device.
- The release time, scheduled execution time, and actual execution time of each EBS device event are identical. If you specify a period of time by using the `EventTime.Start` and `EventTime.End` parameters, all events that occurred within this period are queried. You can query events that occurred within the last seven days.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDisksFullStatus	The operation that you want to perform. Set the value to DescribeDisksFullStatus.
RegionId	String	Yes	cn-hangzhou	The region ID of the EBS device. You can call the DescribeRegions operation to query the most recent region list.
ResourceGroupId	String	No	rg-aek2kkmhmhs****	The ID of the resource group to which the EBS device belongs. When this parameter is specified to query resources, up to 1,000 resources that belong to the specified resource group can be displayed in the response.
Tag.N.Key	String	No	TestKey	The key of tag N added to the EBS device. A key-value pair consists of a key specified by the `Tag.N.Key` parameter and a value specified by the `Tag.N.Value` parameter. The two parameters are associated with each other. Valid values of N: 1 to 20. If a single tag is specified to query resources, up to 1,000 resources that have this tag added can be displayed in the response. If multiple tags are specified to query resources, up to 1,000 resources that have all these tags added can be displayed in the response.
Tag.N.Value	String	No	TestValue	The value of tag N added to the EBS device. A key-value pair consists of a key specified by the `Tag.N.Key` parameter and a value specified by the `Tag.N.Value` parameter. The two parameters are associated with each other. Valid values of N: 1 to 20.
Status	String	No	Available	The lifecycle status of the EBS device. For more information, see Disk status. Valid values: • In_use • Available • Attaching • Detaching • Creating • ReInniting
HealthStatus	String	No	Warning	The health status of the EBS device. Valid values: • Impaired: The EBS device is damaged. • Warning: The performance of the EBS device may be degraded. • Initializing: The EBS device is being initialized. • InsufficientData: The status cannot be determined due to insufficient data. • NotApplicable: The EBS device cannot be used.

Parameter	Type	Required	Example	Description
EventType	String	No	Stalled	The event type. Valid values: • Degraded: The performance of the EBS device is degraded. • SeverelyDegraded: The performance of the EBS device was severely degraded. • Stalled: The performance of the EBS device is severely affected. • ErrorDetected: The local disk is damaged.
EventTime.Start	String	No	2018-05-06T02:43:10Z	The start of the time range in which to query occurred events. The time follows the ISO 8601 standard in the `yyyy-MM-ddTHH:mm:ssZ` format. The time must be displayed in UTC.
EventTime.End	String	No	2018-05-08T02:48:52Z	The end of the time range in which to query occurred events. The time follows the ISO 8601 standard in the `yyyy-MM-ddTHH:mm:ssZ` format. The time must be displayed in UTC.
PageNumber	Integer	No	1	The number of the page to return. The value must be a positive integer. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.
DiskId.N	RepeatList	No	d-bp67acfmxazb4p****	The ID of EBS device N. Valid values of N: 1 to 100.
EventId.N	RepeatList	No	e-bp67acfmxazb4p****	The ID of event N. Valid values of N: 1 to 100.

Response parameters

Parameter	Type	Example	Description
DiskFullStatusSet	Array of DiskFullStatusType		The collection of full status information of the EBS devices.
DiskFullStatusType			
Device	String	null	The name of the EBS device that is attached to an instance. Example: /dev/xvdb. This parameter has a value only when the value of `Status` is `In_use`. **Note** This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
DiskEventSet	Array of DiskEventType		The events about the EBS device.
DiskEventType			
EventEndTime	String	2018-05-06T02:48:52Z	The time when the event ended.

Parameter	Type	Example	Description
EventId	String	e-bp67acfmxazb4p****	The ID of the event.
EventTime	String	2018-05-08T02:43:10Z	The time when the event started.
EventType	Struct		The event type.
Code	Integer	7	The code of the event type.
Name	String	Stalled	The name of the event type. Valid values: • Degraded: The performance of the EBS device was degraded. • SeverelyDegraded: The performance of the EBS device was severely degraded. • Stalled: The performance of the EBS device was severely affected. • ErrorDetected: The local disk was damaged.
ImpactLevel	String	100	The impact level of the event.
DiskId	String	d-bp67acfmxazb4p****	The ID of the EBS device.
HealthStatus	Struct		The health status of the EBS device.
Code	Integer	128	The code of the health status of the EBS device.
Name	String	Impaired	The name of the health status of the EBS device.
InstanceId	String	i-bp67acfmxazb4p****	The ID of the instance.
Status	Struct		The lifecycle status of the EBS device.
Code	Integer	129	The code of the lifecycle status of the EBS device.
Name	String	Available	The name of the lifecycle status of the EBS device.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of EBS devices for which full status information is returned.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDisksFullStatus
&RegionId=cn-hangzhou
&DiskId.1=d-bp13pl2v34qj0xg0****
&EventId.1=e-uf64yvznlao4jl2c****
&Status=Available
&HealthStatus=Warning
&EventType=Stalled
&EventTime.Start=2018-05-06T02:43:10Z
&EventTime.End=2018-05-08T02:48:52Z
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeDisksFullStatusResponse>
      <DiskFullStatusSet>
            <DiskFullStatusType>
                  <DiskEventSet>
                        <DiskEventType>
                              <EventId>e-bp67acfmxazb4p****</EventId>
                              <EventType>
                                    <Code>7</Code>
                                    <Name>Stalled</Name>
                              </EventType>
                              <EventTime>2018-05-08T02:43:10Z</EventTime>
                        </DiskEventType>
                  </DiskEventSet>
                  <DiskId>d-bp67acfmxazb4p****</DiskId>
                  <InstanceId>i-bp67acfmxazb4p****</InstanceId>
                  <Device>/dev/xvda</Device>
                  <HealthStatus>
                        <Code>128</Code>
                        <Name>Impaired</Name>
                  </HealthStatus>
                  <Status>
                        <Code>129</Code>
                        <Name>Available</Name>
                  </Status>
            </DiskFullStatusType>
            <DiskFullStatusType>
                  <DiskEventSet>
                        <DiskEventType>
                              <EventId>e-bp67acfmxazb4p****</EventId>
                              <EventType>
                                    <Code>1</Code>
                                    <Name>Degraded</Name>
                              </EventType>
                              <EventTime>2018-05-06T02:43:10Z</EventTime>
                              <EventEndTime>2018-05-06T02:48:52Z</EventEndTime>
                        </DiskEventType>
                  </DiskEventSet>
                  <DiskId>d-disk2</DiskId>
                  <InstanceId>i-instance2</InstanceId>
                  <Device>/dev/xvdb</Device>
                  <HealthStatus>
                        <Code>64</Code>
                        <Name>Warning</Name>
                  </HealthStatus>
                  <Status>
                        <Code>0</Code>
                        <Name>Ok</Name>
                  </Status>
            </DiskFullStatusType>
      </DiskFullStatusSet>
      <PageNumber>1</PageNumber>
      <PageSize>10</PageSize>
      <RequestId>1A8B4B27-8B2D-XXXX-XXXX-0F64DBE4C211</RequestId>
      <TotalCount>2</TotalCount>
</DescribeDisksFullStatusResponse>
```

JSON format


```
{
    "DiskFullStatusSet": {
        "DiskFullStatusType": [
            {
                "DiskEventSet": {
                    "DiskEventType": [
                        {
                            "EventId": "e-bp67acfmxazb4p****",
                            "EventType": {
                                "Code": "7",
                                "Name": "Stalled"
                            },
                            "EventTime": "2018-05-08T02:43:10Z"
                        }
                    ]
                },
                "DiskId": "d-bp67acfmxazb4p****",
                "InstanceId": "i-bp67acfmxazb4p****",
                "Device": "/dev/xvda",
                "HealthStatus": {
                    "Code": 128,
                    "Name": "Impaired"
                },
                "Status": {
                    "Code": 129,
                    "Name": "Available"
                }
            },
            {
                "DiskEventSet": {
                    "DiskEventType": [
                        {
                            "EventId": "e-bp67acfmxazb4p****",
                            "EventType": {
                                "Code": "1",
                                "Name": "Degraded"
                            },
                            "EventTime": "2018-05-06T02:43:10Z",
                            "EventEndTime": "2018-05-06T02:48:52Z"
                        }
                    ]
                },
                "DiskId": "d-disk2",
                "InstanceId": "i-instance2",
                "Device": "/dev/xvdb",
                "HealthStatus": {
                    "Code": 0,
                    "Name": "Ok"
                },
                "Status": {
                    "Code": 129,
                    "Name": "Available"
                }
            }
        ]
    },
    "PageNumber": 1,
    "PageSize": 10,
    "RequestId": "1A8B4B27-8B2D-XXXX-XXXX-0F64DBE4C211",
    "TotalCount": 2
}
```


Error codes

HttpCode	Error code	Error message	Description
403	InvalidParameter	%s	The error message returned because a specified parameter is invalid.

HttpCode	Error code	Error message	Description
403	DiskIdLimitExceeded	%s	The error message returned because the value of N in the DiskId.N parameter is greater than 100.
403	EventIdLimitExceeded	%s	The error message returned because more than 100 event IDs are specified.
403	InvalidParameter.TimeEndBeforeStart	%s	The error message returned because the specified parameter is invalid. Check whether the end time is earlier than the start time.
403	OperationDenied.NotInWhiteList	%s	The error message returned because you are not authorized to perform this operation. Try again after you have been authorized.
403	TooManyDiskEvent.DiskIdRequired	%s	The error message returned because the system cannot process this number of requests for the specified resource. Try again later.
404	MissingParameter	%s	The error message returned because a required parameter is not specified.

For a list of error codes, visit the API Error Center.

23.5. AcceptInquiredSystemEvent

You can call this operation to accept the default operation for a system event in the Inquiring state and authorize the system to perform the default operation.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AcceptInquiredSystemEvent	The operation that you want to perform. Set the value to AcceptInquiredSystemEvent.
EventId	String	Yes	e-2zeielxl1qzq8slb****	The ID of the system event.
RegionId	String	Yes	cn-hangzhou	The region ID of the system event. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	4DD56CA6-6D75-4D33-BE34-E4A44EBE1C3D	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AcceptInquiredSystemEvent
&EventId=e-2zeielxl1qzq8slb****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AcceptInquiredSystemEventResponse>
        <RequestId>4DD56CA6-6D75-4D33-BE34-E4A44EBE1C3D</RequestId>
</AcceptInquiredSystemEventResponse>
```

`JSON` format

```
{
    "RequestId":"4DD56CA6-6D75-4D33-BE34-E4A44EBE1C3D"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
404	InvalidEventId.NoInquiringEventFound	%s	The error message returned because the specified EventId parameter is invalid.
403	OperationConflict	%s	The error message returned because this operation conflicts with another operation in progress. Try again later.
403	OperationFail.DiskCategoryNotSupported	%s	The error message returned because this operation is not supported while the disk is of the current category.
403	OperationFail.DiskStatusNotSupported	%s	The error message returned because this operation is not supported while the disk is in the current state.
403	OperationFail.InstanceStatusNotSupported	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	IncorrectInstanceStatus	%s	The error message returned because this operation is not supported while the instance is in the current state.

For a list of error codes, visit the API Error Center.

23.6. CancelSimulatedSystemEvents

You can call this operation to cancel one or more simulated system events that are in the Scheduled or Executing state. After you cancel a simulated system event, the simulated event enters the Canceled state.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CancelSimulatedSystemEvents	The operation that you want to perform. Set the value to CancelSimulatedSystemEvents.
EventId.N	RepeatList	Yes	e-xhskHun1256****	The ID of system event N. Valid values of N: 1 to 100. Specify multiple values in the repeated list format.
RegionId	String	Yes	cn-hangzhou	The region ID of the system event. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CancelSimulatedSystemEvents
&EventId.1=e-xhskHun1256****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CancelSimulatedSystemEventsResponse>
      <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
</CancelSimulatedSystemEventsResponse>
```

`JSON` format

```
{
    "RequestId":"E69EF3CC-94CD-42E7-8926-F133B86387C0"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
403	CannotCancelSystemEvent.NotSimulated	%s	The error message returned because you cannot cancel a non-simulated system event.
403	InvalidEventId.NotFound	%s	The error message returned because the specified EventId parameter is invalid.
400	EventIdLimitExceeded	%s	The error message returned because more than 100 system event IDs are specified.

For a list of error codes, visit the API Error Center.

24.Monitoring

24.1. DescribeSnapshotMonitorData

You can call this operation to query the monitoring data of snapshot sizes in a region over the last 30 days.

Description

When you call this operation, take note of the following points:

- A maximum of 400 entries of monitoring data can be returned at a time. If the result of the `(EndTime - StartTime)/Period` formula is more than 400, an error is returned.
- You can query monitoring data from up to the last 30 days. If the value of `StartTime` is more than 30 days earlier than the current time, an error is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSnapshotMonitorData	The operation that you want to perform. Set the value to DescribeSnapshotMonitorData.
EndTime	String	Yes	2019-05-10T03:00:00Z	The end of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the specified value of seconds (ss) is not 00, the time is rounded up to the next minute.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
StartTime	String	Yes	2019-05-10T00:00:00Z	The beginning of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the specified value of seconds (ss) is not 00, the time is rounded up to the next minute.
Period	Integer	No	60	The interval at which to query the monitoring data of snapshot sizes. Unit: seconds. Valid values: • 60 • 600 • 3600 Default value: 60.
Category	String	No	Standard	The type of the snapshot. Valid values: • Standard: normal snapshot • Flash: local snapshot Default value: Standard.

Response parameters

Parameter	Type	Example	Description
MonitorData	Array of DataPoint		The collection of monitoring data of snapshot sizes.
DataPoint			
Size	Long	243036848128	The total size of the snapshots. Unit: bytes.

Parameter	Type	Example	Description
TimeStamp	String	2019-05-10T04:00:00Z	The timestamp that corresponds to a snapshot size.
RequestId	String	9F8163A8-F5DE-47A2-A572-4E062D223E09	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?&Action=DescribeSnapshotMonitorData
&RegionId=cn-hangzhou
&StartTime=2019-05-10T00:00:00Z
&EndTime=2019-05-10T03:00:00Z
&Period=60
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeSnapshotMonitorDataResponse>
     <MonitorData>
          <DataPoint>
               <element>
                    <Size>243036848128</Size>
                    <TimeStamp>2019-05-10T01:00:00Z</TimeStamp>
               </element>
               <element>
                    <Size>243036848128</Size>
                    <TimeStamp>2019-05-10T02:00:00Z</TimeStamp>
               </element>
               <element>
                    <Size>243036848128</Size>
                    <TimeStamp>2019-05-10T03:00:00Z</TimeStamp>
               </element>
          </DataPoint>
     </MonitorData>
     <RequestId>9F8163A8-F5DE-47A2-A572-4E062D223E09</RequestId>
</DescribeSnapshotMonitorDataResponse>
```

`JSON` format

```
{
    "RequestId": "9F8163A8-F5DE-47A2-A572-4E062D223E09",
    "MonitorData": {
        "DataPoint": [
            {
                "TimeStamp": "2019-05-10T01:00:00Z",
                "Size": 243036848128
            },
            {
                "TimeStamp": "2019-05-10T02:00:00Z",
                "Size": 243036848128
            },
            {
                "TimeStamp": "2019-05-10T03:00:00Z",
                "Size": 243036848128
            }
        ]}
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidStartTime.Malformed	The specified parameter "StartTime" is not valid.	The error message returned because the specified StartTime parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidEndTime.Malformed	The specified parameter "EndTime" is not valid.	The error message returned because the specified EndTime parameter is invalid.
400	InvalidPeriod.ValueNotSupported	The specified parameter "Period" is not valid.	The error message returned because the specified Period parameter is invalid.
400	InvalidStartTime.TooEarly	The specified parameter "StartTime" is too early.	The error message returned because the specified StartTime parameter is more than 30 days earlier than the current time.
400	InvalidParameter.TooManyDataQueried	Too many data queried.	The error message returned because the amount of queried monitoring data has reached the upper limit.
400	Throttling	Request was denied due to request throttling.	The error message returned because the request is denied due to throttling. Try again later.

For a list of error codes, visit the API Error Center.

24.2. DescribeEniMonitorData

Queries the monitored data of a secondary elastic network interface (ENI) over a specific period of time.

Description

The monitored data includes traffic sent and received over the internal network, the number of packets sent and received by the secondary ENI, and the number of dropped packets sent and received by the secondary ENI. Specific information may be missing from the returned monitored data. This is because the system cannot obtain the relevant information. For example, if the instance to which the secondary ENI is bound is in the Stopped state, or if the secondary ENI is not bound to an instance and is in the Available state, the monitored data of the secondary ENI cannot be obtained. When you call this operation, take note of the following items:

- Up to 400 monitored data entries can be returned at a time. If the value calculated by using the (EndTime - StartTime)/Period formula is greater than 400, an error is returned.
- Only the monitored data within the last 30 days can be queried. If the value of the StartTime parameter is earlier than 30 days from the time when you call this operation, an error is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeEniMonitorData	The operation that you want to perform. Set the value to **DescribeEniMonitorData**.
EniId	String	No	eni-bp19da36d6xdwey****	The ID of the secondary ENI. By default, all secondary ENIs that are bound to the specified instance are queried.
RegionId	String	Yes	cn-hangzhou	The region ID of the secondary ENI. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	Yes	i-bp1a5zr3u7nq9cx****	The ID of the instance to which the secondary ENI is bound.
StartTime	String	Yes	2018-05-21T12:19:00Z	The beginning of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the value of seconds (ss) is not 00, the time is rounded up to the next minute.

Parameter	Type	Required	Example	Description
EndTime	String	Yes	2018-05-21T12:22:00Z	The end of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the value of seconds (ss) is not 00, the time is rounded up to the next minute.
Period	Integer	No	60	The interval at which to retrieve monitored data. Unit: seconds. Valid values: • 60 • 600 • 3600 Default value: 60.

Response parameters

Parameter	Type	Example	Description
TotalCount	Integer	4	The total number of returned entries.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
MonitorData	Array of EniMonitorData		Details about the monitored data of the ENI.
EniMonitorData			
PacketRx	String	0	The number of packets received by the secondary ENI over the internal network.
TimeStamp	String	2018-05-21T03:22:00Z	The timestamp of the monitored data. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
DropPacketRx	String	0	The number of dropped packets received by the secondary ENI over the internal network.
EniId	String	eni-bp19da36d6xdwey****	The ID of the secondary ENI.
DropPacketTx	String	0	The number of dropped packets sent by the secondary ENI over the internal network.
PacketTx	String	0	The number of packets sent by the secondary ENI over the internal network.
IntranetTx	String	0	The average rate of data traffic sent by the secondary ENI over the internal network. Unit: Kbit/s.
IntranetRx	String	0	The average rate of data traffic received by the secondary ENI over the internal network. Unit: Kbit/s.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeEniMonitorData
&EndTime=2018-05-21T12:22:00Z
&InstanceId=i-bp1a5zr3u7nq9cx****
&RegionId=cn-hangzhou
&StartTime=2018-05-21T12:19:00Z
&EniId=eni-bp19da36d6xdwey****
&Period=60
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeEniMonitorDataResponse>
    <RequestId>5A03C2BA-3BCE-4A87-8076-7DC1629</RequestId>
    <MonitorData>
        <EniMonitorData>
            <PacketTx>0</PacketTx>
            <TimeStamp>2018-05-21T03:22:00Z</TimeStamp>
            <IntranetOut>0</IntranetOut>
            <DropPacketRx>0</DropPacketRx>
            <IntranetIn>0</IntranetIn>
            <EniId>eni-bp19da36d6xdwey4****</EniId>
            <DropPacketTx>0</DropPacketTx>
            <PacketRx>0</PacketRx>
        </EniMonitorData>
        <EniMonitorData>
            <PacketTx>0</PacketTx>
            <TimeStamp>2018-05-21T03:21:00Z</TimeStamp>
            <IntranetOut>0</IntranetOut>
            <DropPacketRx>0</DropPacketRx>
            <IntranetIn>0</IntranetIn>
            <EniId>eni-bp19da36d6xdwey3****</EniId>
            <DropPacketTx>0</DropPacketTx>
            <PacketRx>0</PacketRx>
        </EniMonitorData>
        <EniMonitorData>
            <PacketTx>52240</PacketTx>
            <TimeStamp>2018-05-21T03:19:00Z</TimeStamp>
            <IntranetOut>73344</IntranetOut>
            <DropPacketRx>0</DropPacketRx>
            <IntranetIn>467</IntranetIn>
            <EniId>eni-bp19da36d6xdwey2****</EniId>
            <DropPacketTx>0</DropPacketTx>
            <PacketRx>6603</PacketRx>
        </EniMonitorData>
        <EniMonitorData>
            <PacketTx>34925</PacketTx>
            <TimeStamp>2018-05-21T03:20:00Z</TimeStamp>
            <IntranetOut>48871</IntranetOut>
            <DropPacketRx>0</DropPacketRx>
            <IntranetIn>350</IntranetIn>
            <EniId>eni-bp19da36d6xdwey1****</EniId>
            <DropPacketTx>0</DropPacketTx>
            <PacketRx>4888</PacketRx>
        </EniMonitorData>
    </MonitorData>
</DescribeEniMonitorDataResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "5A03C2BA-3BCE-4A87-8076-7DC1629",
  "MonitorData" : {
    "EniMonitorData" : [ {
      "PacketTx" : 0,
      "TimeStamp" : "2018-05-21T03:22:00Z",
      "IntranetOut" : 0,
      "DropPacketRx" : 0,
      "IntranetIn" : 0,
      "EniId" : "eni-bp19da36d6xdwey4****",
      "DropPacketTx" : 0,
      "PacketRx" : 0
    }, {
      "PacketTx" : 0,
      "TimeStamp" : "2018-05-21T03:21:00Z",
      "IntranetOut" : 0,
      "DropPacketRx" : 0,
      "IntranetIn" : 0,
      "EniId" : "eni-bp19da36d6xdwey3****",
      "DropPacketTx" : 0,
      "PacketRx" : 0
    }, {
      "PacketTx" : 52240,
      "TimeStamp" : "2018-05-21T03:19:00Z",
      "IntranetOut" : 73344,
      "DropPacketRx" : 0,
      "IntranetIn" : 467,
      "EniId" : "eni-bp19da36d6xdwey2****",
      "DropPacketTx" : 0,
      "PacketRx" : 6603
    }, {
      "PacketTx" : 34925,
      "TimeStamp" : "2018-05-21T03:20:00Z",
      "IntranetOut" : 48871,
      "DropPacketRx" : 0,
      "IntranetIn" : 350,
      "EniId" : "eni-bp19da36d6xdwey1****",
      "DropPacketTx" : 0,
      "PacketRx" : 4888
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
4003	InvalidParam.Malformed	The specified parameter "EniId" and "InstanceId" are not valid	The error message returned because the specified EniId and InstanceId parameters are invalid.
403	InvalidStartTime.Malformed	The specified parameter "StartTime" is not valid.	The error message returned because the specified StartTime parameter is invalid.
403	InvalidEndTime.Malformed	The specified parameter "EndTime" is not valid.	The error message returned because the specified EndTime parameter is invalid.
403	InvalidPeriod.ValueNotSupported	The specified parameter "Period" is not valid.	The error message returned because the specified Period parameter is invalid.
403	InvalidStartTime.TooEarly	The specified parameter "StartTime" is too early.	The error message returned because the specified start time is earlier than 30 days from the time when you call this operation.
403	InvalidParameter.TooManyDataQueried	Too many data queried.	The error message returned because the amount of queried monitored data has reached the upper limit.

HTTP status code	Error code	Error message	Description
403	Throttling	Request was denied due to request throttling.	The error message returned because the request is denied due to throttling. Try again later.
403	InvalidInstanceType.NotSupportCredit	The InstanceType of the specified instance does not support credit.	The error message returned because burstable instances are not supported.
403	InvalidParameter.EndTime	The specified parameter EndTime is earlier than StartTime.	The error message returned because the specified end time is earlier than the specified start time.
404	InvalidDiskId.NotFound	The DiskId provided does not exist in our records.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.

For a list of error codes, visit the API Error Center.

24.3. DescribeDiskMonitorData

You can call this operation to query the monitoring data of a disk over a specific period of time.

Description

The monitoring data includes read IOPS, write IOPS, read bandwidth (byte/s), write bandwidth (byte/s), read latency (μs), and write latency (μs) of the disk.

When you call this operation, take note of the following items:

- You can query the monitoring data only of the disks that are in the In Use (`In_Use`) state. For more information, see Basic cloud disk status table.

  Note Some portion of information may be missing from the monitoring data. This is because the system cannot obtain the relevant information, for example, when the disk is not in the In Use (`In_Use`) state.

- A maximum of 400 entries of data can be returned at a time. That means the value of the following formula cannot be greater than 400: `(EndTime-StartTime)/Period` .
- You can query only the monitoring data within the past 30 days. That means the specified `StartTime` parameter cannot be 30 days later than the current time.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDiskMonitorData	The operation that you want to perform. Set the value to DescribeDiskMonitorData.
DiskId	String	Yes	d-bp1bq5g3dxxo1x4o****	The ID of the disk.
EndTime	String	Yes	2014-07-23T12:09:00Z	The end time of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the specified number of seconds (ss) is not 00, the time is automatically rounded up to the next minute.
StartTime	String	Yes	2014-07-23T12:07:00Z	The start time of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the specified number of seconds (ss) is not 00, the time is automatically rounded up to the next minute.

Parameter	Type	Required	Example	Description
Period	Integer	No	60	The interval at which to retrieve monitoring data. Unit: seconds. Valid values: • 60 • 600 • 3600 Default value: 60.

Response parameters

Parameter	Type	Example	Description
MonitorData	Array of DiskMonitorData		Details about the disk monitoring data.
DiskMonitorData			
BPSRead	Integer	0	The read bandwidth of the system disk. Unit: Byte/s.
BPSTotal	Integer	204	The total read and write bandwidth of the system disk. Unit: Byte/s.
BPSWrite	Integer	204	The write bandwidth of the system disk. Unit: Byte/s.
DiskId	String	d-bp1bq5g3dxxo1x4o****	The ID of the disk.
IOPSRead	Integer	0	The number of read I/O operations per second on the system disk.
IOPSTotal	Integer	0	The total number of read and write I/O operations per second on the system disk.
IOPSWrite	Integer	0	The number of write I/O operations per second on the system disk.
LatencyRead	Integer	0	The read latency of the disk. Unit: μs.
LatencyWrite	Integer	0	The write latency of the disk. Unit: μs.
TimeStamp	String	2014-07-23T12:07:00Z	The timestamp of monitoring data query. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	3	The total number of returned monitoring data entries.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDiskMonitorData
&DiskId=d-bp1bq5g3dxxo1x4o****
&EndTime=2014-07-23T12:09:00Z
&StartTime=2014-07-23T12:07:00Z
&Period=60
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeDiskMonitorDataResponse>
          <MonitorData>
                    <DiskMonitorData>
                              <BPSRead>0</BPSRead>
                              <BPSTotal>0</BPSTotal>
                              <BPSWrite>0</BPSWrite>
                              <DiskId>d-bp1bq5g3dxxo1x4o****</DiskId>
                              <IOPSRead>0</IOPSRead>
                              <IOPSTotal>0</IOPSTotal>
                              <IOPSWrite>0</IOPSWrite>
                              <TimeStamp>2014-07-23T12:07:00Z</TimeStamp>
                    </DiskMonitorData>
                    <DiskMonitorData>
                              <BPSRead>0</BPSRead>
                              <BPSTotal>204</BPSTotal>
                              <BPSWrite>204</BPSWrite>
                              <DiskId>d-bp1bq5g3dxxo1x4o****</DiskId>
                              <IOPSRead>0</IOPSRead>
                              <IOPSTotal>0</IOPSTotal>
                              <IOPSWrite>0</IOPSWrite>
                              <TimeStamp>2014-07-23T12:08:00Z</TimeStamp>
                    </DiskMonitorData>
                    <DiskMonitorData>
                              <BPSRead>0</BPSRead>
                              <BPSTotal>819</BPSTotal>
                              <BPSWrite>819</BPSWrite>
                              <DiskId>d-bp1bq5g3dxxo1x4o****</DiskId>
                              <IOPSRead>0</IOPSRead>
                              <IOPSTotal>0</IOPSTotal>
                              <IOPSWrite>0</IOPSWrite>
                              <TimeStamp>2014-07-23T12:09:00Z</TimeStamp>
                    </DiskMonitorData>
          </MonitorData>
          <RequestId>BF666447-B171-4076-BCBA-48437C18FD76</RequestId>
          <TotalCount>3</TotalCount>
</DescribeDiskMonitorDataResponse>
```

`JSON` format

```
{
    "MonitorData": {
        "DiskMonitorData": [
            {
                "BPSRead": 0,
                "BPSTotal": 0,
                "BPSWrite": 0,
                "DiskId": "d-bp1bq5g3dxxo1x4o****",
                "IOPSRead": 0,
                "IOPSTotal": 0,
                "IOPSWrite": 0,
                "TimeStamp": "2014-07-23T12:07:00Z"
            },
            {
                "BPSRead": 0,
                "BPSTotal": 204,
                "BPSWrite": 204,
                "DiskId": "d-bp1bq5g3dxxo1x4o****",
                "IOPSRead": 0,
                "IOPSTotal": 0,
                "IOPSWrite": 0,
                "TimeStamp": "2014-07-23T12:08:00Z"
            },
            {
                "BPSRead": 0,
                "BPSTotal": 819,
                "BPSWrite": 819,
                "DiskId": "d-bp1bq5g3dxxo1x4o****",
                "IOPSRead": 0,
                "IOPSTotal": 0,
                "IOPSWrite": 0,
                "TimeStamp": "2014-07-23T12:09:00Z"
            }
        ]
    },
    "RequestId": "A48A0A77-34F5-4C33-9066-9E8D2DA0D8E2",
    "TotalCount": 3
}
```


Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The DiskId provided does not exist in our records.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
400	InvalidStartTime.Malformed	The specified parameter "StartTime" is not valid.	The error message returned because the specified StartTime parameter is invalid.
400	InvalidEndTime.Malformed	The specified parameter "EndTime" is not valid.	The error message returned because the specified EndTime parameter is invalid.
400	InvalidPeriod.ValueNotSupported	The specified parameter "Period" is not valid.	The error message returned because the specified Period parameter is invalid.
400	InvalidStartTime.TooEarly	The specified parameter "StartTime" is too early.	The error message returned because the specified StartTime value is earlier than the valid range of time.
400	InvalidParameter.TooManyDataQueried	Too many data queried.	The error message returned because the maximum amount of queried monitoring data has been reached.
400	Throttling	Request was denied due to request throttling.	The error message returned because the request is denied due to throttling. Try again later.
400	InvalidInstanceType.NotSupportCredit	The InstanceType of the specified instance does not support credit.	The error message returned because burstable instances are not supported.
400	InvalidParameter.EndTime	The specified parameter EndTime is earlier than StartTime.	The error message returned because the end time is earlier than the start time.

HTTP status code	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.

For a list of error codes, visit the API Error Center.

24.4. DescribeInstanceMonitorData

Queries the monitoring data of an Elastic Compute Service (ECS) instance. The monitoring data includes the vCPU utilization, CPU credits of the burstable instance, received data traffic, sent data traffic, and average bandwidth.

Description

When you call this operation, take note of the following items:

- Up to 400 monitoring data entries can be returned at a time. An error is returned if the value calculated based on the following formula is greater than 400: `(EndTime - StartTime)/Period`.
- You can query the monitoring data of the last 30 days. If the value of the `StartTime` parameter is more than 30 days earlier than the current time, an error is returned.
- In some scenarios, such as when the instance is in the Stopped state, the system cannot obtain the relevant information and a portion may be missing from the returned monitoring data.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceMonitorData	The operation that you want to perform. Set the value to **DescribeInstanceMonitorData**.
InstanceId	String	Yes	i-bp1a36962lrhj4ab****	The ID of the instance.
StartTime	String	Yes	2014-10-29T23:00:00Z	The beginning of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the value of seconds (`ss`) is not `00`, the time is rounded up to the next minute.
EndTime	String	Yes	2014-10-30T08:00:00Z	The end of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the value of seconds (`ss`) is not `00`, the time is rounded up to the next minute.
Period	Integer	No	60	The period in which to retrieve monitoring data. Unit: seconds. Valid values: • 60 • 600 • 3600 Default value: 60.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Parameter	Type	Example	Description
MonitorData	Array of InstanceMonitorData		The monitoring data about the instance.
InstanceMonitorData			
CPUCreditBalance	Float	120	The total CPU credits of the burstable instance.
BPSRead	Integer	1000	The read bandwidth of the disks (system disk and data disks). Unit: Byte/s.
InternetTX	Integer	343	The public data traffic sent by the instance during the period specified by the `Period` parameter, which starts from the time specified by the `TimeStamp` parameter. Unit: Kbit/s.
CPU	Integer	2	The vCPU utilization of the instance. Unit: percent (%).
CPUCreditUsage	Float	30	The number of CPU credits consumed by the burstable instance.
IOPSWrite	Integer	200	The number of write I/O operations per second on the disks (system disk and data disks).
IntranetTX	Integer	343	The internal data traffic sent by the instance during the period specified by the `Period` parameter, which starts from the time specified by the `TimeStamp` parameter. Unit: Kbit/s.
InstanceId	String	i-bp1a36962lrhj4****	The ID of the instance.
BPSWrite	Integer	13585	The write bandwidth of the disks (system disk and data disks). Unit: Byte/s.
CPUNotpaidSurplusCreditUsage	Float	0.5	The unpaid excess credits.
CPUAdvanceCreditBalance	Float	0.4	The overdrawn CPU credits of the burstable instance.
IOPSRead	Integer	1000	The number of read I/O operations per second on the disks (system disk and data disks).
InternetBandwidth	Integer	10	The public bandwidth of the instance. Unit: Kbit/s.
InternetRX	Integer	122	The public data traffic received by the instance during the period specified by the `Period` parameter, which starts from the time specified by the `TimeStamp` parameter. Unit: Kbit/s.
TimeStamp	String	2014-10-30T05:00:00Z	The timestamp of monitoring data query.
IntranetRX	Integer	122	The internal data traffic received by the instance during the period specified by the `Period` parameter, which starts from the time specified by the `TimeStamp` parameter. Unit: Kbit/s.
IntranetBandwidth	Integer	10	The internal bandwidth of the instance. Unit: Kbit/s.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceMonitorData
&EndTime=2014-10-30T08:00:00Z
&InstanceId=i-bp1a36962lrhj4ab****
&StartTime=2014-10-29T23:00:00Z
&Period=3600
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeInstanceMonitorDataResponse>
    <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
    <MonitorData>
        <InstanceMonitorData>
            <InstanceId>i-bp1a36962lrhj4ab****</InstanceId>
            <CPU>2</CPU>
            <IntranetRX>122</IntranetRX>
            <IntranetTX>343</IntranetTX>
            <IntranetFlow>675</IntranetFlow>
            <IntranetBandwidth>10</IntranetBandwidth>
            <InternetRX>122</InternetRX>
            <InternetTX>343</InternetTX>
            <InternetFlow>675</InternetFlow>
            <InternetBandwidth>10</InternetBandwidth>
            <IOPSRead>1000</IOPSRead>
            <IOPSWrite>200</IOPSWrite>
            <BPSRead>1000</BPSRead>
            <BPSWrite>13585</BPSWrite>
            <TimeStamp>2014-10-30T05:00:00Z</TimeStamp>
        </InstanceMonitorData>
    </MonitorData>
</DescribeInstanceMonitorDataResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "C8B26B44-0189-443E-9816-D951F59623A9",
  "MonitorData" : {
    "InstanceMonitorData" : [ {
      "InstanceId" : "i-bp1a36962lrhj4ab****",
      "CPU" : 0,
      "IntranetRX" : 122,
      "IntranetTX" : 343,
      "IntranetFlow" : 675,
      "IntranetBandwidth" : 10,
      "InternetRX" : 122,
      "InternetTX" : 343,
      "InternetFlow" : 675,
      "InternetBandwidth" : 10,
      "IOPSRead" : 1000,
      "IOPSWrite" : 13585,
      "BPSRead" : 1000,
      "BPSWrite" : 200,
      "TimeStamp" : "2014-10-30T05:00:00Z"
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	InvalidStartTime.Malformed	The specified parameter "StartTime" is not valid.	The error message returned because the specified StartTime parameter is invalid.
400	InvalidEndTime.Malformed	The specified parameter "EndTime" is not valid.	The error message returned because the specified EndTime parameter is invalid.
400	InvalidPeriod.ValueNotSupported	The specified parameter "Period" is not valid.	The error message returned because the specified Period parameter is invalid.
400	InvalidStartTime.TooEarly	The specified parameter "StartTime" is too early.	The error message returned because the specified start time is more than 30 days earlier than the current time.
400	InvalidParameter.TooManyDataQueried	Too many data queried.	The error message returned because the amount of queried monitoring data has reached the upper limit.
400	Throttling	Request was denied due to request throttling.	The error message returned because the request is denied due to throttling. Try again later.
400	InvalidStartTime.ValueNotSupported	The specified parameter StartTime is later than EndTime.	The error message returned because the specified end time is earlier than the specified start time.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.

For a list of error codes, visit the API Error Center.

24.5. GetInstanceScreenshot

You can call this operation to obtain screenshots of an instance.

Description

ECS returns an instance screenshot that is in the JPG format and encoded in Base64. You must manually decode the screenshot. We recommend that you call this operation for troubleshooting and diagnosis. When you call this operation, take note of the following items:

- The instance must be in the Running state.
- For instances of the retired instance types, you cannot obtain the screenshot information. For more information, see Retired instance types.
- If you call this operation in the same instance for multiple times, the call interval must be at least 10 seconds. Otherwise, the `Throttling` error code is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetInstanceScreenshot	The operation that you want to perform. Set the value to GetInstanceScreenshot.
InstanceId	String	Yes	i-bp1gbz20g229bvu5****	The ID of the instance.
RegionId	String	Yes	cn-shenzhen	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
WakeUp	Boolean	No	false	Specifies whether to wake up the instance that is in sleep mode. Default value: false.

Response parameters

Parameter	Type	Example	Description
InstanceId	String	i-bp1gbz20g229bvu5****	The ID of the instance.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Screenshot	String	iVBORw0KGgoA...AAABJRU5ErkJggg==	The JPG-formatted instance screenshot, which is encoded in Base64.

Examples

Sample requests

```
http://ecs-cn-hangzhou.example.com/?Action=GetInstanceScreenshot
&InstanceId=i-bp1gbz20g229bvu5****
&RegionId=cn-shenzhen
&WakeUp=false
&<Common request parameters>
```

Sample success responses

`XML` format

```
<GetInstanceScreenshotResponse>
      <RequestId>22A1933F-AD02-4560-A6A7-53CF2231D942</RequestId>
      <InstanceId>i-bp1gbz20g229bvu5****</InstanceId>
      <Screenshot>iVBORw0KGgoA...AAABJRU5ErkJggg==</Screenshot>
</GetInstanceScreenshotResponse>
```

`JSON` format

```
{
    "RequestId": "22A1933F-AD02-4560-A6A7-53CF2231D942",
    "InstanceId": "i-bp1gbz20g229bvu5****",
    "Screenshot": "iVBORw0KGgoA...AAABJRU5ErkJggg=="
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
404	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
405	IncorrectInstanceStatus	%s	The error message returned because this operation is not supported while the instance is in the current state.
405	NotSupported	%s	The error message returned because the operation is invalid.
429	Throttling	%s	The error message returned because the request is denied due to request throttling.

For a list of error codes, visit the API Error Center.

24.6. GetInstanceConsoleOutput

You can call this operation to obtain the command output of an instance. The returned command output is encoded in Base64.

Description

- ECS is a virtualized cloud-based service and cannot be connected to display devices. However, Alibaba Cloud caches the command output for the last start, restart, or shutdown of each instance. You can call the GetInstanceConsoleOutput operation to obtain the information.
- For instances of the retired instance types, you cannot obtain the command outputs. For more information, see Retired instance types.
- You cannot obtain the command outputs of Windows instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetInstanceConsoleOutput	The operation that you want to perform. Set the value to GetInstanceConsoleOutput.
InstanceId	String	Yes	i-bp1c1xhsrac2coiw****	The ID of the instance.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
RemoveSymbols	Boolean	No	false	Specifies whether to remove symbols from the returned command output. Valid values: • true: removes the symbols • false: does not remove the symbols Default value: false.

Response parameters

Parameter	Type	Example	Description
ConsoleOutput	String	V2VsY29tZSB0byBDZW50T1MgCgpDaGVja2luZyBmaWxlc3lzdGVtcwpDaGVja2luZyBhbGwgZmlsZSBzeXN0ZW1zLgpbL3NiaW4vZnNjay5leHQ0ICgxKSAtLSAvXSBmc2NrLmV4dDQgLWEgL2Rldi92ZGExIAovZGV2L3ZkYTE6IGNsZWFuLCAzMjAxNi8yNjIxNDQwIGZpbGVzLCA0NDc5NzQvMTA0ODU1MDQgYmxvY2tzCgpFbnRlcmluZyBub24taW50ZXJhY3RpdmUgc3RhcnR1cApDYWxsaW5nIHRoZSBzeXN0ZW0gYWN0aXZpdHkgZGF0YSBjb2xsZWN0b3IgKHNhZGMpLi4uIAoKQnJpbmdpbmcgdXAgaW50ZXJmYWNlIGV0aDA6ICAKRGV0ZXJtaW5pbmcgSVAgaW5mb3JtYXRpb24gZm9yIGV0aDAuLi4gZG9uZS4KCmFsaXl1bi1zZXJ2aWNlIHN0YXJ0L3J1bm5pbmcsIHByb2Nlc3MgMTczMwpmaW5pc2hlZAoKQ2VudE9TIHJlbGVhc2UgNi44IChaW5hbCkKS2VybmVsIDIuNi4zMi02OTYuMy4yLmVsNi5pNjg2IG9uIGFuIGk2ODYKCmlaMnplZDk2ZTQ2MmF5cjBxeioqKioqIGxvZ2luOg==	The Base64-encoded command output of the instance.

Parameter	Type	Example	Description
InstanceId	String	i-bp1c1xhsrac2coiw****	The ID of the instance.
LastUpdateTime	String	2018-03-22 10:04:57	The time when the instance was last started, restarted, or shut down. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
http://ecs-cn-hangzhou.aliyuncs.com/?Action=GetInstanceConsoleOutput
&InstanceId=i-bp1c1xhsrac2coiw****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format


```
<GetInstanceConsoleOutputResponse>
      <RequestId>22A1933F-AD02-4560-A6A7-53CF2231D942</RequestId>
      <InstanceId>i-bp1c1xhsrac2coiw****</InstanceId>
      <LastUpdateTime>2018-03-22 10:04:57</LastUpdateTime>
      <ConsoleOutput>V2VsY29tZSB0byBDZW50T1MgCgpDaGVja2luZyBmaWxlc3lzdGVtcwpDaGVja2luZyBhbGwgZmlsZSBzeXN0ZWlzLgpbL3NiaW4vZnNjay5
leHQ0ICgxKSAtLSAvXSBmc2NrLmV4dDQgLWEgL2Rldi92ZGExIAovZGV2L3ZkYTE6IGNsZWFuLCAzMjAxNi8yNjIxNDQwIGZpbGVzLCA0NDc5NzQvMTA0ODU1MDQgYmx
vY2tzCgpFbnRlcmluZyBub24taW50ZXJhY3RpdmUgc3RhcnRlcApDYWxsaW5nIHRoZSBzeXN0ZW0gYWN0aXZpdHkgZGF0YSBjb2xsZWN0b3IgKHNhZGMpLi4uIAoKQnJ
pbmdpbmcgdXAgaW50ZXJmYWNlIGV0aDA6ICAKRGV0ZXJtaW5pbmcgSVAgaW5mb3JtYXRpb24gZm9yIGV0aDAuLi4gZG9uZS4KCmFsaXl1bi1zZXJ2aWNlIHN0YXJ0L3J
1bm5pbmcsIHByb2Nlc3MgMTczMwpmaW5pc2hlZAoKQ2VudE9TIHJlbGVhc2UgNi44IChGaW5hbCkKS2VybmVsIDIuNi4zMi02OTYuMy4yLmVsNi5pNjg2IG9uIGFuIGk
2ODYKCmlaMnplZDk2ZTQ2MmF5cjBxeioqKioqIGxvZ2luOg==</ConsoleOutput>
</GetInstanceConsoleOutputResponse>
```


`JSON` format


```
{
    "RequestId": "22A1933F-AD02-4560-A6A7-53CF2231D942",
    "InstanceId": "i-bp1c1xhsrac2coiw****",
    "LastUpdateTime": "2018-03-22 10:04:57",
    "ConsoleOutput": "V2VsY29tZSB0byBDZW50T1MgCgpDaGVja2luZyBmaWxlc3lzdGVtcwpDaGVja2luZyBhbGwgZmlsZSBzeXN0ZWlzLgpbL3NiaW4vZnNjay
5leHQ0ICgxKSAtLSAvXSBmc2NrLmV4dDQgLWEgL2Rldi92ZGExIAovZGV2L3ZkYTE6IGNsZWFuLCAzMjAxNi8yNjIxNDQwIGZpbGVzLCA0NDc5NzQvMTA0ODU1MDQgYm
xvY2tzCgpFbnRlcmluZyBub24taW50ZXJhY3RpdmUgc3RhcnRlcApDYWxsaW5nIHRoZSBzeXN0ZW0gYWN0aXZpdHkgZGF0YSBjb2xsZWN0b3IgKHNhZGMpLi4uIAoKQn
JpbmdpbmcgdXAgaW50ZXJmYWNlIGV0aDA6ICAKRGV0ZXJtaW5pbmcgSVAgaW5mb3JtYXRpb24gZm9yIGV0aDAuLi4gZG9uZS4KCmFsaXl1bi1zZXJ2aWNlIHN0YXJ0L3
J1bm5pbmcsIHByb2Nlc3MgMTczMwpmaW5pc2hlZAoKQ2VudE9TIHJlbGVhc2UgNi44IChGaW5hbCkKS2VybmVsIDIuNi4zMi02OTYuMy4yLmVsNi5pNjg2IG9uIGFuIG
k2ODYKCmlaMnplZDk2ZTQ2MmF5cjBxeioqKioqIGxvZ2luOg=="
}
```


Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
404	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
405	IncorrectInstanceStatus	%s	The error message returned because this operation is not supported while the instance is in the current state.
405	NotSupported	%s	The error message returned because the operation is invalid.
429	Throttling	%s	The error message returned because the request is denied due to request throttling.

For a list of error codes, visit the API Error Center.

24.7. DescribeInstanceMaintenanceAttributes

You can call this operation to query the maintenance properties of an instance.

Description

This operation is used to query the specified maintenance policy of an instance, which contains the following two major maintenance properties:

- Maintenance window: the time period that you specify for maintenance.
- Maintenance action: the policy that you specify in response to instance shutdown.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceMaintenanceAttributes	The operation that you want to perform. Set the value to DescribeInstanceMaintenanceAttributes.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId.N	RepeatList	No	i-bp67acfmxazb4p****	The ID of instance N. Valid values of N: 1 to 100.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Long	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
MaintenanceAttributes	Array of MaintenanceAttribute		Details of the maintenance properties.
MaintenanceAttribute			
ActionOnMaintenance	Struct		The property of the maintenance action of the instance.
DefaultValue	String	AutoRecover	The default maintenance action.
SupportedValues	List	"SupportedValue": ["Stop", "AutoRecover"]	Details of the supported maintenance actions.
Value	String	Stop	The current maintenance action. Valid values: • Stop: The instance is shutdown. • AutoRecover: The instance is automatically recovered. • AutoRedeploy: Failover is performed, which may cause damage to the data disks attached to the instance.
InstanceId	String	i-bp67acfmxazb4p****	The ID of the instance.

Parameter	Type	Example	Description
MaintenanceWindows	Array of MaintenanceWindow		Details of the maintenance window.
MaintenanceWindow			
EndTime	String	18:00:00	The end time of the maintenance window.
StartTime	String	02:00:00	The start time of the maintenance window.
NotifyOnMaintenance	Boolean	false	Indicates whether an event notification was sent before instance shutdown.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	100	The total number of queried maintenance properties.

Examples

Sample requests

```
https://ecs.aliyuncs.com?Action=DescribeInstanceMaintenanceAttributes
&InstanceId.1=i-bp67acfmxazb4p****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeInstanceMaintenanceAttributesResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
      <PageNumber>1</PageNumber>
      <PageSize>10</PageSize>
      <TotalCount>100</TotalCount>
      <InstanceMaintenanceAttributes>
            <InstanceMaintenanceAttribute>
                  <InstanceId>i-bp67acfmxazb4ph***</InstanceId>
                  <NotifyOnMaintenance>false</NotifyOnMaintenance>
                  <MaintenanceWindows>
                        <MaintenanceWindow>
                              <StartTime>02:00:00</StartTime>
                              <EndTime>18:00:00</EndTime>
                        </MaintenanceWindow>
                  </MaintenanceWindows>
                  <ActionOnMaintenance>
                        <Value>Stop</Value>
                        <DefaultValue>AutoRecover</DefaultValue>
                        <SupportedValues>
                              <SupportedValue>Stop</SupportedValue>
                              <SupportedValue>AutoRecover</SupportedValue>
                        </SupportedValues>
                  </ActionOnMaintenance>
            </InstanceMaintenanceAttribute>
      </InstanceMaintenanceAttributes>
</DescribeInstanceMaintenanceAttributesResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
    "PageNumber": 1,
    "PageSize": 10,
    "TotalCount": 100,
    "InstanceMaintenanceAttributes": {
        "InstanceMaintenanceAttribute": [{
            "InstanceId": "i-bp67acfmxazb4ph***",
            "NotifyOnMaintenance": false,
            "MaintenanceWindows ": {
                "MaintenanceWindow": [{
                    "StartTime": "02:00:00",
                    "EndTime": "18:00:00"
                }]
            },
            "ActionOnMaintenance": {
                "Value": "Stop",
                "DefaultValue": "AutoRecover",
                "SupportedValues": {
                    "SupportedValue": ["Stop", "AutoRecover"]
                }
            }
        }]
    }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
403	InstanceIdLimitExceeded	%s	The error message returned because the value of N in the InstanceId.N parameter is greater than 100.
403	OperationDenied.NotInWhiteList	%s	The error message returned because you are not authorized to perform this operation. Try again when you are authorized.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.

For a list of error codes, visit the API Error Center.

24.8. ModifyInstanceMaintenanceAttributes

You can call this operation to modify the maintenance properties of one or more instances.

Description

This operation is used to modify the maintenance policy of an instance. The maintenance policy consists of the following maintenance properties:

- Maintenance window: the time period that you specify for maintenance.
- Maintenance action: the policy that you specify in response to instance shutdown.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceMaintenanceAttributes	The operation that you want to perform. Set the value to ModifyInstanceMaintenanceAttributes.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId.N	RepeatList	No	i-bp67acfmxazb4ph****	The ID of instance N. Valid values of N: 1 to 100.
MaintenanceWindow.N.StartTime	String	No	02:00:00	The start time of maintenance window N. The time must be on the hour at exactly 0 minute and 0 second. The MaintenanceWindow.N.StartTime and MaintenanceWindow.N.EndTime parameters must be specified at the same time. The MaintenanceWindow.N.Endtime value must be 1 to 23 hours later than the MaintenanceWindow.N.StartTime value. Specify the time in the `HH:mm:ss` format. The time must be in UTC+8. Set the value of N to 1.
MaintenanceWindow.N.EndTime	String	No	18:00:00	The end time of maintenance window N. The time must be on the hour at exactly 0 minute and 0 second. The MaintenanceWindow.N.StartTime and MaintenanceWindow.N.EndTime parameters must be specified at the same time. The MaintenanceWindow.N.Endtime value must be 1 to 23 hours later than the MaintenanceWindow.N.StartTime value. Specify the time in the `HH:mm:ss` format. The time must be in UTC+8. Set the value of N to 1.
ActionOnMaintenance	String	No	AutoRecover	The maintenance action. Valid values: • Stop: stops the instance. • AutoRecover: automatically recovers the instance. • AutoRedeploy: fails the instance over, which may cause damage to the data disks attached to the instance.
NotifyOnMaintenance	Boolean	No	false	Specifies whether to send an event notification before instance shutdown. Valid values: • True: sends an event notification. • False: does not send an event notification. Default value: false.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com?Action=ModifyInstanceMaintenanceAttributes
&InstanceId.1=i-bp67acfmxazb4ph****
&ActionOnMaintenance=AutoRecover
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyInstanceMaintenanceAttributesResponse>
    <RequestId>E69FF3CC-94DD-42EF-8836-F33C45EDF9945ED</RequestId>
<ModifyInstanceMaintenanceAttributesResponse>
```

`JSON` format

```
{
    "RequestId": "E69FF3CC-94DD-42EF-8836-F33C45EDF9945ED"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance does not exist.
403	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
403	OperationDenied.NotInWhiteList	%s	The error message returned because you are not authorized to perform this operation. Try again when you are authorized.

For a list of error codes, visit the API Error Center.

24.9. RedeployInstance

You can call this operation to redeploy an ECS instance when the instance receives an event notification.

Description

RedeployInstance is an asynchronous operation. It migrates data before it restarts the instance. After the instance is redeployed, the instance enters the Running (`Running`) state. If the instance fails to be redeployed, the instance returns to the original physical server and its original state.

When you call this operation, take note of the following items:

- The instance must be in the Running or Stopped state. After the instance is redeployed, the status of the instance has the following changes:
  - If the instance is in the Running (`Running`) state, the instance enters the Stopping `Stopping` state.
  - If the instance is in the Stopped (`Stopped`) state, the instance enters the Starting (`Starting`) state.
- Instances on dedicated hosts cannot be redeployed.
- If `OperationLocks` in the DescribeInstances response contains `"LockReason": "security"` for the instance, the instance is locked for security reasons and cannot be redeployed.
- If the instance receives simulated events that are created by calling the CreateSimulatedSystemEvent operation, you cannot redeploy the instance by calling the RedeployInstance operation.
- When you handle local disk-related system events, if the damaged local disks are isolated but the SystemMaintenance.RebootAndReInitErrorDisk (**instance restart and re-initialization of damaged disks due to system maintenance**) event is not sent, you can still call the RedeployInstance operation to redeploy the instance. For more information, see Overview of system events on ECS instances equipped with local disks.

The following table lists the types and status of events to which you can respond by calling the RedeployInstance operation.

System event	Status
Instance restart due to system maintenance (SystemMaintenance.Reboot)	Inquiring and Scheduled
Instance redeployment due to system maintenance (SystemMaintenance.Redeploy)	Inquiring and Scheduled
Instance restart and replacement of damaged disks due to system maintenance (SystemMaintenance.RebootAndIsolateErrorDisk)	Inquiring

System event	Status
Instance restart and re-initialization of damaged disks due to system maintenance (SystemMaintenance.RebootAndReInitErrorDisk)	Inquiring
Instance redeployment due to a system error (SystemFailure.Redeploy)	Inquiring and Scheduled
For instances equipped with local disks only: instance restart due to a system error (SystemFailure.Reboot)	Executing
Isolation of damaged disks due to system maintenance (SystemMaintenance.IsolateErrorDisk)	Inquiring
Re-initialization of damaged disks due to system maintenance (SystemMaintenance.ReInitErrorDisk)	Inquiring

Note When the system redeploys instances equipped with local disks, the local disks are re-initialized and data in the local disks is cleared.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RedeployInstance	The operation that you want to perform. Set the value to RedeployInstance.
InstanceId	String	Yes	i-bp1azkttqpldxgted****	The ID of the instance.
ForceStop	Boolean	No	false	Specifies whether to force stop the instance in the Running state. Default value: false. **Note** The effect of a forced stop is the same as a power failure. Data in the instance operating system that has not been written to local disks may be lost. We recommend that you redeploy instances when they are in the Stopped state.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TaskId	String	t-bp10e8orkp8x****	The ID of the redeployment task. You can call the DescribeTasks operation to query the migration result.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RedeployInstance
&InstanceId=i-bp1azkttqpldxgted****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RedeployInstanceResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
      <TaskId>t-bp10e8orkp8x****</TaskId>
</RedeployInstanceResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
    "TaskId": "t-bp10e8orkp8x****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The InstanceId provided does not exist in our records.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	DiskError	IncorrectDiskStatus.	The error message returned because the specified disk status is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance and try again.
403	IncorrectInstanceStatus	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	InvalidOperation.RedeployInstance	%s	The error message returned because the operation is invalid.

For a list of error codes, visit the API Error Center.

24.10. ReportInstancesStatus

You can call this operation to report the exception on one or more ECS instances. You can report the same exception on multiple ECS instances or the same exception on multiple disks of one ECS instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ReportInstancesStatus	The operation that you want to perform. Set the value to ReportInstancesStatus.
InstanceId.N	RepeatList	Yes	i-bp165p6xk2tmdhj0****	The ID of ECS instance N. Valid values of N: 1 to 100. Specify multiple values in the repeated list format.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
Description	String	Yes	The local disk is unavailable, the mount point is inaccessible, or files cannot be loaded.	The detailed description of the exception.
Reason	String	No	abnormal-local-disk	The reason why the exception occurs to the ECS instance. Valid values: • instance-hang: The instance is unavailable or cannot be connected. • instance-stuck-in-status: The instance is stuck in a state such as Starting or Stopping. • abnormal-network: The instance has a network exception. • abnormal-local-disk: A local disk attached to the instance has an exception. • abnormal-cloud-disk: A disk or a Shared Block Storage device attached to the instance has an exception. • others: other exception types. If the exception is not of the preceding types, you can set `Reason` to others and specify the `Description` parameter.
IssueCategory	String	No	hardware-cpu-error	The category of the exception. This parameter is applicable only to ECS bare metal instances. Valid values: • hardware-cpu-error: CPU failure • hardware-motherboard-error: motherboard failure • hardware-mem-error: memory failure • hardware-power-error: power failure • hardware-disk-error: disk failure • hardware-networkcard-error: network interface controller (NIC) failure • hardware-raidcard-error: SAS/RAID card failure • hardware-fan-error: fan failure • others: other failures
DiskId.N	RepeatList	No	d-bp1aeljlfad7x6u1****	The ID of disk N that has the exception. If you are using an ECS bare metal instance, enter the serial number of the disk on the instance. Valid values of N: 1 to 100. Specify multiple values in the repeated list format. **Note** When the value of the `Reason` parameter is `abnormal-local-disk` or `abnormal-cloud-disk`, or the value of the `IssueCategory` parameter is `hardware-disk-error`, you must specify this parameter.

Parameter	Type	Required	Example	Description
Device.N	RepeatList	No	/dev/xvdb	The device name of disk N on an instance that has the exception. If you are using an ECS bare metal instance, enter the slot number of disk N on the instance. Valid values of N: 1 to 100. Specify multiple values in the repeated list format. **Note** For ECS Bare Metal Instance Instance, when the value of the `Reason` parameter is `abnormal-local-disk` or `abnormal-cloud-disk`, or the value of the `IssueCategory` parameter is `hardware-disk-error`, you must specify this parameter.
StartTime	String	No	2017-11-30T06:32:31Z	The start time of the instance exception. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
EndTime	String	No	2017-11-31T06:32:31Z	The end time of the instance exception. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ReportInstancesStatus
&InstanceId.1=i-bp165p6xk2tmdhj0****
&Reason=abnormal-local-disk
&DiskId.1=d-bp1aeljlfad7x6u1****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ReportInstancesStatusResponse>
    <RequestId>4DD56CA6-6D75-4D33-BE34-E4A44EBE1C3D</RequestId>
</ReportInstancesStatusResponse>
```

`JSON` format

```
{
    "RequestId":"4DD56CA6-6D75-4D33-BE34-E4A44EBE1C3D"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	InvalidParameter	%s	The error message returned because a specified parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InstanceIdLimitExceeded	%s	The error message returned because the value of N in the InstanceId.N parameter is greater than 100.
403	DiskIdLimitExceeded	%s	The error message returned because the value of N in the DiskId.N parameter is greater than 100.
403	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance does not exist.

For a list of error codes, visit the API Error Center.

25.Cloud assistants

25.1. CreateActivation

Creates an activation code. This activation code is used to register servers that are not provided by Alibaba Cloud as Alibaba Cloud managed instances.

Description

After you use an activation code to register a server that is not provided by Alibaba Cloud as an Alibaba Cloud managed instance, you can use a variety of online services provided by Alibaba Cloud, such as Cloud Assistant, Operation Orchestration Service (OOS), and Apsara Devops in the managed instance.

If a server is not provided by Alibaba Cloud, it can be registered as an Alibaba Cloud managed instance only when the server can access the Internet and runs an operating system of one of the following versions:

- Alibaba Cloud Linux 2 and Alibaba Cloud Linux 3 and later
- CentOS 6, CentOS 7, and CentOS 8 and later
- Debian 8, Debian 9, and Debian 10 and later
- Ubuntu 12, Ubuntu 14, Ubuntu 16, and Ubuntu 18 and later
- CoreOS
- OpenSUSE
- RedHat 5, RedHat 6, and RedHat 7 and later
- SUSE Linux Enterprise Server (SLES) 11, SLES 12, and SLES 15 and later
- Windows Server 2012, Windows Server 2016, and Windows Server 2019 and later

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateActivation	The operation that you want to perform. Set the value to **CreateActivation**.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which to create the activation code. The following regions are supported: China (Qingdao), China (Beijing), China (Zhangjiakou), China (Hohhot), China (Hangzhou), China (Shanghai), China (Shenzhen), China (Heyuan), and China (Hong Kong). You can call the DescribeRegions operation to query the most recent region list.
InstanceName	String	No	test-InstanceName	The default instance name prefix. The instance name prefix must be 1 to 50 characters in length. It must start with a letter and cannot start with `http://` or `https://`. The instance name prefix can contain only letters, digits, periods (.), underscores (_), hyphens (-), and colons (:). If you use the activation code created by the CreateActivation operation to register managed instances, the instances are assigned sequential names that are prefixed by the value of this parameter. You can also specify a new instance name to override the assigned sequential name when you register a managed instance. If you specify InstanceName when you register a managed instance, an instance name in the format of `<InstanceName>-<Number>` is generated. The number of digits in the <Number> value is determined by that in the `InstanceCount` value. Example: `001`. If you do not specify InstanceName, the hostname (Hostname) is used as the instance name.

Parameter	Type	Required	Example	Description
Description	String	No	This is description.	The description of the activation code. The description can be 1 to 100 characters in length and cannot start with `http://` or `https://`.
InstanceCount	Integer	No	10	The maximum number of times that the activation code can be used to register managed instances. Valid values: 1 to 1000. Default value: 10.
TimeToLiveInHours	Long	No	4	The validity period of the activation code. The activation code cannot be used to register new instances after the validity period expires. Unit: hours. Valid values: 1 to 24. Default value: 4.
IpAddressRange	String	No	0.0.0.0/0	The IP addresses of hosts that are allowed to use the activation code. The value can be IPv4 addresses, IPv6 addresses, or CIDR blocks.

Response parameters

Parameter	Type	Example	Description
RequestId	String	4ECEEE12-56F1-4FBC-9AB1-890F1234****	The ID of the request.
ActivationCode	String	a-hz0ch3SwhOlE1234+Xo32lAZC****	The value of the activation code. The value is returned only once after the CreateActivation operation is called and cannot be subsequently queried. Make sure that you properly save the return value.
ActivationId	String	4ECEEE12-56F1-4FBC-9AB1-890F1234****	The ID of the activation code.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateActivation
&InstanceName=test-InstanceName
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateActivationResponse>
    <RequestId>4ECEEE12-56F1-4FBC-9AB1-890F1234****</RequestId>
    <ActivationId>4ECEEE12-56F1-4FBC-9AB1-890F1234****</ActivationId>
    <ActivationCode>a-hz0ch3SwhOlE1234+Xo32lAZC****</ActivationCode>
</CreateActivationResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "4ECEEE12-56F1-4FBC-9AB1-890F1234****",
  "ActivationId" : "4ECEEE12-56F1-4FBC-9AB1-890F1234****",
  "ActivationCode" : "a-hz0ch3SwhOlE1234+Xo32lAZC****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
400	InstanceName.ExceedLimit	Default instance name prefix length exceeds.	The error message returned because the instance name prefix exceeds 50 characters in length.
400	InstanceName.InvalidPattern	Default instance name prefix pattern invalid.	The error message returned because the instance name prefix is invalid.
400	ActivationDesc.ExceedLimit	Activation description length exceeds.	The error message returned because the description of the activation code exceeds 100 characters in length.
400	ActivationLimitation.Invalid	Registration limitation must be positive.	The error message returned because the maximum number of times that the activation code can be used to register managed instances has been reached.
400	AddressRange.InvalidPattern	Address range should be ipv4 address or cidr.	The error message returned because the IP address of hosts that are allowed to use the activation code must be IPv4 addresses, IPv6 addresses, or CIDR blocks.
400	ActivationCount.ExceedLimit	Too many activations have been created.	The error message returned because the maximum number of activation codes that can be created has been reached.
400	ActivationTTL.ExceedLimit	Activation TTL exceeds limit.	The error message returned because the specified TimeToLiveInHours parameter is invalid.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
500	InternalError.Dispatch	An error occurred when dispatch the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.2. InvokeCommand

Triggers a Cloud Assistant command on one or more Elastic Compute Service (ECS) instances.

Description

- You can call the InvokeCommand operation up to 5,000 times per day in a region. To adjust the maximum number of daily calls, submit a ticket.
- The ECS instances on which to run the Cloud Assistant command must meet the following requirements. If multiple ECS instances are specified and one of the instances does not meet the requirements for running the command, the call fails. You must specify instances that meet the requirements and call the InvokeCommand operation again.
  - The network type is Virtual Private Cloud (VPC). For more information, see What is a VPC?
  - The instances are in the Running (`Running`) state.
  - The Cloud Assistant client is installed on the instances. For more information, see Install the Cloud Assistant client.
  - Before you run PowerShell commands, make sure that the instances have the PowerShell module configured.
- If `Timed` is set to false, the command is run only once.
- If `Timed` is set to true, the command is run on a periodic basis.
  - The command is run based on the schedule specified by the `Frequency` parameter. The results of each execution of a command do not affect the next execution of the command.

- If you specify a time zone and use a cron expression to set a schedule on which to run the command, the schedule must be based on the specified time zone. If you do not specify a time zone, the schedule must be based on the system time of the instance. Make sure that the time or time zone of the instance meets your business needs. For more information, see Configure the NTP service and time zone for Linux instances or Configure the NTP service for Windows instances.

  If you are concerned about recurring tasks, make sure that the version of the Cloud Assistant client is not earlier than the following ones. If the `ClientNeedUpgrade` error code is returned, you must upgrade the Cloud Assistant client to the latest version. For more information, see Update or disable updates for the Cloud Assistant client.

  - Linux: 2.2.3.282
  - Windows: 2.1.3.282

- Command executions may fail due to instance status exceptions, network exceptions, or exceptions on the Cloud Assistant client. If an execution fails, no execution information is generated.
- If you enable the custom parameter feature by setting EnableParameter to true when you create a command, you must specify custom parameters (`Parameters`) when you run the command.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	InvokeCommand	The operation that you want to perform. Set the value to **InvokeCommand**.
RegionId	String	Yes	cn-hangzhou	The region ID of the command. You can call the DescribeRegions operation to query the most recent region list.
CommandId	String	Yes	c-e996287206324975b5fbe1d****	The ID of the command. You can call the DescribeCommands operation to query all available command IDs.
RepeatMode	String	No	Once	Specifies how to run the command. Valid values: • Once: immediately runs the command. • Period: runs the command on a periodic basis. If you set this parameter to `Period` , you must set `Timed` to true and specify `Frequency` . • NextRebootOnly: automatically runs the command the next time the instance starts. • EveryReboot: automatically runs the command every time the instance starts. Default value: • When `Timed` is not set to true and `Frequency` is not specified, the default value of RepeatMode is `Once` . • When `Timed` is set to true and `Frequency` is specified, `Period` is used as the value of RepeatMode regardless of whether RepeatMode is specified. Take note of the following items: • When this parameter is set to `Period` , `NextRebootOnly` , or `EveryReboot` , you can call the StopInvocation operation to stop the process of the command that is to be run or is run on a periodic basis. • When this parameter is set to `Period` or `EveryReboot` , you can call the DescribeInvocationResults operation and set IncludeHistory to true to view the historical execution results of the command that is run on a periodic basis.

Parameter	Type	Required	Example	Description
Timed	Boolean	No	true	Specifies whether to run the command on a periodic basis. Valid values: • true: periodically runs the command on the schedule specified by `Frequency`. The results of each execution do not affect the next execution. • false: runs the command only once. Default value: false.

Frequency	String	No	0 */20 * * * ?	The schedule on which to run the command. You must specify this parameter when you set `Timed` to `true`. You can configure a command to run at a fixed interval based on a rate expression, run only once at a specified time, or run on a schedule defined by a cron expression.
				• To run a command at a fixed interval, use a rate expression to specify an interval. You can specify the interval in seconds, minutes, hours, or days. This option is applicable when tasks need to be executed at a fixed interval. The format is `rate(<Interval value><Interval unit>)`. For example, specify `rate(5m)` to run the command every 5 minutes. Take note of the following limits when you set an interval:
				  ○ The specified interval can only be anywhere from 60 seconds to 7 days and must be longer than the timeout period of the recurring task.
				  ○ The specified interval is the amount of time elapsed between two consecutive times that the command is run on the selected instances. The interval does not relate to the amount of time required to run the command each time. For example, assume that you set the interval to 5 minutes and that it takes 2 minutes to run the command each time. Each time the command is run, the system waits 3 minutes before it runs the command again.
				  ○ A task is not executed immediately after the task is created. For example, assume that you set the interval to 5 minutes for a task. The task begins to be executed 5 minutes after it is created.
				• To run a command only once at a specified time, specify a point in time and a time zone. The format is `at(yyyy-MM-dd HH:mm:ss <Time zone>)`, which indicates `at(Year-Month-Day Hour:Minute:Second <Time zone>)`. If you do not specify a time zone, the UTC time zone is used by default. The time zone supports the following forms:
				  ○ The time zone name. Examples: `Asia/Shanghai (China/Shanghai)` and `America/Los_Angeles (America/Los Angeles)`.
				  ○ The time offset from Greenwich Mean Time (GMT). Examples: `GMT+8:00` (UTC+8) and `GMT-7:00` (UTC-7). If you use the GMT format, you cannot pad leading zeros to the hour value.
				  ○ The time zone abbreviation: Only UTC is supported.
				  To specify a command to run only once at 13:15:30 on June 06, 2022 (Shanghai time), set the time to `at(2022-06-06 13:15:30 Asia/Shanghai)`. To specify a command to run only once at 13:15:30 on June 06, 2022 (UTC-7), set the time to `at(2022-06-06 13:15:30 GMT-7:00)`.
				• To run a command on a clock-based schedule, specify a cron expression to define a schedule. The format is `<Cron expression> <time zone>`. The cron expression is in the format of `<seconds> <minutes> <hours> <day of the month> <month> <da`

Parameter	Type	Required	Example	Description
				`y of the week> <year (optional)>` . The system calculates the execution times of the command based on the specified cron expression and time zone and runs the command as scheduled. If you do not specify a time zone, the system time zone of the instance on which to run the command is used by default. For more information about cron expressions, see Cron expressions. The time zone supports the following forms: ○ The time zone name. Examples: `Asia/Shanghai (China/Shanghai)` and `America/Los_Angeles (America/Los Angeles)` . ○ The time offset from GMT. Example: `GMT+8:00` (UTC+8) and `GMT-7:00` (UTC-7). If you use the GMT format, you cannot pad leading zeros to the hour value. ○ The time zone abbreviation: Only UTC is supported. For example, to specify a command to run at 10:15:00 every day in 2022 (Shanghai time), set the time to `0 15 10 ? * * 2022 Asia/Shanghai` . To specify a command to run every half an hour from 10:00:00 to 11:30:00 every day in 2022 (UTC+8), set the time to `0 0/30 10-11 * ? 2022 GMT +8:00` . To specify a command to run every 5 minutes from 14:00:00 to 14:55:00 every October every two years from 2022 (UTC), set the time to `0 0/5 14 * 10 ? 2022/2 UTC` . **Note** The minimum interval must be 10 seconds or more and cannot be shorter than the timeout period of the recurring task.
Parameters	Map	No	null	The key-value pairs of custom parameters to be passed in when the custom parameter feature is enabled. Number of custom parameters: 0 to 10. • Each key in a Map collection cannot be an empty string and can be up to 64 characters in length. • Each value in a Map collection can be an empty string. • After the custom parameters and the original command content are encoded in Base64, their total size cannot exceed 16 KB. • The custom parameter names specified in the value of Parameters must all be included in the custom parameters specified when you created the command. You can use empty strings to represent the parameters that are not passed in. You can leave this parameter empty to disable the custom parameter feature.
Username	String	No	root	The username used to run the command on ECS instances. • For Linux instances, the root username is used. • For Windows instances, the System username is used. You can also specify other usernames that already exist in the ECS instance to run the command. It is more secure to run Cloud Assistant commands as a regular user. For more information, see Configure a regular user to run Cloud Assistant commands.

Parameter	Type	Required	Example	Description
WindowsPasswordName	String	No	axtSecretPassword	The name of the password used to run the command on a Windows instance. If you want to use a username other than the default System username to run the command on the Windows instance, you must specify both the WindowsPasswordName and the `Username` parameters. The password is hosted in plaintext in the parameter repository of Operation Orchestration Service (OOS) to reduce the risk of password leaks. Only the name of the password is passed in by using the WindowsPasswordName parameter. For more information, see Manage encryption parameters and Run Cloud Assistant commands as a regular user. **Note** When you use the root username for Linux instances or the System username for Windows instances to run the command, you do not need to specify the WindowsPasswordName parameter.
InstanceId.N	String	Yes	i-bp185dy2o3o6n****	The ID of instance N on which to run the command. You can specify up to 50 instance IDs in each request. Valid values of N: 1 to 50.

Response parameters

Parameter	Type	Example	Description
InvokeId	String	t-7d2a745b412b4601b2d47f6a768d****	The ID of the execution.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3****	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=InvokeCommand
&CommandId=c-e99628720632497 5b5fbe1d****
&InstanceId.1=i-bp185dy2o3o6n****
&RegionId=cn-hangzhou
&Timed=true
&Frequency=0 */20 * * * *
&Parameters={"name":"Jack", "accessKey":"LTAIdyv******aRY"}
&Username=root
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<InvokeCommandResponse>
    <InvokeId>t-7d2a745b412b4601b2d47f6a768d****</InvokeId>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3****</RequestId>
</InvokeCommandResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "InvokeId" : "t-7d2a745b412b4601b2d47f6a768d****",
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
403	InvalidInstance.NotMatch	The specified instance type does not match the command.	The error message returned because the specified command cannot be run on the specified ECS instance. Check whether the state of the instance meets the conditions for running the command.
403	MissingParam.Frequency	The frequency must be specified when you create a timed task.	The error message returned because the Frequency parameter is not specified when you set Timed to true.
403	InvalidParam.Frequency	The specified frequency is invalid.	The error message returned because the specified Frequency parameter is invalid.
403	InstanceIds.ExceedLimit	The number of instance IDs exceeds the upper limit.	The error message returned because more than 50 ECS instance IDs are specified.
403	Invocation.ExceedQuota	The invocation quota in the current region has been reached for today.	The error message returned because the daily maximum number of command executions in the specified region is reached.
403	ParameterCount.ExceedLimit	The maximum number of parameters is exceeded.	The error message returned because the number of specified custom parameters exceeds the upper limit.
403	ParameterKey.ExceedLimit	The maximum length of a parameter name is exceeded.	The error message returned because the key of a custom parameter exceeds 64 characters in length.
403	CmdContent.ExceedLimit	The maximum length of a command is exceeded.	The error message returned because the length of the command exceeds the upper limit. Shorten your command.
403	ParameterKey.Duplicate	Parameter names cannot be duplicated.	The error message returned because a parameter that has the same name already exists. Parameter names must be unique.
403	Parameter.NotMatched	The passed-in parameters do not match the parameters defined when you created the command.	The error message returned because the custom parameters passed in do not match those specified when the command was created.
403	Username.ExceedLimit	The length of the username exceeds the upper limit.	The error message returned because the length of the username exceeds the upper limit.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
404	InvalidRepeatMode.NotFound	The specified repeat mode does not exist.	The error message returned because the specified RepeatMode parameter does not exist.
404	InvalidInstance.NotFound	The specified instance does not exist.	The error message returned because the specified instance does not exist.
404	InvalidCmdId.NotFound	The specified command ID does not exist.	The error message returned because the specified CommandId parameter is invalid. You can call the DescribeCommands operation to query all available command IDs.
404	Parameter.Disabled	Parameters cannot be passed in when the command customization function is disabled.	The error message returned because Parameters is specified when the custom parameter feature is disabled.

HTTP status code	Error code	Error message	Description
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.3. DisableActivation

Manually disables an activation code.

Description

To prevent an activation code from being leaked, you can call the DisableActivation operation to disable the activation code. Disabled activation codes cannot be used to register new managed instances. However, managed instances that are already registered are not affected.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DisableActivation	The operation that you want to perform. Set the value to **DisableActivation**.
RegionId	String	Yes	cn-hangzhou	The region ID of the activation code. The following regions are supported: China (Qingdao), China (Beijing), China (Zhangjiakou), China (Hohhot), China (Hangzhou), China (Shanghai), China (Shenzhen), China (Heyuan), and China (Hong Kong). You can call the DescribeRegions operation to query the most recent region list.
ActivationId	String	Yes	4ECEEE12-56F1-4FBC-9AB1-890F1234****	The ID of the activation code.

Response parameters

Parameter	Type	Example	Description
RequestId	String	4ECEEE12-56F1-4FBC-9AB1-890F74942176	The ID of the request.
Activation	Object		Details about the activation code and its usage information.
CreationTime	String	2021-01-20T06:00:00Z	The time when the activation code was created.
DeregisteredCount	Integer	1	The number of instances that were deregistered.
InstanceCount	Integer	1	The maximum number of times that the activation code can be used to register managed instances.
Description	String	This is description.	The description of the activation code.
RegisteredCount	Integer	1	The number of instances that were registered.
InstanceName	String	test-InstanceName	The default instance name prefix.
Disabled	Boolean	false	Indicates whether the activation code is disabled.

Parameter	Type	Example	Description
IpAddressRange	String	0.0.0.0/0	The IP addresses of hosts that are allowed to use the activation code.
TimeToLiveInHours	Long	4	The validity period of the activation code. Unit: hours.
ActivationId	String	4ECEEE12-56F1-4FBC-9AB1-890F1234****	The ID of the activation code.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DisableActivation
&ActivationId=4ECEEE12-56F1-4FBC-9AB1-890F1234****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DisableActivationResponse>
    <RequestId>4ECEEE12-56F1-4FBC-9AB1-890F74942176</RequestId>
    <Activation>
        <InstanceName>test-InstanceName</InstanceName>
        <DeregisteredCount>1</DeregisteredCount>
        <InstanceCount>1</InstanceCount>
        <Description>This is description.</Description>
        <CreationTime>2021-01-20T06:00:00Z</CreationTime>
        <ActivationId>4ECEEE12-56F1-4FBC-9AB1-890F1234****</ActivationId>
        <RegisteredCount>1</RegisteredCount>
        <TimeToLiveInHours>4</TimeToLiveInHours>
        <Disabled>false</Disabled>
        <IpAddressRange>0.0.0.0/0</IpAddressRange>
    </Activation>
</DisableActivationResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "4ECEEE12-56F1-4FBC-9AB1-890F74942176",
  "Activation" : {
    "InstanceName" : "test-InstanceName",
    "DeregisteredCount" : "1",
    "InstanceCount" : "1",
    "Description" : "This is description.",
    "CreationTime" : "2021-01-20T06:00:00Z",
    "ActivationId" : "4ECEEE12-56F1-4FBC-9AB1-890F1234****",
    "RegisteredCount" : "1",
    "TimeToLiveInHours" : "4",
    "Disabled" : "false",
    "IpAddressRange" : "0.0.0.0/0"
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.

HTTP status code	Error code	Error message	Description
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
404	ActivationId.NotFound	The specified activation id does not exist.	The error message returned because the specified ActivationId parameter does not exist.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.4. DeregisterManagedInstance

Deregisters a managed instance. After you deregister a managed instance, you can no longer use Cloud Assistant to send commands or files to the instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeregisterManagedInstance	The operation that you want to perform. Set the value to **DeregisterManagedInstance**.
RegionId	String	Yes	cn-hangzhou	The region ID of the secondary ENI. The following regions are supported: China (Qingdao), China (Beijing), China (Zhangjiakou), China (Hohhot), China (Hangzhou), China (Shanghai), China (Shenzhen), China (Heyuan), and China (Hong Kong). You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	Yes	mi-hz01axdfas****	The ID of the managed instance.

Response parameters

Parameter	Type	Example	Description
RequestId	String	4ECEEE12-56F1-4FBC-9AB1-890F74942176	The ID of the request.
Instance	Object		Details of the managed instance.
LastInvokedTime	String	2021-01-20T09:00:40Z	The last Cloud Assistant task execution time.
InternetIp	String	47.8.**.**	The public IP address of the managed instance.
Hostname	String	test-Hostname	The hostname of the managed instance.
InstanceId	String	mi-hz01axdfas****	The ID of the managed instance.
ActivationId	String	4ECEEE12-56F1-4FBC-9AB1-890F7494****	The ID of the activation code.
IntranetIp	String	10.0.**.**	The internal IP address of the managed instance.

Parameter	Type	Example	Description
AgentVersion	String	2.2.0.102	The version number of the Cloud Assistant client.
RegistrationTime	String	2021-01-20T08:57:56Z	The time when the managed instance was registered.
InstanceName	String	test-InstanceName-001	The name of the managed instance.
OsType	String	linux	The operating system type of the managed instance.
OsVersion	String	Linux_#38~18.04.1-Ubuntu SMP Wed Jan 6 18:26:30 UTC 2021_x86_64	The version information of the operating system.
InvocationCount	Long	2	The number of times that Cloud Assistant tasks were executed on the managed instance.
MachineId	String	e03231b37ab14e53b5795ad625fc****	The machine code of the managed instance.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeregisterManagedInstance
&InstanceId=mi-hz01axdfas****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DeregisterManagedInstanceResponse>
    <RequestId>4ECEEE12-56F1-4FBC-9AB1-890F74942176</RequestId>
    <Instance>
        <MachineId>e03231b37ab14e53b5795ad625fc****</MachineId>
        <AgentVersion>2.2.0.102</AgentVersion>
        <InstanceId>mi-hz01axdfas****</InstanceId>
        <InvocationCount>2</InvocationCount>
        <OsVersion>Linux_#38~18.04.1-Ubuntu SMP Wed Jan 6 18:26:30 UTC 2021_x86_64</OsVersion>
        <Hostname>test-Hostname</Hostname>
        <ActivationId>4ECEEE12-56F1-4FBC-9AB1-890F7494****</ActivationId>
        <RegistrationTime>2021-01-20T08:57:56Z</RegistrationTime>
        <IntranetIp>10.0.**.**</IntranetIp>
        <InstanceName>test-InstanceName-001</InstanceName>
        <InternetIp>47.8.**.**</InternetIp>
        <OsType>linux</OsType>
        <LastInvokedTime>2021-01-20T09:00:40Z</LastInvokedTime>
    </Instance>
</DeregisterManagedInstanceResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "4ECEEE12-56F1-4FBC-9AB1-890F74942176",
  "Instance" : {
    "MachineId" : "e03231b37ab14e53b5795ad625fc****",
    "AgentVersion" : "2.2.0.102",
    "InstanceId" : "mi-hz01axdfas****",
    "InvocationCount" : "2",
    "OsVersion" : "Linux_#38~18.04.1-Ubuntu SMP Wed Jan 6 18:26:30 UTC 2021_x86_64",
    "Hostname" : "test-Hostname",
    "ActivationId" : "4ECEEE12-56F1-4FBC-9AB1-890F7494****",
    "RegistrationTime" : "2021-01-20T08:57:56Z",
    "IntranetIp" : "10.0.**.**",
    "InstanceName" : "test-InstanceName-001",
    "InternetIp" : "47.8.**.**",
    "OsType" : "linux",
    "LastInvokedTime" : "2021-01-20T09:00:40Z"
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
404	InvalidInstance.NotFound	The specified instance id does not exist.	The error message returned because the specified InstanceId parameter does not exist.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.5. StopInvocation

Stops the process of a Cloud Assistant command that is running on one or more instances.

Description

- If you stop the process of a command that runs only once, the executions that have started are not interrupted. The executions that have not started are canceled.
- If you stop the process of a command that runs on a recurring schedule, the executions that have started are not interrupted but subsequent executions are cancelled.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	StopInvocation	The operation that you want to perform. Set the value to **StopInvocation**.
RegionId	String	Yes	cn-hangzhou	The region ID of the Cloud Assistant command. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
InvokeId	String	Yes	t-7d2a745b412b4601b2d47f6a768d****	The ID of the execution. You can call the DescribeInvocations operation to query all execution IDs.
InstanceId.N	String	No	i-bp67acfmxazb4p****	The ID of instance N on which to stop the process of the Cloud Assistant command. You can specify up to 50 instance IDs in each request. Valid values of N: 1 to 50.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=StopInvocation
&InvokeId=t-7d2a745b412b4601b2d47f6a768d****
&RegionId=cn-hangzhou
&InstanceId.1=bp67acfmxazb4p****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<StopInvocationResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</StopInvocationResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
403	InstanceIds.ExceedLimit	The number of instance IDs exceeds the upper limit.	The error message returned because the number of specified instance IDs exceeds the upper limit.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
404	InvalidInvokeId.NotFound	The specified invoke ID does not exist.	The error message returned because the specified InvokeId parameter does not exist.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.6. StartTerminalSession

Creates a session by using the session management feature. When you call this operation, you can include the ID of an Elastic Compute Service (ECS) instance in the request to create a WebSocket session to the instance. The URL of the WebSocket session returned by the operation can be used to connect to the instance.

Description

The session management feature is in invitational preview. To use this feature, submit a ticket.

When you use custom code to connect to an ECS instance that serves as a client, you can call this operation to obtain the WebSocket URL that is used to connect to the instance. When you call this operation to create a session to an ECS instance, take note of the following items:

- The ECS instance must be in the Running (Running) state.
- The Cloud Assistant client must be installed on the ECS instance. You can call the DescribeCloudAssistantStatus operation to check whether the Cloud Assistant client is installed on the ECS instance and query the version number of the installed Cloud Assistant client.
  - If the Cloud Assistant client is not installed on the ECS instance, call the InstallCloudAssistant operation to install the client.
  - Only the Cloud Assistant client versions that are later than the following ones support the session management feature. You can upgrade your Cloud Assistant client. For information about how to upgrade the Cloud Assistant client, see Update or disable updates for the Cloud Assistant client.
    - For Linux operating systems: 2.2.3.256
    - For Windows operating systems: 2.1.3.256
- Each WebSocket URL returned by the StartTerminalSession operation remains valid for 10 minutes.
- Up to 1,000 sessions can be created and available per region. Each ECS instance can have up to 10 sessions in the connected state.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	StartTerminalSession	The operation that you want to perform. Set the value to **StartTerminalSession**.
RegionId	String	Yes	cn-hangzhou	The region ID of the ECS instance. You can call the DescribeRegions operation to query the most recent region list.
PortNumber	Integer	No	22	The port number of the ECS instance, which is used to forward data. After this parameter is specified, the Cloud Assistant client forwards data to the specified port for port forwarding. Example: 22. This parameter is empty by default, which indicates that no port number is configured to forward data.
InstanceId.N	String	Yes	i-bp1eifrtpxa9tb****	The ID of ECS instance N. You can use this parameter to specify up to 10 ECS instances. Valid values of N: 1 to 10.

Response parameters

Parameter	Type	Example	Description
RequestId	String	EB5173B0-8E80-564E-AAD1-31354123DCF4	The ID of the request.
SessionId	String	s-hz023od0x9****	The ID of the session.
SecurityToken	String	d86c2df2-d19c-4bd8-b817-a19ef123****	The security token included in the WebSocket request header. The system uses this token to authenticate the request.

Parameter	Type	Example	Description
WebSocketUrl	String	wss://cn-hangzhou.axt.aliyuncs.com/session?sessionId=s-hz023od0x9****&token=d86c2df2-d19c-4bd8-b817-a19ef123****	The URL of the WebSocket session to connect to the instance. The URL includes the session ID (`SessionId`) and the authentication token (`SecurityToken`).

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=StartTerminalSession
&RegionId=cn-hangzhou
&InstanceId.1=i-bp1eifrtpxa9tb****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<StartTerminalSessionResponse>
    <SecurityToken>d86c2df2-d19c-4bd8-b817-a19ef123****</SecurityToken>
    <RequestId>EB5173B0-8E80-564E-AAD1-31354123DCF4</RequestId>
    <WebSocketUrl>wss://cn-hangzhou.axt.aliyuncs.com/session?sessionId=s-hz023od0x9****&amp;token=d86c2df2-d19c-4bd8-b817-a19ef1
23****</WebSocketUrl>
    <SessionId>s-hz023od0x9****</SessionId>
</StartTerminalSessionResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "SecurityToken" : "d86c2df2-d19c-4bd8-b817-a19ef123****",
  "RequestId" : "EB5173B0-8E80-564E-AAD1-31354123DCF4",
  "WebSocketUrl" : "wss://cn-hangzhou.axt.aliyuncs.com/session?sessionId=s-hz023od0x9****&token=d86c2df2-d19c-4bd8-b817-a19ef123
****",
  "SessionId" : "s-hz023od0x9****"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
403	InstanceIds.ExceedLimit	The number of instance IDs exceeds the upper limit.	The error message returned because the number of specified instance IDs exceeds the upper limit.
403	SessionCount.ExceedLimit	The number of sessions exceeds the upper limit.	The error message returned because the number of sessions in the connected state exceeds the upper limit.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
404	InvalidInstance.NotFound	The specified instances not found.	The error message returned because the specified InstanceId parameter does not exist.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.7. InstallCloudAssistant

Installs the Cloud Assistant client on one or more Elastic Compute Service (ECS) instances. After the Cloud Assistant client is installed on ECS instances, you must restart the instances for the Cloud Assistant client to take effect.

Description

After you call the InstallCloudAssistant operation and then the RebootInstance operation, the Cloud Assistant client takes effect.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	InstallCloudAssistant	The operation that you want to perform. Set the value to **InstallCloudAssistant**.
RegionId	String	Yes	cn-hangzhou	The region ID of the ECS instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId.N	String	Yes	i-bp1iudwa5b1tqa****	The ID of ECS instance N. Valid values of N: 1 to 50.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=InstallCloudAssistant
&InstanceId.1=i-bp11f7trr4hbi1****
&InstanceId.2=i-bp1iudwa5b1tqa****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<InstallCloudAssistantResponse>
    <RequestId>928E2273-5715-46B9-A730-238DC996A533</RequestId>
</InstallCloudAssistantResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "928E2273-5715-46B9-A730-238DC996A533"
}
```

Error codes

HttpCode	Error code	Error message	Description

HttpCode	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
403	InstanceIds.ExceedLimit	The number of instance IDs exceeds the upper limit.	The error message returned because the number of specified instance IDs exceeds the upper limit.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
404	InvalidInstance.NotFound	The specified instance does not exist.	The error message returned because the specified InstanceId parameter does not exist.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.8. ModifyCommand

Modifies the parameters and content of a Cloud Assistant command.

Description

You can modify a command when it is run. After the command is modified, the new command content applies to subsequent executions.

You cannot modify the command type. For example, you cannot change a shell command (RunShellScript) to a batch command (RunBatScript).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyCommand	The operation that you want to perform. Set the value to **ModifyCommand**.
RegionId	String	Yes	cn-hangzhou	The region ID of the command. You can call the DescribeRegions operation to query the most recent region list.
CommandId	String	Yes	c-hz01272yr52****	The ID of the command. You can call the DescribeCommands operation to query all available command IDs.
Name	String	No	test-CommandName	The name of the command. The name supports all character sets and can be up to 128 characters in length.
Description	String	No	This is description.	The description of the command. The description supports all character sets and can be up to 512 characters in length.

Parameter	Type	Required	Example	Description

CommandContent	String	No	echo	The content of the command. The command content can be plaintext or Base64-encoded. Take note of the following items:
				• The Base64-encoded command content cannot exceed 16 KB in size.
				• If the command content is Base64-encoded, set `ContentEncoding` to Base64.
				• When `EnableParameter` is set to true, the custom parameter feature is enabled and you can configure custom parameters based on the following rules:
				  ○ Define custom parameters in the `{{}}` format. Within `{{}}`, the spaces and line feeds before and after the parameter names are ignored.
				  ○ The number of custom parameters cannot exceed 20.
				  ○ A custom parameter name can contain only letters, digits, underscores (_), and hyphens (-). The name is case-insensitive.
				  ○ Each custom parameter name cannot exceed 64 bytes in length.

WorkingDir	String	No	/home/	The working directory of the command on the ECS instance.
Timeout	Long	No	120	The maximum timeout period for command execution. Unit: seconds. When a command cannot run within the specified time range, the command times out. When a command execution times out, the Cloud Assistant client forcefully terminates the command process by canceling the process ID (PID) of the command.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0DE9B41E-EF0D-40A0-BB43-37749C5BDA9C	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyCommand
&CommandId=c-hz01272yr52****
&RegionId=cn-hangzhou
&Name=test-CommandName
&Description=This is description.
&CommandContent=c2VydmljZSB0b21jYXQgc3RhcnQ=
&WorkingDir=/home/
&Timeout=120
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyCommandResponse>
    <RequestId>0DE9B41E-EF0D-40A0-BB43-37749C5BDA9C</RequestId>
</ModifyCommandResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "0DE9B41E-EF0D-40A0-BB43-37749C5BDA9C"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
403	CmdName.Readonly	The command name is readonly after publishing.	The error message returned because the command is published and cannot have its name changed.
403	CmdName.ExceedLimit	The length of the command name exceeds the upper limit.	The error message returned because the command name exceeds 128 characters in length.
403	CmdContent.ExceedLimit	The length of the command content exceeds the upper limit.	The error message returned because the length of the command content exceeds the upper limit.
403	CmdDesc.ExceedLimit	The length of the command description exceeds the upperlimit.	The error message returned because the command description exceeds 512 characters in length.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
404	InvalidCmdId.NotFound	The specified command ID does not exist.	The error message returned because the specified CommandId parameter is invalid. You can call the DescribeCommands operation to query all available command IDs.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.9. ModifyManagedInstance

Modifies the information of a managed instance.

Description

The ModifyManagedInstance operation can be called to modify only the name of a single managed instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyManagedInstance	The operation that you want to perform. Set the value to **ModifyManagedInstance**.
RegionId	String	Yes	cn-hangzhou	The region ID of the managed instance. The following regions are supported: China (Qingdao), China (Beijing), China (Zhangjiakou), China (Hohhot), China (Hangzhou), China (Shanghai), China (Shenzhen), China (Heyuan), and China (Hong Kong). You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
InstanceId	String	Yes	mi-hz01nmcf****	The ID of the managed instance.
InstanceName	String	Yes	testInstanceName	The new name of the managed instance. The name must be 1 to 128 characters in length. It must start with a letter and cannot start with a special character or a digit. The name can contain letters, digits, periods (.), underscores (_), hyphens (-), and colons (:) and cannot start with `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Instance	Object		Details about the managed instance.
InstanceName	String	testInstanceName	The name of the managed instance.
InstanceId	String	mi-hz01nmcf****	The ID of the managed instance.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyManagedInstance
&RegionId=cn-hangzhou
&InstanceId=mi-hz01nmcf****
&InstanceName=testInstanceName
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ModifyManagedInstanceResponse>
    <RequestId>874C6289-9D18-5E1A-8A68-8AC11E6E57B3</RequestId>
    <Instance>
        <InstanceName>testInstanceName</InstanceName>
        <InstanceId>mi-hz01nmcf****</InstanceId>
    </Instance>
</ModifyManagedInstanceResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "874C6289-9D18-5E1A-8A68-8AC11E6E57B3",
  "Instance" : {
    "InstanceName" : "testInstanceName",
    "InstanceId" : "mi-hz01nmcf****"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description

HttpCode	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
400	InstanceName.ExceedLimit	The specified instance name exceed limit.	The error message returned because the new name specified for the managed instance exceeds the maximum length.
400	InstanceName.InvalidPattern	The specified instance name pattern invalid.	The error message returned because the specified InstanceName parameter is invalid.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
404	InvalidInstance.NotFound	The specified instances id does not exist.	The error message returned because the specified InstanceId parameter does not exist.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.10. SendFile

Sends a file to one or more Elastic Compute Service (ECS) instances.

Description

- The instances to which to send a file must be in the Running (`Running`) state.
- The Cloud Assistant client must be installed on the instances. For information about how to install the Cloud Assistant client, see InstallCloudAssistant.
- Only the Cloud Assistant client versions that are later than the following ones support file sending. If the `ClientNeedUpgrade` error code is returned, you must upgrade the Cloud Assistant client to the latest version. For more information, see Update or disable updates for the Cloud Assistant client.
  - For Linux instances, the version of the Cloud Assistant client must be later than 1.0.2.569.
  - For Windows instances, the version of the Cloud Assistant client must be later than 1.0.0.149.
- The file to be sent must not exceed 32 KB in size after it is encoded in Base64.
- The file may fail to be sent due to exceptions on the instances, network, or the Cloud Assistance client. Call the DescribeSendFileResults operation to troubleshoot the issues.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	SendFile	The operation that you want to perform. Set the value to **SendFile**.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance to which to send the file. You can call the DescribeRegions operation to query the most recent region list.
Name	String	Yes	file.txt	The name of the file. The name supports all character sets and can be up to 255 characters in length.
Description	String	No	This is a test file.	The description of the file. The description supports all character sets and can be up to 512 characters in length.

Parameter	Type	Required	Example	Description
Timeout	Long	No	60	The timeout period for sending the file. Unit: seconds. • A timeout error occurs when a file cannot be sent because the process slows down or because a specific module or the Cloud Assistant client does not exist. • If the specified timeout period is less than 10 seconds, the system automatically sets the timeout period to 10 seconds to ensure that the file is sent to the instances. Default value: 60.
TargetDir	String	Yes	/home	The destination directory on the instance to which to send the file. If the specified directory does not exist, the system creates the directory on the instance.
ContentType	String	No	PlainText	The content type of the file. Valid values: • PlainText: The command content is not encoded. • Base64: The command content is Base64-encoded. Default value: PlainText.
Content	String	Yes	#!/bin/bash echo "Current User is :" echo $(ps | grep "$$" | awk '{print $2}') -------- oss://bucketName/objectName	The content of the file. The content must not exceed 32 KB in size after it is encoded in Base64. • If `ContentType` is set to `PlainText`, the Content value is in plaintext. • If `ContentType` is set to `Base64`, the Content value is Base64-encoded.
FileOwner	String	No	root	The owner of the file. This parameter takes effect only on Linux instances. Default value: root.
FileGroup	String	No	root	The user group of the file. This parameter takes effect only on Linux instances. Default value: root.
FileMode	String	No	0644	The permissions on the file. This parameter takes effect only on Linux instances. You can configure this parameter in the same way as you configure the chmod command. Default value: 0644, which indicates that the owner of the file has the read and write permissions on the file and that the user group of the file and other users have only the read permissions on the file.
Overwrite	Boolean	No	true	Specifies whether to overwrite a file in the destination directory if the file has the same name as the sent file. • true: overwrites the file. • false: does not overwrite the file. Default value: false.
InstanceId.N	String	Yes	i-bp185dy2o3o6n****	The ID of instance N to which to send the file. A maximum of 50 instance IDs can be specified. Valid values of N: 1 to 50.

Response parameters

Parameter	Type	Example	Description
InvokeId	String	f-7d2a745b412b46****	The ID of the execution.

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=SendFile
&Content='echo hello'
&InstanceId.1=i-bp185dy2o3o6n****
&Name=file.txt
&RegionId=cn-hangzhou
&TargetDir=/home
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<SendFileResponse>
        <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
        <InvokeId>f-7d2a745b412b46****</InvokeId>
</SendFileResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "E69EF3CC-94CD-42E7-8926-F133B86387C0",
  "InvokeId" : "f-7d2a745b412b46****"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
403	FileSize.ExceedLimit	The length of file content exceeds limit.	The error message returned because the maximum length of the file content has been reached.
403	FileName.ExceedLimit	The length of file name exceeds limit.	The error message returned because the maximum length of the file name has been reached.
403	FileDesc.ExceedLimit	The length of file description exceeds limit.	The error message returned because the maximum length of the file description has been reached.
403	FileTargetDir.Invalid	The target directory of file is invalid.	The error message returned because the specified TargetDir parameter is invalid.
403	InstanceIds.ExceedLimit	The number of instance IDs exceeds the upper limit.	The error message returned because the maximum number of specified instance IDs has been reached.
403	FileMode.Invalid	The mode of file is invalid.	The error message returned because the specified FileMode parameter is invalid.
403	FileContent.DecodeError	The Content can not be base64 decoded.	The error message returned because the file content cannot be decoded in Base64.
403	FileContentType.Invalid	The ContentType of file is invalid.	The error message returned because the specified ContentType parameter is invalid.

HttpCode	Error code	Error message	Description
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
404	InvalidInstance.NotFound	The specified instances not found.	The error message returned because the specified InstanceId parameter does not exist.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.11. DescribeSendFileResults

Queries the files sent by Cloud Assistant and their status.

Description

- When you send a file, the file may fail to be sent to specified instances. You must call this operation to check the file sending results.
- You can call this operation to query the file sending records of the last two weeks. A maximum of 100,000 file sending records can be retained.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSendFileResults	The operation that you want to perform. Set the value to **DescribeSendFileResults**.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InvokeId	String	No	f-hz0jdfwd9f****	The ID of the execution.
Name	String	No	test.txt	The name of the file about which you want to query sending records.
InstanceId	String	No	i-hz0jdfwd9f****	The ID of the instance for which you want to query file sending results.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Long	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description
PageSize	Long	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Parameter	Type	Example	Description
PageNumber	Long	1	The page number of the returned page.
TotalCount	Long	2	The total number of file sending tasks.
Invocations	Array of Invocation		Details about the file sending records.
Invocation			
CreationTime	String	2019-12-20T06:15:54Z	The time when the file sending task was created.

InvocationStatus	String	Success	The overall sending status of the file. The overall sending status of the file depends on its sending status on all the destination instances. Valid values:
			• Pending: The file is being verified or sent. If the sending status of the file on at least one instance is Pending, the overall sending status of the file is Pending.
			• Running: The file creation task is running on the instances. If the sending status of the file on at least one instance is Running, the overall sending status of the file is Running.
			• Success: If the sending status of the file on all the instances is Success, the overall sending status of the file is Success.
			• Failed: If the sending status of the file on all the instances is Failed, the overall sending status of the file is Failed. If the sending status of the file on one or more instances is one of the following values, the overall sending status of the file is Failed:
			  ○ Invalid: The file is invalid.
			  ○ Aborted: The file failed to be sent.
			  ○ Failed: The file failed to be created.
			  ○ Timeout: The file sending task timed out.
			  ○ Error: An error occurred while the file is being sent.
			• PartialFailed: The file was sent to some of the specified instances and failed to be sent to the others. The overall sending status of the file is PartialFailed only when its sending status is Success on some instances and is Failed on the others.

ContentType	String	PlainText	The content type of the file. Valid values: • PlainText • Base64
TargetDir	String	/root	The destination directory.
FileOwner	String	root	The owner of the file.
Description	String	This is a test file.	The description of the file.
VmCount	Integer	1	The number of instances to which you want to send the file.
FileMode	String	777	The permissions on the file.
FileGroup	String	root	The user group of the file.
InvokeId	String	f-hz0jdfwd9f****	The ID of the execution.
Name	String	test.txt	The name of the file.

Parameter	Type	Example	Description
Content	String	#!/bin/bash echo "Current User is :" echo $(ps | grep "$$" | awk '{print $2}')	The content of the file.
Overwrite	String	false	Indicates whether a file in the destination directory is overwritten if the file has the same name as the sent file.
InvokeInstances	Array of InvokeInstance		Details about the destination instances.
InvokeInstance			
CreationTime	String	2019-12-20T06:15:54Z	The creation time of the file sending task.
StartTime	String	2019-12-20T06:15:54Z	The time when the file sending task started to be executed on the instance.
InvocationStatus	String	Success	The status of the file sending task.
FinishTime	String	2019-12-20T06:15:54Z	The time when the file sending task finished being executed.
UpdateTime	String	2019-12-20T06:15:54Z	The time when the task status was updated.
ErrorInfo	String	the instance is not running when create task	The error message returned when the file failed to be sent to the instance or the file sending task failed to be executed on the instance. Valid values: • Null: The file is sent to the instance. • the specified instance does not exists • the instance has released when create task • the instance is not running when create task • the specified account does not exists • the aliyun service is not running on the instance • the aliyun service in the instance does not response • the aliyun service in the instance is upgrading now • the aliyun service in the instance need upgrade • the command delivery has been timeout • Unexpected error during creating • File already exists • File content error • File name is invalid • File path is invalid • Owner not exists • Group not exists • Mode is invalid

Parameter	Type	Example	Description
ErrorCode	String	InstanceNotExists	The error code returned when the file failed to be sent to the instance. Valid values: • Null: The file is sent to the instance. • InstanceNotExists: The instance does not exist or was released. • InstanceReleased: The instance is released while the file is being sent. • InstanceNotRunning: The instance is not running when the file sending task is being created. • AccountNotExists: The specified account does not exist. • ClientNotRunning: The Cloud Assistant client is not running. • ClientNotResponse: The Cloud Assistant client is not responding. • ClientIsUpgrading: The Cloud Assistant client is being upgraded. • ClientNeedUpgrade: The Cloud Assistant client needs to be upgraded. • DeliveryTimeout: The file sending task timed out. • FileCreateFail: The file failed to be created. • FileAlreadyExists: A file with the same name already exists in the specified directory. • FileContentInvalid: The file content is invalid. • FileNameInvalid: The file name is invalid. • FilePathInvalid: The specified directory is invalid. • FileAuthorityInvalid: The specified permissions on the file are invalid.
InstanceId	String	i-uf614fhehhz****	The ID of the instance.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSendFileResults
&RegionId=cn-hangzhou
&InvokeId=f-hz0vk9****
&Name=test.txt
&InstanceId=i-bp1hsglsw****
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeSendFileResultsResponse>
    <TotalCount>1</TotalCount>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <PageSize>10</PageSize>
    <PageNumber>1</PageNumber>
    <Invocations>
        <Invocation>
            <FileMode>0644</FileMode>
            <Overwrite>false</Overwrite>
            <InvocationStatus>Success</InvocationStatus>
            <Description>This is a test file.</Description>
            <ContentType>PlainText</ContentType>
            <VmCount>1</VmCount>
            <TargetDir>/root</TargetDir>
            <FileGroup>root</FileGroup>
            <FileOwner>root</FileOwner>
            <InvokeInstances>
                <InvokeInstance>
                    <InvocationStatus>Success</InvocationStatus>
                    <FinishTime>2020-09-11T08:30:55Z</FinishTime>
                    <InstanceId>i-bp1hsglsw****</InstanceId>
                    <ErrorInfo/>
                    <CreationTime>2020-09-11T08:30:55Z</CreationTime>
                    <StartTime>2020-09-11T08:30:55Z</StartTime>
                    <UpdateTime>2020-09-11T08:30:55Z</UpdateTime>
                    <ErrorCode/>
                </InvokeInstance>
            </InvokeInstances>
            <Name>test.txt</Name>
            <Content>ZWNobyBoZWxsbw==</Content>
            <CreationTime>2020-09-11T08:30:55Z</CreationTime>
            <InvokeId>f-hz0vk9****</InvokeId>
        </Invocation>
    </Invocations>
</DescribeSendFileResultsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalCount" : 1,
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "PageSize" : 10,
  "PageNumber" : 1,
  "Invocations" : {
    "Invocation" : [ {
      "FileMode" : "0644",
      "Overwrite" : false,
      "InvocationStatus" : "Success",
      "Description" : "This is a test file.",
      "ContentType" : "PlainText",
      "VmCount" : 1,
      "TargetDir" : "/root",
      "FileGroup" : "root",
      "FileOwner" : "root",
      "InvokeInstances" : {
        "InvokeInstance" : [ {
          "InvocationStatus" : "Success",
          "FinishTime" : "2020-09-11T08:30:55Z",
          "InstanceId" : "i-bp1hsglsw****",
          "ErrorInfo" : "",
          "CreationTime" : "2020-09-11T08:30:55Z",
          "StartTime" : "2020-09-11T08:30:55Z",
          "UpdateTime" : "2020-09-11T08:30:55Z",
          "ErrorCode" : ""
        } ]
      },
      "Name" : "test.txt",
      "Content" : "ZWNobyBoZWxsbw==",
      "CreationTime" : "2020-09-11T08:30:55Z",
      "InvokeId" : "f-hz0vk9****"
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
403	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned because the specified PageNumber parameter is invalid.
403	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned because the specified PageSize parameter is invalid.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.12. DescribeCloudAssistantStatus

Queries whether the Cloud Assistant client is installed on one or more Elastic Compute Service (ECS) instances. If the Cloud Assistant client is installed, the system queries the total number of Cloud Assistant commands that have been run, the number of Cloud Assistant commands that are being run, and the time when Cloud Assistant commands were last run.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeCloudAssistantStatus	The operation that you want to perform. Set the value to **DescribeCloudAssistantStatus**.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
OSType	String	No	Windows	The operating system type of the instance. Valid values: • Windows • Linux
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Long	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.
InstanceId.N	String	No	i-bp1iudwa5b1tqa****	The ID of instance N. You can specify up to 100 instance IDs in each request. Valid values of N: 1 to 100.

Response parameters

Parameter	Type	Example	Description
PageSize	Long	1	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
PageNumber	Long	1	The page number of the returned page.
TotalCount	Long	1	The total number of instances.
InstanceCloudAssistantStatusSet	Array of InstanceCloudAssistantStatus		Details about the installation status of the Cloud Assistant client.
InstanceCloudAssistantStatus			
CloudAssistantStatus	String	true	Indicates whether the Cloud Assistant client is installed on the instance.
LastInvokedTime	String	2021-03-15T08:00:00Z	The time when commands were last run.
CloudAssistantVersion	String	2.2.0.106	The version number of the Cloud Assistant client.
ActiveTaskCount	Long	0	The number of commands that are being run.
InvocationCount	Long	2	The total number of commands that have been run.

Parameter	Type	Example	Description
InstanceId	String	i-bp1iudwa5b1tqa****	The ID of the instance.
LastHeartbeatTime	String	2021-03-15T09:00:00Z	The last heartbeat time of Cloud Assistant.
OSType	String	Linux	The operating system type of the instance. Valid values: • Windows • Linux
SupportSessionManager	Boolean	true	Indicates whether the version of the Cloud Assistant client supports the session management feature.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeCloudAssistantStatus
&InstanceId.1=i-bp1iudwa5b1tqa****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeCloudAssistantStatusResponse>
    <TotalCount>1</TotalCount>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <PageSize>1</PageSize>
    <PageNumber>1</PageNumber>
    <InstanceCloudAssistantStatusSet>
        <InstanceCloudAssistantStatus>
            <CloudAssistantVersion>2.2.0.106</CloudAssistantVersion>
            <SupportSessionManager>true</SupportSessionManager>
            <InstanceId>i-bp1iudwa5b1tqa****</InstanceId>
            <CloudAssistantStatus>true</CloudAssistantStatus>
            <OSType>Linux</OSType>
            <InvocationCount>2</InvocationCount>
            <ActiveTaskCount>0</ActiveTaskCount>
            <LastInvokedTime>2021-03-15T08:00:00Z</LastInvokedTime>
            <LastHeartbeatTime>2021-03-15T09:00:00Z</LastHeartbeatTime>
        </InstanceCloudAssistantStatus>
    </InstanceCloudAssistantStatusSet>
</DescribeCloudAssistantStatusResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalCount" : 1,
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "PageSize" : 1,
  "PageNumber" : 1,
  "InstanceCloudAssistantStatusSet" : {
    "InstanceCloudAssistantStatus" : [ {
      "CloudAssistantVersion" : "2.2.0.106",
      "SupportSessionManager" : true,
      "InstanceId" : "i-bp1iudwa5b1tqa****",
      "CloudAssistantStatus" : "true",
      "OSType" : "Linux",
      "InvocationCount" : 2,
      "ActiveTaskCount" : 0,
      "LastInvokedTime" : "2021-03-15T08:00:00Z",
      "LastHeartbeatTime" : "2021-03-15T09:00:00Z"
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
403	InstanceIds.ExceedLimit	The number of instance IDs exceeds the upper limit.	The error message returned because the number of specified instance IDs exceeds the upper limit.
403	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned because the specified PageSize parameter is invalid.
403	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned because the specified PageNumber parameter is invalid.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
404	InvalidInstance.NotFound	The specified instance does not exist.	The error message returned because the specified instance does not exist.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.13. DescribeCommands

Queries the Cloud Assistant commands that you created or the public Cloud Assistant commands that Alibaba Cloud provides.

Description

If you specify only the `Action` and `RegionId` parameters, all the available commands (`CommandId`) that you created in the specified region are queried by default.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeCommands	The operation that you want to perform. Set the value to **DescribeCommands**.
RegionId	String	Yes	cn-hangzhou	The region ID of the command. You can call the DescribeRegions operation to query the most recent region list.

Provider	String	No	AlibabaCloud	The provider of the public command.
				• If you do not specify this parameter, all the commands that you created are queried.
				• If you set this parameter to `AlibabaCloud`, all the public commands provided by Alibaba Cloud are queried.
				• If you set this parameter to a specific provider, all the public commands provided by the provider are queried. Examples:
				  ○ If you set `Provider` to AlibabaCloud.ECS.GuestOS, all the public commands provided by `AlibabaCloud.ECS.GuestOS` are queried.
				  ○ If you set `Provider` to AlibabaCloud.ECS.GuestOSDiagnose, all the public commands provided by `AlibabaCloud.ECS.GuestOSDiagnose` are queried.

CommandId	String	No	c-hz01272yr52****	The ID of the command.
Name	String	No	testName	The name of the command. Partial command names are not supported.
Description	String	No	testDescription	The description of the command.
Type	String	No	RunShellScript	The command type. Valid values: • RunBatScript: batch command, applicable to Windows instances • RunPowerShellScript: PowerShell command, applicable to Windows instances • RunShellScript: shell command, applicable to Linux instances
ContentEncoding	String	No	PlainText	The encoding mode of the `CommandContent` and `Output` response parameters. Valid values: • PlainText: returns the original command content and command output. • Base64: returns the Base64-encoded command content and command output. Default value: Base64.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Long	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description
PageSize	Long	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
PageNumber	Long	1	The page number of the returned page.
TotalCount	Long	5	The total number of commands.
Commands	Array of Command		Details about the commands.
Command			
CreationTime	String	2020-11-17T06:52Z	The time when the command was created.
Type	String	RunShellScript	The command type.
Timeout	Long	3600	The timeout period.
InvokeTimes	Integer	2	The number of tasks created by using the command.
CommandId	String	c-hz01272yr52****	The ID of the command.
WorkingDir	String	/home/	The working directory of the command.
Description	String	testDescription	The description of the command.
Version	Integer	1	The version of the public command. If multiple public commands from the same provider (`Provider`) belong to the same category and have the same name, these commands are of different versions of the same command. This parameter is not returned for the Cloud Assistant commands that you created.
Provider	String	AlibabaCloud.ECS.GuestOS	The provider of the public command.
CommandContent	String	Y2QgL3Jvb3Q=	The Base64-encoded command content.
Category	String	Alibaba Cloud-ECS-instance system	The category of the public command.
Latest	Boolean	true	Indicates whether the public command is of the latest version. If multiple public commands from the same provider (`Provider`) belong to the same category and have the same name, these commands are of different versions of the same command. This parameter is not returned for the Cloud Assistant commands that you created.
Name	String	testName	The name of the command.
EnableParameter	Boolean	true	Indicates whether the custom parameter feature was enabled for the command.

Parameter	Type	Example	Description
ParameterNames	Array of String	['parameter1','parameter2']	A list of custom parameter names that are parsed from the command content specified when the command was being created. If the custom parameter feature is not enabled, an empty list is returned.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeCommands
&RegionId=cn-hangzhou
&CommandId=c-hz01272yr52****
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeCommandsResponse>
    <TotalCount>1</TotalCount>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <PageSize>10</PageSize>
    <PageNumber>1</PageNumber>
    <Commands>
        <Command>
            <Category/>
            <Description>test1</Description>
            <ParameterNames></ParameterNames>
            <Timeout>3600</Timeout>
            <Name>testName</Name>
            <Provider/>
            <CommandContent>Y2QgL3Jvb3Q=</CommandContent>
            <WorkingDir/>
            <Type>RunShellScript</Type>
            <InvokeTimes>2</InvokeTimes>
            <CreationTime>2020-11-17T06:52Z</CreationTime>
            <EnableParameter>false</EnableParameter>
            <CommandId>c-hz01272yr52****</CommandId>
        </Command>
    </Commands>
</DescribeCommandsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalCount" : 1,
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "PageSize" : 10,
  "PageNumber" : 1,
  "Commands" : {
    "Command" : [ {
      "Category" : "",
      "Description" : "test1",
      "ParameterNames" : {
        "ParameterName" : [ ]
      },
      "Timeout" : 3600,
      "Name" : "testName",
      "Provider" : "",
      "CommandContent" : "Y2QgL3Jvb3Q=",
      "WorkingDir" : "",
      "Type" : "RunShellScript",
      "InvokeTimes" : 2,
      "CreationTime" : "2020-11-17T06:52Z",
      "EnableParameter" : false,
      "CommandId" : "c-hz01272yr52****"
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
403	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned because the specified PageNumber parameter is invalid.
403	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned because the specified PageSize parameter is invalid.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.14. DescribeInvocationResults

Queries the execution results of one or more Cloud Assistant commands on Elastic Compute Service (ECS) instances.

Description

- After you run a command, the command may not succeed or return the expected results. You can call this operation to query the actual execution results.
- You can query execution information that was generated within the last two weeks. A maximum of 100,000 pieces of execution information can be retained.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInvocationResults	The operation that you want to perform. Set the value to **DescribeInvocationResults**.
RegionId	String	Yes	cn-hangzhou	The region ID of the command. You can call the DescribeRegions operation to query the most recent region list.
InvokeId	String	No	t-hz0jdfwd9f****	The ID of the execution. You can call the DescribeInvocations operation to query the execution IDs.
InstanceId	String	No	i-bp1i7gg30r52z2em****	The ID of the instance.
CommandId	String	No	c-hz0jdfwcsr****	The ID of the command.
InvokeRecordStatus	String	No	Running	The state of the execution. Valid values: • Running • Finished • Failed • Stopped **Note** To improve compatibility, we recommend that you do not use this parameter. We recommend that you use the `InvocationStatus` parameter.
IncludeHistory	Boolean	No	false	Specifies whether to return the historical results of the recurring execution. Valid values: • true: returns the historical results of the recurring execution. When this parameter is set to true, the `InvokeId` parameter must be set to the ID of a recurring execution. • false: does not return the historical results of the recurring execution. Default value: false.
ContentEncoding	String	No	PlainText	The encoding method of the `Output` response parameter. Valid values: • PlainText: returns the original command content and command output. • Base64: returns the Base64-encoded command content and command output. Default value: Base64.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Long	No	1	The number of entries to return on each page. Maximum value: 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Invocation	Object		Details of the execution result.
PageSize	Long	1	The number of entries returned per page.
PageNumber	Long	1	The page number of the returned page.
TotalCount	Long	1	The total number of commands.
InvocationResults	Array of InvocationResult		The execution results.
InvocationResult			

InvocationStatus	String	Success	The execution state on a single instance. Valid values:
			• Pending: The command is being verified or sent.
			• Invalid: The specified command type or parameter is invalid.
			• Aborted: The command fails to be sent. To send a command to an instance, make sure that the instance is in the Running state and the command is sent to the instance within 1 minute.
			• Running: The command is being run on the instance.
			• Success:
			  ○ One-time execution: The execution is complete, and the exit code is 0.
			  ○ Recurring execution: The last execution succeeds, the exit code is 0, and the specified cycle ends.
			• Failed:
			  ○ One-time execution: The execution is complete, but the exit code is not 0.
			  ○ Recurring execution: The last execution is complete, the exit code is not 0, and the specified cycle is about to end.
			• Error: The execution cannot proceed due to an exception.
			• Timeout: The execution times out.
			• Cancelled: The execution is canceled, and the command is not started.
			• Stopping: The command that is running is being stopped.
			• Terminated: The command is terminated while it is being run.
			• Scheduled:
			  ○ One-time execution: The command is not applicable.
			  ○ Recurring execution: The command is waiting to be run.

Repeats	Integer	0	The number of times that the command is run on the instance. • If the execution is a one-time execution, the value is 0 or 1. • If the execution is a recurring execution, the value is the number of times that the command is run.
CommandId	String	c-hz0jdfwcsr****	The ID of the command.
InstanceId	String	i-bp1i7gg30r52z2em****	The ID of the instance.
Output	String	MTU6MzA6MDEK	The command output.
Dropped	Integer	0	The size of truncated and discarded text when the size of text in the `Output` response parameter is larger than 24 KB.

Parameter	Type	Example	Description
StopTime	String	2020-01-19T09:15:47Z	The time when the command stopped being run on the instance. If you call the `StopInvocation` operation to manually stop the execution, the value is the time when you call the operation.
ExitCode	Long	0	The exit code of the command. • For Linux instances, the value is the exit code of the shell command. • For Windows instances, the value is the exit code of the batch or PowerShell command.
StartTime	String	2019-12-20T06:15:55Z	The time when the command started to be run on the instance.
ErrorInfo	String	the specified instance does not exists	The error message returned when the command cannot be sent or run. Valid values: • If this parameter is empty, the command is run normally. • the specified instance does not exists • the instance has released when create task • the instance is not running when create task • the command is not applicable • the specified account does not exists • the specified directory does not exists • the cron job expression is invalid • the aliyun service is not running on the instance • the aliyun service in the instance does not response • the aliyun service in the instance is upgrading now • the aliyun service in the instance need upgrade • the command delivery has been timeout • the command execution has been timeout • the command execution got an exception • the command execution has been interrupted • the command execution exit code is not zero

Parameter	Type	Example	Description
ErrorCode	String	InstanceNotExists	The error code returned when the command cannot be sent or run. Valid values: • If this parameter is empty, the command is run normally. • InstanceNotExists: The instance does not exist or has been released. • InstanceReleased: The instance is released while the command is being run. • InstanceNotRunning: The instance is not running while the command is being run. • CommandNotApplicable: The command is not applicable to the specified instance. • AccountNotExists: The specified account does not exist. • DirectoryNotExists: The specified directory does not exist. • BadCronExpression: The specified cron expression for the execution schedule is invalid. • ClientNotRunning: The Cloud Assistant client is not running. • ClientNotResponse: The Cloud Assistant client does not respond. • ClientIsUpgrading: The Cloud Assistant client is being upgraded. • ClientNeedUpgrade: The Cloud Assistant client needs to be upgraded. • DeliveryTimeout: The request to send the command has timed out. • ExecutionTimeout: The execution has timed out. • ExecutionException: An exception has occurred while the command is being run. • ExecutionInterrupted: The execution is interrupted. • ExitCodeNonzero: The execution is complete, but the exit code is not 0.
FinishedTime	String	2019-12-20T06:15:56Z	The completion time of the execution. If an execution times out, the completion time of the execution is subject to the value of the TimedOut parameter specified in the CreateCommand operation.
InvokeId	String	t-hz0jdfwd9f****	The ID of the execution.
InvokeRecordStatus	String	Running	The status of the execution.
Username	String	root	The username that was used to run the command on the ECS instance.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInvocationResults
&RegionId=cn-hangzhou
&InstanceId=i-bp1i7gg30r52z2em****
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeInvocationResultsResponse>
    <RequestId>F416C43A-6581-4138-9503-4FBBC4EA1BB7</RequestId>
    <Invocation>
        <InvocationResults>
            <InvocationResult>
                <Dropped>0</Dropped>
                <InvocationStatus>Failed</InvocationStatus>
                <InstanceId>i-bp1i7gg30r52z2em****</InstanceId>
                <ExitCode>1</ExitCode>
                <ErrorInfo>the command execution exit code is not zero.</ErrorInfo>
                <StartTime>2020-05-11T09:01:40Z</StartTime>
                <Repeats>1</Repeats>
                <InvokeRecordStatus>Finished</InvokeRecordStatus>
                <FinishedTime>2020-05-11T09:01:41Z</FinishedTime>
                <Output/>
                <CommandId>c-hz0jdfwcsr****</CommandId>
                <ErrorCode>ExitCodeNonzero</ErrorCode>
                <InvokeId>t-hz0jdfwd9f****</InvokeId>
                <StopTime/>
            </InvocationResult>
        </InvocationResults>
        <TotalCount>5</TotalCount>
        <PageSize>1</PageSize>
        <PageNumber>1</PageNumber>
    </Invocation>
</DescribeInvocationResultsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "F416C43A-6581-4138-9503-4FBBC4EA1BB7",
  "Invocation" : {
    "InvocationResults" : {
      "InvocationResult" : [ {
        "Dropped" : 0,
        "InvocationStatus" : "Failed",
        "InstanceId" : "i-bp1i7gg30r52z2em****",
        "ExitCode" : 1,
        "ErrorInfo" : "the command execution exit code is not zero.",
        "StartTime" : "2020-05-11T09:01:40Z",
        "Repeats" : 1,
        "InvokeRecordStatus" : "Finished",
        "FinishedTime" : "2020-05-11T09:01:41Z",
        "Output" : "",
        "CommandId" : "c-hz0jdfwcsr****",
        "ErrorCode" : "ExitCodeNonzero",
        "InvokeId" : "t-hz0jdfwd9f****",
        "StopTime" : ""
      } ]
    },
    "TotalCount" : 5,
    "PageSize" : 1,
    "PageNumber" : 1
  }
}
```

Error codes

HTTP state code	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
403	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned because the specified PageNumber parameter is invalid.

HTTP state code	Error code	Error message	Description
403	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned because the specified PageSize parameter is invalid.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.15. DescribeActivations

Queries existing activation codes and their usage information.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeActivations	The operation that you want to perform. Set the value to **DescribeActivations**.
RegionId	String	Yes	cn-hangzhou	The region ID of the activation code. The following regions are supported: China (Qingdao), China (Beijing), China (Zhangjiakou), China (Hohhot), China (Hangzhou), China (Shanghai), China (Shenzhen), China (Heyuan), and China (Hong Kong). You can call the DescribeRegions operation to query the most recent region list.
ActivationId	String	No	4ECEEE12-56F1-4FBC-9AB1-890F1234****	The ID of the activation code.
InstanceName	String	No	test-InstanceName	The default instance name prefix.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Long	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description
PageSize	Long	10	The number of entries returned per page.
RequestId	String	4ECEEE12-56F1-4FBC-9AB1-890F74625134	The ID of the request.
PageNumber	Long	1	The page number of the returned page.
TotalCount	Long	1	The total number of entries returned.

Parameter	Type	Example	Description
ActivationList	Array of Activation		Details of the activation codes and their usage information.
CreationTime	String	2021-01-20T06:00:00Z	The time when the activation code was created.
DeregisteredCount	Integer	1	The number of instances that were deregistered.
InstanceCount	Integer	1	The maximum number of times that the activation code can be used to register managed instances.
Description	String	This is description.	The description of the activation code.
RegisteredCount	Integer	1	The number of instances that were registered.
InstanceName	String	test-InstanceName	The default instance name prefix.
Disabled	Boolean	false	Indicates whether the activation code is disabled.
IpAddressRange	String	0.0.0.0/0	The IP addresses of hosts that are allowed to use the activation code.
TimeToLiveInHours	Long	4	The validity period of the activation code. Unit: hours.
ActivationId	String	4ECEEE12-56F1-4FBC-9AB1-890F1234****	The ID of the activation code.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeActivations
&RegionId=cn-hangzhou
&ActivationId=4ECEEE12-56F1-4FBC-9AB1-890F1234****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeActivationsResponse>
    <TotalCount>1</TotalCount>
    <PageSize>10</PageSize>
    <RequestId>4ECEEE12-56F1-4FBC-9AB1-890F74942176</RequestId>
    <PageNumber>1</PageNumber>
    <ActivationList>
        <InstanceName>test-InstanceName</InstanceName>
        <DeregisteredCount>1</DeregisteredCount>
        <InstanceCount>1</InstanceCount>
        <Description>This is description.</Description>
        <CreationTime>2021-01-20T06:00:00Z</CreationTime>
        <ActivationId>4ECEEE12-56F1-4FBC-9AB1-890F1234****</ActivationId>
        <RegisteredCount>1</RegisteredCount>
        <TimeToLiveInHours>4</TimeToLiveInHours>
        <Disabled>false</Disabled>
        <IpAddressRange>0.0.0.0/0</IpAddressRange>
    </ActivationList>
</DescribeActivationsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalCount" : "1",
  "PageSize" : "10",
  "RequestId" : "4ECEEE12-56F1-4FBC-9AB1-890F74942176",
  "PageNumber" : "1",
  "ActivationList" : [ {
    "InstanceName" : "test-InstanceName",
    "DeregisteredCount" : "1",
    "InstanceCount" : "1",
    "Description" : "This is description.",
    "CreationTime" : "2021-01-20T06:00:00Z",
    "ActivationId" : "4ECEEE12-56F1-4FBC-9AB1-890F1234****",
    "RegisteredCount" : "1",
    "TimeToLiveInHours" : "4",
    "Disabled" : "false",
    "IpAddressRange" : "0.0.0.0/0"
  } ]
}
```

Error codes

HTTP state code	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
400	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned because the specified PageNumber parameter is invalid.
400	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned because the specified PageSize parameter is invalid.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.16. DescribeManagedInstances

Queries managed instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeManagedInstances	The operation that you want to perform. Set the value to **DescribeManagedInstances**.
RegionId	String	Yes	cn-hangzhou	The region ID of the managed instance. The following regions are supported: China (Qingdao), China (Beijing), China (Zhangjiakou), China (Hohhot), China (Hangzhou), China (Shanghai), China (Shenzhen), China (Heyuan), and China (Hong Kong). You can all the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
OsType	String	No	windows	The operating system type of the managed instance. Valid values: • windows • linux
InstanceIp	String	No	192.168.**.**	The internal or public IP address of the managed instance.
ActivationId	String	No	4ECEEE12-56F1-4FBC-9AB1-890F7494****	The ID of the activation code.
InstanceName	String	No	my-webapp-server	The name of the managed instance.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Long	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.
InstanceId.N	String	No	mi-hz018jrc1o0****	The ID of managed instance N. Valid values of N: 1 to 50.

Response parameters

Parameter	Type	Example	Description
PageSize	Long	10	The number of entries returned per page.
RequestId	String	77115469-F2C5-4ECA-94F7-FA04F2FD****	The ID of the request.
PageNumber	Long	1	The page number of the returned page.
TotalCount	Long	1	The total number of managed instances returned.
Instances	Array of Instance		Details of the managed instances.
LastInvokedTime	String	2021-01-20T09:00:40Z	The last Cloud Assistant task execution time.
Connected	Boolean	true	Indicates whether the managed instance is connected. Valid values: • true: The managed instance is connected and you can manage the instance by using Cloud Assistant. • false: The managed instance is not connected because the managed instance is down or because the Cloud Assistant client is not installed correctly.
InternetIp	String	40.65.**.**	The public IP address of the managed instance.
Hostname	String	demo	The hostname of the managed instance.
InstanceId	String	mi-hz018jrc1o0****	The ID of the managed instance.

Parameter	Type	Example	Description
ActivationId	String	3704F543-F768-43FA-9864-897F75B3****	The ID of the activation code.
IntranetIp	String	10.0.**.**	The internal IP address of the managed instance.
AgentVersion	String	2.2.0.102	The version number of the Cloud Assistant client.
RegistrationTime	String	2021-01-20T08:57:56Z	The time when the managed instance was registered.
InstanceName	String	webAPP-linux-01	The name of the managed instance.
OsType	String	Linux	The operating system type of the managed instance.
OsVersion	String	Linux_#38~18.04.1-Ubuntu SMP Wed Jan 6 18:26:30 UTC 2021_x86_64	The version information of the operating system.
InvocationCount	Long	1	The number of times that Cloud Assistant tasks were executed on the managed instance.
MachineId	String	e03231b37ab14e53b5795ad625fc****	The machine code of the managed instance.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeManagedInstances
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeManagedInstancesResponse>
<Instances>
    <MachineId>e03231b37ab14e53b5795ad625fc****</MachineId>
    <InstanceId>mi-hz018jrc1o0****</InstanceId>
    <AgentVersion>2.2.0.102</AgentVersion>
    <Connected>true</Connected>
    <InvocationCount>1</InvocationCount>
    <OsVersion>Linux_#38~18.04.1-Ubuntu SMP Wed Jan 6 18:26:30 UTC 2021_x86_64</OsVersion>
    <ActivationId>3704F543-F768-43FA-9864-897F75B3****</ActivationId>
    <Hostname>demo</Hostname>
    <RegistrationTime>2021-01-20T08:57:56Z</RegistrationTime>
    <IntranetIp>10.0.**.**</IntranetIp>
    <InstanceName>webAPP-linux-01</InstanceName>
    <InternetIp>40.65.**.**</InternetIp>
    <OsType>Linux</OsType>
    <LastInvokedTime>2021-01-20T09:00:40Z</LastInvokedTime>
</Instances>
<TotalCount>1</TotalCount>
<RequestId>77115469-F2C5-4ECA-94F7-FA04F2FDC8F4</RequestId>
<PageSize>10</PageSize>
<PageNumber>1</PageNumber>
</DescribeManagedInstancesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "Instances" : [ {
    "MachineId" : "e03231b37ab14e53b5795ad625fc****",
    "InstanceId" : "mi-hz018jrc1o0****",
    "AgentVersion" : "2.2.0.102",
    "Connected" : true,
    "InvocationCount" : 1,
    "OsVersion" : "Linux_#38~18.04.1-Ubuntu SMP Wed Jan 6 18:26:30 UTC 2021_x86_64",
    "ActivationId" : "3704F543-F768-43FA-9864-897F75B3****",
    "Hostname" : "demo",
    "RegistrationTime" : "2021-01-20T08:57:56Z",
    "IntranetIp" : "10.0.**.**",
    "InstanceName" : "webAPP-linux-01",
    "InternetIp" : "40.65.**.**",
    "OsType" : "Linux",
    "LastInvokedTime" : "2021-01-20T09:00:40Z"
  } ],
  "TotalCount" : 1,
  "RequestId" : "77115469-F2C5-4ECA-94F7-FA04F2FDC8F4",
  "PageSize" : 10,
  "PageNumber" : 1
}
```

Error codes

HTTP state code	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
400	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned because the specified PageNumber parameter is invalid.
400	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned because the specified PageSize parameter is invalid.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.17. DeleteCommand

Deletes a Cloud Assistant command.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteCommand	The operation that you want to perform. Set the value to **DeleteCommand**.
RegionId	String	Yes	cn-hangzhou	The region ID of the command. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
CommandId	String	Yes	c-4d34302d02424c5c8e10281e3a31****	The ID of the command. You can call the DescribeCommands operation to query all available command IDs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteCommand
&CommandId=c-4d34302d02424c5c8e10281e3a31****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DeleteCommandResponse>
    <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
</DeleteCommandResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "E69EF3CC-94CD-42E7-8926-F133B86387C0"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
403	InvalidStatus.CmdIdInUse	The specified commandId is in use by some runing Invocation.	The error message returned because the specified command is being run. Stop the command and try again.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
404	InvalidCmdId.NotFound	The specified command ID does not exist.	The error message returned because the specified CommandId parameter is invalid. You can call the DescribeCommands operation to query all available command IDs.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

25.18. DeleteActivation

Deletes an unused activation code.

Description

Before you call this operation to delete an activation code, make sure that the activation code has never been used to register managed instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteActivation	The operation that you want to perform. Set the value to **DeleteActivation**.
RegionId	String	Yes	cn-hangzhou	The region ID of the activation code. The following regions are supported: China (Qingdao), China (Beijing), China (Zhangjiakou), China (Hohhot), China (Hangzhou), China (Shanghai), China (Shenzhen), China (Heyuan), and China (Hong Kong). You can call the DescribeRegions operation to query the most recent region list.
ActivationId	String	Yes	4ECEEE12-56F1-4FBC-9AB1-890F1234****	The ID of the activation code.

Response parameters

Parameter	Type	Example	Description
RequestId	String	4ECEEE12-56F1-4FBC-9AB1-890F74942176	The ID of the request.
Activation	Object		Details of the activation code and its usage information.
CreationTime	String	2021-01-20T06:00:00Z	The time when the activation code was created.
DeregisteredCount	Integer	0	The number of instances that were deregistered.
InstanceCount	Integer	1	The maximum number of times that the activation code can be used to register managed instances.
Description	String	This is description.	The description of the activation code.
RegisteredCount	Integer	0	The number of registered instances.
InstanceName	String	test-InstanceName	The default instance name prefix.
IpAddressRange	String	0.0.0.0/0	The IP addresses of hosts that are allowed to use the activation code.
TimeToLiveInHours	Long	4	The validity period of the activation code. Unit: hours.
ActivationId	String	4ECEEE12-56F1-4FBC-9AB1-890F1234****	The ID of the activation code.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteActivation
&ActivationId=4ECEEE12-56F1-4FBC-9AB1-890F1234****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DeleteActivationResponse>
    <RequestId>4ECEEE12-56F1-4FBC-9AB1-890F74942176</RequestId>
    <Activation>
        <InstanceName>test-InstanceName</InstanceName>
        <DeregisteredCount>0</DeregisteredCount>
        <InstanceCount>1</InstanceCount>
        <Description>This is description.</Description>
        <CreationTime>2021-01-20T06:00:00Z</CreationTime>
        <ActivationId>4ECEEE12-56F1-4FBC-9AB1-890F1234****</ActivationId>
        <RegisteredCount>0</RegisteredCount>
        <TimeToLiveInHours>4</TimeToLiveInHours>
        <IpAddressRange>0.0.0.0/0</IpAddressRange>
    </Activation>
</DeleteActivationResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "4ECEEE12-56F1-4FBC-9AB1-890F74942176",
  "Activation" : {
    "InstanceName" : "test-InstanceName",
    "DeregisteredCount" : "0",
    "InstanceCount" : "1",
    "Description" : "This is description.",
    "CreationTime" : "2021-01-20T06:00:00Z",
    "ActivationId" : "4ECEEE12-56F1-4FBC-9AB1-890F1234****",
    "RegisteredCount" : "0",
    "TimeToLiveInHours" : "4",
    "IpAddressRange" : "0.0.0.0/0"
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	RegionId.ApiNotSupported	The api is not supported in this region.	The error message returned because the API operation cannot be called in the specified region. Check whether the RegionId parameter is valid.
403	ActivationId.InUse	The specified activation id is in use.	The error message returned because the activation code is in use.
403	Operation.Forbidden	The operation is not permitted.	The error message returned because the operation is not supported.
404	ActivationId.NotFound	The specified activation id does not exist.	The error message returned because the specified ActivationId parameter does not exist.
500	InternalError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was being sent. Try again later.

For a list of error codes, visit the API Error Center.

26.HPC clusters

26.1. CreateHpcCluster

You can call this operation to create an HPC cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateHpcCluster	The operation that you want to perform. Set the value to CreateHpcCluster.
Name	String	Yes	hpc-Cluster-01	The name of the HPC cluster. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with http:// or https://. It can contain letters, digits, underscores (_), and hyphens (-).
RegionId	String	Yes	cn-hangzhou	The region ID of the HPC cluster. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Description	String	No	testHPCDescription	The description of the HPC cluster. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
HpcClusterId	String	hpc-pnlg1ds9rky4****	The ID of the HPC cluster.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateHpcCluster
&RegionId=cn-hangzhou
&Name=hpc-Cluster-01
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateHpcClusterResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
      <HpcClusterId>hpc-pnlg1ds9rky4****</HpcClusterId>
</CreateHpcClusterResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
    "HpcClusterId": "hpc-pnlg1ds9rky4****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter RegionId that is mandatory for processing this request is not supplied.	The error message returned because the RegionId parameter is not specified.
400	InvalidHpcClusterName.Malformed	Specified hpc cluster name is not valid.	The error message returned because the specified Name parameter is invalid.
400	InvalidHpcClusterDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified Description parameter is invalid.
404	InvalidRegionId.NotFound	The specified parameter "RegionId" is not valid.	The error message returned because the specified RegionId parameter does not exist. Check whether the HPC cluster service is available in the region.
404	InternalError	Failed to create hpc cluster	The error message returned because the HPC cluster failed to be created.
400	Invalid.Parameter	Invalid parameters	The error message returned because a specified parameter is invalid.

For a list of error codes, visit the API Error Center.

26.2. DescribeHpcClusters

You can call this operation to query available HPC clusters. The request parameters are used as filters. Specified parameters have logical AND relations. The request parameters are not dependent on each other.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer automatically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeHpcClusters	The operation that you want to perform. Set the value to DescribeHpcClusters.
RegionId	String	Yes	cn-hangzhou	The region ID of the HPC cluster. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
HpcClusterIds	String	No	["hpc-xxxxxxxxx", "hpc-yyyyyyyyy", ... "hpc-zzzzzzzzz"]	The IDs of the HPC clusters. You can specify a JSON array that consists of up to 100 HPC cluster IDs. Separate multiple HPC cluster IDs with commas (,).

Parameter	Type	Required	Example	Description
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 100 Default value: 10.

Response parameters

Parameter	Type	Example	Description
HpcClusters	Array of HpcCluster		Details about the HPC clusters. The value is an array that consists of the information of each HPC cluster.
HpcCluster			
Description	String	testDescription	The description of the HPC cluster.
HpcClusterId	String	hpc-bp1a5zr3u7nq9cx****	The ID of the HPC cluster.
Name	String	testName	The name of the HPC cluster.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of queried HPC clusters.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeHpcClusters
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeHpcClustersResponse>
      <PageNumber>1</PageNumber>
      <TotalCount>2</TotalCount>
      <HpcClusters>
            <HpcCluster>
                  <Name>chuatest1</Name>
                  <Description>testDescription1</Description>
                  <HpcClusterId>hpc-bp1a5zr3u7nq9cx****</HpcClusterId>
            </HpcCluster>
            <HpcCluster>
                  <Name>chuatest2</Name>
                  <Description>testDescription2</Description>
                  <HpcClusterId>hpc-l6aam7fivcfd21fu****</HpcClusterId>
            </HpcCluster>
      </HpcClusters>
      <PageSize>10</PageSize>
      <RequestId>382960A6-C535-4705-B6EA-8338466270C4</RequestId>
</DescribeHpcClustersResponse>
```

`JSON` format

```
{
    "PageNumber": 1,
    "TotalCount": 2,
    "HpcClusters": {
        "HpcCluster": [
            {
                "Name": "chuatest1",
                "Description": "testDescription1",
                "HpcClusterId": "hpc-bp1a5zr3u7nq9cx****"
            },
            {
                "Name": "chuatest2",
                "Description": "testDescription2",
                "HpcClusterId": "hpc-l6aam7fivcfd21fu****"
            }
        ]
    },
    "PageSize": 10,
    "RequestId": "382960A6-C535-4705-B6EA-8338466270C4"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegionId.NotFound	The specified parameter "RegionId" is not valid.	The error message returned because the specified RegionId parameter does not exist. Check whether the HPC cluster service is available in the region.
400	MissingParameter.HpcClusterId	The input parameter HpcClusterId that is mandatory for processing this request is not supplied.	The error message returned because the HpcClusterIds parameter is not specified.
400	InvalidHpcClusterIds.ExceedLimit	The amount of specified specified hpc cluster ids exceeds the limit.	The error message returned because the maximum number of HPC cluster IDs has been reached.
400	InvalidHpcClusterIds.Malformed	The amount of specified specified hpc cluster ids is invalid.	The error message returned because the maximum number of HPC cluster IDs has been reached.
400	Invalid.Parameter	Invalid parameters.	The error message returned because a specified parameter is invalid.

For a list of error codes, visit the API Error Center.

26.3. ModifyHpcClusterAttribute

You can call this operation to modify the description of an Alibaba Cloud HPC (HPC) cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyHpcClusterAttribute	The operation that you want to perform. Set the value to ModifyHpcClusterAttribute.
HpcClusterId	String	Yes	hpc-b8bq705cvx1****	The ID of the HPC cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the HPC cluster. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The **ClientToken** value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotency.
Description	String	No	testDescription	The description of the HPC cluster. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.
Name	String	No	testName	The name of the HPC cluster. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with http:// or https://. It can contain letters, digits, underscores (_), and hyphens (-). This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyHpcClusterAttribute
&HpcClusterId=hpc-b8bq705cvx1****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyHpcClusterAttributeResponse>
      <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyHpcClusterAttributeResponse>
```

`JSON` format

```
{
    "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter RegionId that is mandatory for processing this request is not supplied.	The error message returned because the RegionId parameter is not specified.
400	InvalidHpcClusterName.Malformed	Specified hpc cluster name is not valid.	The error message returned because the specified Name parameter is invalid.
400	InvalidHpcClusterDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified Description parameter is invalid.
400	InvalidRegionId.NotFound	The specified parameter "RegionId" is not valid.	The error message returned because the specified RegionId parameter does not exist. Check whether the HPC cluster service is available in the region.
400	InvalidModifyInfo	Modify info is invalid, name/description must not null at the same time	The error message returned because the specified parameter is invalid. You must specify at least one of the Name and Description parameters.
400	HPC_CLUSTER_MODIFY_FAILED	Modify failed, possibly this hpc cluster does not exist	The error message returned because the specified HPC cluster failed to be modified. Check whether the HPC cluster exists.
400	Invalid.Parameter	Invalid parameters	The error message returned because the specified parameter is invalid.
400	HpcClusterNotExists	The specified hpc cluster does not exist	The error message returned because the specified HPC cluster does not exist.

For a list of error codes, visit the API Error Center.

26.4. DeleteHpcCluster

You can call this operation to delete an HPC cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer automatically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteHpcCluster	The operation that you want to perform. Set the value to DeleteHpcCluster.
HpcClusterId	String	Yes	hpc-cxvr5uzy54j0ya****	The ID of the HPC cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the HPC cluster. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteHpcCluster
&RegionId=cn-hangzhou
&HpcClusterId=hpc-cxvr5uzy54j0ya****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteHpcClusterResponse>
      <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</DeleteHpcClusterResponse>
```

`JSON` format

```
{
    "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter.RegionId	The input parameter RegionId that is mandatory for processing this request is not supplied.	The error message returned because the required RegionId parameter is not specified.
404	InvalidRegionId.NotFound	The specified parameter "RegionId" is not valid.	The error message returned because the specified RegionId parameter does not exist. Check whether the HPC cluster service is available in the region.
400	MissingParameter.HpcClusterId	The input parameter HpcClusterId that is mandatory for processing this request is not supplied.	The error message returned because the HpcClusterId parameter is not specified.
400	Invalid.Parameter	Invalid parameters.	The error message returned because a specified parameter is invalid.
400	NotExists.HpcCluster	The specified hpc cluster does not exist.	The error message returned because the specified HPC cluster does not exist.
400	NotEmpty.HpcCluster	The specified hpc cluster is not empty, still contains instances.	The error message returned because the specified HPC cluster contains instances. Release the instances and try again.

For a list of error codes, visit the API Error Center.

27.Tags

27.1. TagResources

Creates and adds tags to specified Elastic Compute Service (ECS) resources.

Description

Before you add tags to a resource, Alibaba Cloud checks the number of existing tags of the resource. An error message is returned if the maximum number is reached. For more information, see the "Tag limits" section in Limits.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	TagResources	The operation that you want to perform. Set the value to TagResources.
RegionId	String	Yes	cn-hangzhou	The region ID of the resource. You can call the DescribeRegions operation to query the most recent region list.
ResourceId.N	RepeatList	Yes	i-bp67acfmxazb4ph****	The ID of resource N. Valid values of N: 1 to 50.
ResourceType	String	Yes	instance	The type of the resource. Valid values: • instance: ECS instance • disk: disk • snapshot: snapshot • image: image • securitygroup: security group • volume: storage volume • eni: elastic network interface (ENI) • ddh: dedicated host • ddhcluster: dedicated host cluster • keypair: SSH key pair • launchtemplate: launch template • reservedinstance: reserved instance • snapshotpolicy: automatic snapshot policy • elasticityassurance: elasticity assurance • capacityreservation: capacity reservation
Tag.N.Key	String	No	TestKey	The key of tag N. Valid values of N: 1 to 20. The tag key cannot be an empty string. The tag key can be up to 128 characters in length and cannot start with `acs:` or `aliyun`. It cannot contain `http://` or `https://`.
Tag.N.Value	String	No	TestValue	The value of tag N. Valid values of N: 1 to 20. The tag value can be an empty string. The tag value can be up to 128 characters in length and cannot start with `acs:`. It cannot contain `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=TagResources
&RegionId=cn-hangzhou
&ResourceId.1=i-bp1j6qtvdm8w0z1o0****
&ResourceId.2=i-bp1j6qtvdm8w0z1oP****
&ResourceType=instance
&Tag.1.Key=TestKey
&<Common request parameters>
```

Sample success responses

`XML` format

```
<TagResourcesResponse>
    <RequestId>C46FF5A8-C5F0-4024-8262-B16B639225A0</RequestId>
</TagResourcesResponse>
```

`JSON` format

```
{
 "RequestId":"C46FF5A8-C5F0-4024-8262-B16B639225A0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	%s	The error message returned because the specified RegionId parameter does not exist.
404	MissingParameter.TagOwnerUid	The parameter - TagOwnerUid should not be null	The error message returned because the TagOwnerUid parameter is not specified.
404	MissingParameter.TagOwnerBid	The parameter - TagOwnerBid should not be null	The error message returned because the TagOwnerBid parameter is not specified.
404	MissingParameter.ResourceType	The parameter - ResourceType should not be null	The error message returned because the ResourceType parameter is not specified.
404	MissingParameter.Tags	The parameter - Tags should not be null	The error message returned because the tag-related parameters are not specified.
404	MissingParameter.RegionId	The parameter - RegionId should not be null	The error message returned because the RegionId parameter is not specified.
403	PermissionDenied.TagOwnerUid	The specified operator not have permission to set TagOwnerUid value.	The error message returned because you are not authorized to set the owner of the tag.
403	PermissionDenied.Scope	The specified operator not have permission to set Scope value.	The error message returned because you are not authorized to specify the Scope parameter.
400	NumberExceed.ResourceIds	The ResourceIds parameter's number is exceed , Valid : 50	The error message returned because more than 50 resource IDs are specified.
400	NumberExceed.Tags	The Tags parameter's number is exceed , Valid : 20	The error message returned because more than 20 tags are specified.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
404	InvalidResourceId.NotFound	The specified ResourceIds are not found in our records.	The error message returned because the specified resource does not exist. Check whether the resource ID is correct.

HttpCode	Error code	Error message	Description
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter does not exist.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	OperationDenied.QuotaExceed	The quota of tags on resource is beyond permitted range.	The error message returned because the maximum number of tags that can be added to the resource has been reached.
403	InvalidResourceId.NotSupported	The specified ResourceId does not support tagging.	The error message returned because the specified resource does not support tagging.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags has reached the upper limit.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	Invalid.Scope	The specified scope is invalid.	The error message returned because the specified scope is invalid.
403	NoPermission.Tag	The operator is not permission for the tag.	The error message returned because you are not authorized to manage the tag.
403	QuotaExceed.Tags	%s	The error message returned because the maximum number of tags has been reached.

For a list of error codes, visit the API Error Center.

27.2. ListTagResources

Queries the tags that are added to one or more Elastic Compute Service (ECS) resources, or queries the IDs and tags of resources in a specified non-default resource group.

Description

Specify at least one of the following parameters or parameter pairs in a request to determine a query object:

- `ResourceId.N`
- `Tag.N` parameter pair (`Tag.N.Key` and `Tag.N.Value`)
- `TagFilter.N` parameter pair (TagFilter.N.TagKey and TagFilter.N.TagValues.N)

If one of the following sets of request parameters is specified as filter conditions, only ECS resources that meet all the specified filter conditions are returned:

- Set 1: `Tag.N.Key, Tag.N.Value` , and `ResourceId.N`
- Set 2: `TagFilter.N.TagKey, TagFilter.N.TagValues.N` , and `ResourceId.N`

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListTagResources	The operation that you want to perform. Set the value to **ListTagResources**.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the resource. You can call the DescribeRegions operation to query the most recent region list.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query.
ResourceType	String	Yes	instance	The type of the resource. Valid values: • instance: ECS instance • disk: disk • snapshot: snapshot • image: image • securitygroup: security group • volume: storage volume • eni: elastic network interface (ENI) • ddh: dedicated host • ddhcluster: dedicated host cluster • keypair: SSH key pair • launchtemplate: launch template • reservedinstance: reserved instance • snapshotpolicy: automatic snapshot policy • elasticityassurance: elasticity assurance • capacityreservation: capacity reservation
ResourceId.N	String	No	i-bp1j6qtvdm8w0z1o****	The ID of resource N. Valid values of N: 1 to 50.

Tag.N.Key	String	No	TestKey	The key of tag N used for exact search of ECS resources. The tag key must be 1 to 128 characters in length. Valid values of N: 1 to 20.
				Methods of using the `Tag.N` parameter pair (Tag.N.Key and Tag.N.Value):
				• Method 1: Use this parameter pair for exact search of ECS resources that have specified tags added. Each tag is a key-value pair.
				  ○ If you specify only `Tag.N.Key`, all ECS resources whose tags contain the specified tag key are returned.
				  ○ If you specify only `Tag.N.Value`, the `InvalidParameter.TagValue` error is returned.
				  ○ If you specify multiple tag key-value pairs, only the ECS resources that have all these tag key-value pairs added are returned.
				• Method 2: Use this parameter pair to query resource information of a non-default resource group. Set `Tag.1.Key` to `acs:rm:rgId` and `Tag.1.Value` to the ID of a resource group.
				  ○ If you set `Tag.1.Key` to `acs:rm:rgId`, you must set `Tag.1.Value` to the ID of a non-default resource group. If you set Tag.1.Value to the ID of the default resource group, an error message is returned.
				  ○ If you set `Tag.1.Key` to `acs:rm:rgId`, you cannot specify other Tag.N parameter pairs. If you specify multiple `Tag.N` parameter pairs to query resource groups and resource tags at the same time, an error message is returned.

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	TestValue	The value of tag N used for exact search of ECS resources. The tag value must be 1 to 128 characters in length. Valid values of N: 1 to 20. **Note** When Tag.1.Key is set to `acs:rm:rgId`, you can set Tag.1.Value only to the ID of a non-default resource group.
TagFilter.N.TagValues.N	String	No	TestTagFilter	The value of tag N used for fuzzy search of ECS resources. The tag value must be 1 to 128 characters in length. Valid values of N: 1 to 5. For more information, see the description of `TagFilter.N.TagKey`.
TagFilter.N.TagKey	String	No	env	The key of tag N used for fuzzy search of ECS resources. The tag key must be 1 to 128 characters in length. Valid values of N: 1 to 5. The `TagFilter.N` parameter pair (TagFilter.N.TagKey and TagFilter.N.TagValues.N) is used for fuzzy search of ECS resources that have specified tags added. In the specified tags, a single tag key may correspond to one or more tag values. Fuzzy search may have a latency of 2 seconds. A fuzzy search can return a result set of entries about up to 5,000 resources. • When you use `TagFilter.N.TagKey` for fuzzy search of ECS resources, you must leave `TagFilter.N.TagValues.N` empty. For example, to query ECS resources whose tags contain the `environment` tag key, you can set `TagFilter.1.TagKey` to `env*` for prefix search, `*env*` for infix search, or `env` for exact search, but you must leave `TagFilter.1.TagValues` empty. • When you use `TagFilter.N.TagValues.N` for fuzzy search of ECS resources, you must set `TagFilter.N.TagKey` to an exact value. For example, to query ECS resources that have a tag consisting of the `env` tag key and the `product` tag value, you must set `TagFilter.1.TagKey` to `env` and can set `TagFilter.1.TagValues.1` to `proc*` for prefix search, to `*proc*` for infix search, or to `proc` for exact search. Only one of the preceding search methods can be used for each tag key (`TagFilter.N.TagKey`). If multiple search methods are configured for a tag key, the first search method prevails. • If you specify multiple tag keys, only the ECS resources that have all of the specified tag keys added are returned. • If you specify a tag key that corresponds to multiple tag values, all the ECS resources that have one or more of these tag key-value pairs added are returned. **Note** The `TagFilter.N` parameter pair (TagFilter.N.TagKey and TagFilter.N.TagValues.N) cannot be used together with the `Tag.N` parameter pair (Tag.N.Key and Tag.N.Value). Otherwise, an error message is returned.

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query.
RequestId	String	484256DA-D816-44D2-9D86-B6EE4D5BA78C	The ID of the request.
TagResources	Array of TagResource		Details about resources and tags, including resource IDs, resource types, and tag key-value pairs.
TagResource			
TagValue	String	TestValue	The value of the tag.
ResourceType	String	instance	The type of the resource. Valid values: • instance: ECS instance • disk: disk • snapshot: snapshot • image: image • securitygroup: security group • volume: storage volume • eni: ENI • ddh: dedicated host • ddhcluster: dedicated host cluster • keypair: SSH key pair • launchtemplate: launch template • reservedinstance: reserved instance • snapshotpolicy: automatic snapshot policy • elasticityassurance: elasticity assurance • capacityreservation: capacity reservation
ResourceId	String	i-bp1j6qtvdm8w0z1o****	The ID of the resource.
TagKey	String	TestKey	The key of the tag.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ListTagResources
&RegionId=cn-hangzhou
&ResourceType=instance
&ResourceId.1=i-bp1j6qtvdm8w0z1o****
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ListTagResourcesResponse>
 <TagResources>
  <TagResource>
   <ResourceType>instance</ResourceType>
   <TagValue>TestValue</TagValue>
   <ResourceId>i-bp1j6qtvdm8w0z1o****</ResourceId>
   <TagKey>TestKey</TagKey>
  </TagResource>
 </TagResources>
 <RequestId>DE65F6B7-7566-4802-9007-96F2494AC5XX</RequestId>
</ListTagResourcesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TagResources" : {
    "TagResource" : [ {
      "ResourceType" : "instance",
      "TagValue" : "TestValue",
      "ResourceId" : "i-bp1j6qtvdm8w0z1o****",
      "TagKey" : "TestKey"
    } ]
  },
  "RequestId" : "DE65F6B7-7566-4802-9007-96F2494AC512"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidDefaultResourceGroup.NotSupported	The specified parameter Tag is not support for default resource group.	The error message returned because queries of the default resource group are not supported.
400	InvalidTag.NotSupported	You can only specify Tag for either resource tag or resource group.	The error message returned because resource groups and resource tags cannot be queried at the same time.
400	NumberExceed.ResourceIds	The ResourceIds parameter's number is exceed , Valid : 50	The error message returned because more than 50 resource IDs are specified.
400	NumberExceed.Tags	The Tags parameter's number is exceed , Valid : 20	The error message returned because more than 20 tags are specified.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	OperationDenied.QuotaExceed	The quota of tags on resource is beyond permitted range.	The error message returned because the maximum number of tags that can be added to the resource has been reached.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not correspond to each other.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags has exceeded the upper limit.
400	Invalid.Scope	The specified scope is invalid.	The error message returned because the specified Scope parameter is invalid.
403	PermissionDenied.TagOwnerUid	The specified operator not have permission to set TagOwnerUid value.	The error message returned because you are not authorized to set the owner of the tag.
403	PermissionDenied.Scope	The specified operator not have permission to set Scope value.	The error message returned because you are not authorized to specify the Scope parameter.
403	InvalidResourceId.NotSupported	The specified ResourceId does not support tagging.	The error message returned because the specified resource does not support tagging.
403	NoPermission.Tag	The operator is not permission for the tag.	The error message returned because you are not authorized to manage the tag.
404	InvalidRegionId.NotFound	%s	The error message returned because the specified RegionId parameter does not exist.

HTTP status code	Error code	Error message	Description
404	MissingParameter.TagOwnerUid	The parameter - TagOwnerUid should not be null	The error message returned because the TagOwnerUid parameter is not specified.
404	MissingParameter.TagOwnerBid	The parameter - TagOwnerBid should not be null	The error message returned because the TagOwnerBid parameter is not specified.
404	MissingParameter.ResourceType	The parameter - ResourceType should not be null	The error message returned because the ResourceType parameter is not specified.
404	MissingParameter.Tags	The parameter - Tags should not be null	The error message returned because the tag-related parameters are not specified.
404	MissingParameter.RegionId	The parameter - RegionId should not be null	The error message returned because the RegionId parameter is not specified.
404	InvalidResourceId.NotFound	The specified ResourceIds are not found in our records.	The error message returned because the specified ResourceId parameter does not exist. Check whether the resource ID is correct.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter does not exist.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.

For a list of error codes, visit the API Error Center.

27.3. UntagResources

Removes tags from specified Elastic Compute Service (ECS) resources. After a tag is removed from a resource, it is automatically deleted if it is not added to other resources.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UntagResources	The operation that you want to perform. Set the value to UntagResources.
RegionId	String	Yes	cn-hangzhou	The region ID of the resource. You can call the DescribeRegions operation to query the most recent region list.
ResourceId.N	RepeatList	Yes	i-bp67acfmxazb4ph****	The ID of resource N. Valid values of N: 1 to 50.

Parameter	Type	Required	Example	Description
ResourceType	String	Yes	instance	The type of the resource. Valid values: • instance: ECS instance • disk: disk • snapshot: snapshot • image: image • securitygroup: security group • volume: storage volume • eni: elastic network interface (ENI) • ddh: dedicated host • ddhcluster: dedicated host cluster • keypair: SSH key pair • launchtemplate: launch template • reservedinstance: reserved instance • snapshotpolicy: automatic snapshot policy • elasticityassurance: elasticity assurance • capacityreservation: capacity reservation
TagKey.N	RepeatList	No	TestKey	The key of tag N. Valid values of N: 1 to 20.
All	Boolean	No	false	Specifies whether to remove all tags from the resource. This parameter is valid only when the TagKey.N parameter is not specified. Valid values: • true • false Default value: false.

Response parameters

Parameter	Type	Example	Description
RequestId	String	C46FF5A8-C5F0-4024-8262-B16B639225A0	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=UntagResources
&RegionId=cn-hangzhou
&ResourceType=instance
&ResourceId.1=i-bp1j6qtvdm8w0z1o0****
&TagKey.1=TestKey
&<Common request parameters>
```

Sample success responses

`XML` format

```
<UntagResourcesResponse>
    <RequestId>C46FF5A8-C5F0-4024-8262-B16B639225A0</RequestId>
</UntagResourcesResponse>
```

`JSON` format

```
{
    "RequestId":"C46FF5A8-C5F0-4024-8262-B16B639225A0"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	%s	The error message returned because the specified RegionId parameter does not exist.
404	MissingParameter.TagOwnerUid	The parameter - TagOwnerUid should not be null	The error message returned because the TagOwnerUid parameter is not specified.
404	MissingParameter.TagOwnerBid	The parameter - TagOwnerBid should not be null	The error message returned because the TagOwnerBid parameter is not specified.
404	MissingParameter.ResourceType	The parameter - ResourceType should not be null	The error message returned because the ResourceType parameter is not specified.
404	MissingParameter.Tags	The parameter - Tags should not be null	The error message returned because the tag-related parameters are not specified.
404	MissingParameter.RegionId	The parameter - RegionId should not be null	The error message returned because the RegionId parameter is not specified.
403	PermissionDenied.TagOwnerUid	The specified operator not have permission to set TagOwnerUid value.	The error message returned because you are not authorized to set the owner of the tag.
403	PermissionDenied.Scope	The specified operator not have permission to set Scope value.	The error message returned because you are not authorized to specify the Scope parameter.
400	NumberExceed.ResourceIds	The ResourceIds parameter's number is exceed , Valid : 50	The error message returned because more than 50 resource IDs are specified.
400	NumberExceed.Tags	The Tags parameter's number is exceed , Valid : 20	The error message returned because more than 20 tags are specified.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
404	InvalidResourceId.NotFound	The specified ResourceIds are not found in our records.	The error message returned because the specified resource does not exist. Check whether the resource ID is correct.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter does not exist.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	OperationDenied.QuotaExceed	The quota of tags on resource is beyond permitted range.	The error message returned because the maximum number of tags that can be added to the resource has been reached.
403	InvalidResourceId.NotSupported	The specified ResourceId does not support tagging.	The error message returned because the specified resource does not support tagging.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags has reached the upper limit.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	Invalid.Scope	The specified scope is invalid.	The error message returned because the specified scope is invalid.
403	NoPermission.Tag	The operator is not permission for the tag.	The error message returned because you are not authorized to manage the tag.

For a list of error codes, visit the API Error Center.

28.Regions

28.1. DescribeRegions

Queries available Alibaba Cloud regions.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeRegions	The operation that you want to perform. Set the value to DescribeRegions.
InstanceChargeType	String	No	PrePaid	The billing method of the instance. For more information, see Billing overview. Valid values: • PrePaid: subscription. If this parameter is set to PrePaid, make sure that you have sufficient balance or credits in your account. Otherwise, the InvalidPayMethod error code is returned. • PostPaid: pay-as-you-go. Default value: PostPaid.
ResourceType	String	No	instance	The type of the resource. Valid values: • instance: Elastic Compute Service (ECS) instance • disk: disk • reservedinstance: reserved instance • scu: storage capacity unit (SCU) Default value: instance.
AcceptLanguage	String	No	zh-CN	The natural language that is used to filter responses. For more information, visit RFC 7231. Valid values: • zh-CN: Chinese • en-US: English • ja: Japanese Default value: zh-CN.

Response parameters

Parameter	Type	Example	Description
Regions	Array		Details about the regions.
Region			
LocalName	String	China (Qingdao)	The name of the region.
RegionEndpoint	String	ecs.aliyuncs.com	The endpoint of the region.
RegionId	String	cn-qingdao-et2-bo1	The ID of the region.
Status	String	available	Indicates whether clusters are sold out. Valid values: • available • soldOut

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeRegions
&RegionId=cn-qingdao
&InstanceChargeType=PrePaid
&ResourceType=Instance
&AcceptLanguage=en-US
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeRegionsResponse>
      <RequestId>38EC7366-F5A9-46B1-BDB1-0FDC2E296397</RequestId>
      <Regions>
            <Region>
                  <RegionId>cn-qingdao-et2-bo1</RegionId>
                  <RegionEndpoint>ecs.aliyuncs.com</RegionEndpoint>
                  <LocalName>China (Qingdao)</LocalName>
            </Region>
            <Region>
                  <RegionId>cn-qingdao-nebula</RegionId>
                  <RegionEndpoint>ecs.cn-qingdao-nebula.aliyuncs.com</RegionEndpoint>
                  <LocalName>cn-qingdao-nebula</LocalName>
            </Region>
      </Regions>
</DescribeRegionsResponse>
```

`JSON` format

```
{
    "RequestId": "38EC7366-F5A9-46B1-BDB1-0FDC2E296397",
    "Regions": {
        "Region": [
            {
                "RegionId": "cn-qingdao-et2-b01",
                "RegionEndpoint": "ecs.aliyuncs.com",
                "LocalName": "China (Qingdao)"
            },
            {
                "RegionId": "cn-qingdao-nebula",
                "RegionEndpoint": "ecs.cn-qingdao-nebula.aliyuncs.com",
                "LocalName": "cn-qingdao-nebula"
            }
        ]
    }
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	Unauthorized.EmptyRegion	The specified account has no access authority to any region.	The error message returned because you are not authorized to access any regions. Apply for permissions and try again.
404	InvalidAcceptLanguage.NotFound	Only Chinese (zh-CN), English (en-US), and Japanese (ja) are allowed.	The error message returned because the specified AcceptLanguage parameter is invalid. Valid values are zh-CN, en-US, and ja.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter does not exist.

For a list of error codes, visit the API Error Center.

28.2. DescribeZones

Queries the zones in a specific region.

Description

When you call this operation, only a list of zones and some resource information related to each zone are returned. If you want to query instance types and disk categories that are available for purchase in a specific zone, we recommend that you call the DescribeAvailableResource operation.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeZones	The operation that you want to perform. Set the value to **DescribeZones**.
RegionId	String	Yes	cn-hangzhou	The ID of the region for which to query zones. You can call the DescribeRegions operation to query the most recent region list.
InstanceChargeType	String	No	PostPaid	The billing method supported in the zone. For more information, see Billing overview. Valid values: • PrePaid: subscription • PostPaid: pay-as-you-go Default value: PostPaid.
SpotStrategy	String	No	NoSpot	The bidding policy for the pay-as-you-go instance. You can specify this parameter when the `InstanceChargeType` parameter is set to PostPaid. For more information, see Preemptible instances. Valid values: • NoSpot: The instance is a regular pay-as-you-go instance. • SpotWithPriceLimit: The instance is a preemptible instance with a user-defined maximum hourly price. • SpotAsPriceGo: The instance is created as a preemptible instance for which the market price is automatically used as the bid price. The market price can be up to the pay-as-you-go price. Default value: NoSpot.
AcceptLanguage	String	No	zh-CN	The natural language that is used to filter responses. For more information, see RFC 7231. Valid values: • zh-CN • en-US • ja Default value: zh-CN.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Zones	Array of Zone		Details of the zones and their supported resources.

Parameter	Type	Example	Description
Zone			
ZoneId	String	cn-hangzhou-g	The ID of the zone.
ZoneType	String	AvailabilityZone	The type of the zone. Valid values: • AvailabilityZone: Alibaba Cloud public cloud zone
LocalName	String	Hangzhou Zone G	The name of the zone in the local language.
AvailableResources	Array of ResourcesInfo		The resources available in the zone.
ResourcesInfo			
IoOptimized	Boolean	true	Indicates whether I/O optimized instances are supported in the zone.
SystemDiskCategories	Array of String	["cloud_essd"]	The categories of system disks that can be created. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • cloud_essd: enhanced SSD (ESSD)
InstanceGenerations	Array of String	["ecs-6"]	The generation numbers of the supported instance families.
DataDiskCategories	Array of String	["cloud_essd"]	The categories of the data disks that can be created. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • cloud_essd: ESSD • ephemeral_ssd: local SSD
InstanceTypes	Array of String	["ecs.g5.large"]	The instance types of I/O optimized instances of different network types that can be created in the zone.
InstanceTypeFamilies	Array of String	["ecs.r7t", "ecs.r7"]	The instance families of instances that can be created.
NetworkTypes	Array of String	["vpc"]	The supported network types. Valid values: • VPC: Virtual Private Cloud (VPC) • Classic: classic network
AvailableResourceCreation	Array of String	["DedicatedHost"]	The types of resources that can be created. Valid values: • VSwitch: vSwitches • IoOptimized: I/O optimized instances • Instance: instances • DedicatedHost: dedicated hosts • disk: disks
DedicatedHostGenerations	Array of String	["ddh-6"]	The generation numbers of the supported dedicated hosts.
AvailableInstanceTypes	Array of String	["ecs.g6.xlarge"]	The instance types of instances that can be created in the zone.

Parameter	Type	Example	Description
AvailableDiskCategories	Array of String	["cloud"]	The categories of disks that can be created. Valid values: • cloud: basic disk • cloud_ssd: standard SSD • cloud_efficiency: ultra disk • cloud_essd: ESSD
AvailableDedicatedHostTypes	Array of String	["ddh.g6"]	The supported dedicated host types.
AvailableVolumeCategories	Array of String	san_efficiency	The supported Shared Block Storage device types.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeZones
&RegionId=cn-hangzhou
&InstanceChargeType=PostPaid
&SpotStrategy=NoSpot
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeZonesResponse>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <Zones>
        <Zone>
            <DedicatedHostGenerations>
                <DedicatedHostGeneration>ddh-5</DedicatedHostGeneration>
                <DedicatedHostGeneration>ddh-6</DedicatedHostGeneration>
            </DedicatedHostGenerations>
            <AvailableInstanceTypes>
                <InstanceTypes>ecs.g6.xlarge</InstanceTypes>
                <InstanceTypes>ecs.g7t.4xlarge</InstanceTypes>
            </AvailableInstanceTypes>
            <ZoneId>cn-hangzhou-g</ZoneId>
            <AvailableDedicatedHostTypes>
                <DedicatedHostType>ddh.g6</DedicatedHostType>
                <DedicatedHostType>ddh.r6</DedicatedHostType>
            </AvailableDedicatedHostTypes>
            <AvailableResources>
                <ResourcesInfo>
                    <InstanceGenerations>
                        <supportedInstanceGeneration>ecs-5</supportedInstanceGeneration>
                        <supportedInstanceGeneration>ecs-6</supportedInstanceGeneration>
                    </InstanceGenerations>
                    <NetworkTypes>
                        <supportedNetworkCategory>vpc</supportedNetworkCategory>
                    </NetworkTypes>
                    <IoOptimized>true</IoOptimized>
                    <SystemDiskCategories>
                        <supportedSystemDiskCategory>cloud_efficiency</supportedSystemDiskCategory>
                        <supportedSystemDiskCategory>cloud_essd</supportedSystemDiskCategory>
                    </SystemDiskCategories>
                    <InstanceTypes>
                        <supportedInstanceType>ecs.c6.xlarge</supportedInstanceType>
                        <supportedInstanceType>ecs.g5.large</supportedInstanceType>
                    </InstanceTypes>
                    <InstanceTypeFamilies>
                        <supportedInstanceTypeFamily>ecs.r7t</supportedInstanceTypeFamily>
                        <supportedInstanceTypeFamily>ecs.r7</supportedInstanceTypeFamily>
                    </InstanceTypeFamilies>
                    <DataDiskCategories>
                        <supportedDataDiskCategory>cloud_efficiency</supportedDataDiskCategory>
                        <supportedDataDiskCategory>cloud_essd</supportedDataDiskCategory>
                    </DataDiskCategories>
                </ResourcesInfo>
            </AvailableResources>
            <AvailableDiskCategories>
                <DiskCategories>cloud_efficiency</DiskCategories>
                <DiskCategories>cloud_essd</DiskCategories>
            </AvailableDiskCategories>
            <ZoneType>AvailabilityZone</ZoneType>
            <LocalName>Hangzhou Zone G</LocalName>
            <AvailableResourceCreation>
                <ResourceTypes>VSwitch</ResourceTypes>
                <ResourceTypes>IoOptimized</ResourceTypes>
                <ResourceTypes>Instance</ResourceTypes>
                <ResourceTypes>DedicatedHost</ResourceTypes>
                <ResourceTypes>Disk</ResourceTypes>
            </AvailableResourceCreation>
            <AvailableVolumeCategories>
                <VolumeCategories>san_efficiency</VolumeCategories>
            </AvailableVolumeCategories>
        </Zone>
    </Zones>
</DescribeZonesResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "Zones" : {
    "Zone" : [ {
      "DedicatedHostGenerations" : {
        "DedicatedHostGeneration" : [ "ddh-5", "ddh-6" ]
      },
      "AvailableInstanceTypes" : {
        "InstanceTypes" : [ "ecs.g6.xlarge", "ecs.g7t.4xlarge" ]
      },
      "ZoneId" : "cn-hangzhou-g",
      "AvailableDedicatedHostTypes" : {
        "DedicatedHostType" : [ "ddh.g6", "ddh.r6" ]
      },
      "AvailableResources" : {
        "ResourcesInfo" : [ {
          "InstanceGenerations" : {
            "supportedInstanceGeneration" : [ "ecs-5", "ecs-6" ]
          },
          "NetworkTypes" : {
            "supportedNetworkCategory" : [ "vpc" ]
          },
          "IoOptimized" : true,
          "SystemDiskCategories" : {
            "supportedSystemDiskCategory" : [ "cloud_efficiency", "cloud_essd" ]
          },
          "InstanceTypes" : {
            "supportedInstanceType" : [ "ecs.c6.xlarge", "ecs.g5.large" ]
          },
          "InstanceTypeFamilies" : {
            "supportedInstanceTypeFamily" : [ "ecs.r7t", "ecs.r7" ]
          },
          "DataDiskCategories" : {
            "supportedDataDiskCategory" : [ "cloud_efficiency", "cloud_essd" ]
          }
        } ]
      },
      "AvailableDiskCategories" : {
        "DiskCategories" : [ "cloud_efficiency", "cloud_essd" ]
      },
      "ZoneType" : "AvailabilityZone",
      "LocalName": "Hangzhou Zone G"
      "AvailableResourceCreation" : {
        "ResourceTypes" : [ "VSwitch", "IoOptimized", "Instance", "DedicatedHost", "Disk" ]
      },
      "AvailableVolumeCategories" : {
        "VolumeCategories" : [ "san_efficiency" ]
      }
    } ]
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidSpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	InvalidRegion.NotFound	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified InstanceChargeType parameter does not exist.

HttpCode	Error code	Error message	Description
404	InvalidAcceptLanguage.NotFound	Only Chinese (zh-CN), English (en-US), and Japanese (ja) are allowed.	The error message returned because the specified AcceptLanguage parameter is invalid. Valid values are zh-CN, en-US, and ja.

For a list of error codes, visit the API Error Center.

28.3. DescribeResourcesModification

Queries available resources within a zone when you upgrade or downgrade instance types or system disks.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeResourcesModification	The operation that you want to perform. Set the value to **DescribeResourcesModification**.
RegionId	String	Yes	cn-hangzhou	The ID of the target region. You can call the DescribeRegions operation to query the most recent region list.
ResourceId	String	Yes	i-bp67acfmxazb4p****	The ID of the resource. For example, when DestinationResource is set to InstanceType, this parameter can be interpreted as InstanceId.

MigrateAcrossZone	Boolean	No	true	Specifies whether instance types can be upgraded across clusters. Valid values:
				• true
				• false
				Default value: false.
				When the MigrateAcrossZone parameter is set to true and you upgrade the ECS instance based on the returned information, take note of the following items:
				• Classic network-type instances:
				  ○ For phased-out instance types, when a non-I/O-optimized instance is upgraded to an I/O-optimized instance, the private IP address, cloud disk device names, and software license codes of the instance are changed. For Linux instances, basic disks (cloud) are identified by the prefix xvd. Ultra disks (cloud_efficiency) and standard SSDs (cloud_ssd) are identified by the prefix vd.
				  ○ For instance families available for purchase, when the instance type of an instance is changed, the private IP address of the instance is also changed.
				• VPC-type instances: For phased-out instance types, when a non-I/O-optimized instance is upgraded to an I/O-optimized instance, the cloud disk device names and software license codes of the instance are changed. For Linux instances, basic disks (cloud) are identified by the prefix xvd. Ultra disks (cloud_efficiency) and standard SSDs (cloud_ssd) are identified by the prefix vd.

DestinationResource	String	Yes	InstanceType	The type of the target resource. Valid values: • InstanceType • SystemDisk

Parameter	Type	Required	Example	Description

OperationType	String	No	Upgrade	The operation to modify resource configurations.
				• Valid values for subscription resources:
				  ○ Upgrade
				  ○ Downgrade
				  ○ RenewDowngrade
				  ○ RenewModify
				• Valid values for pay-as-you-go resources: Upgrade
				Default value: Upgrade.

InstanceType	String	No	ecs.g5.large	The instance type. For more information, see Instance families or call the DescribeInstanceTypes operation to query the most recent instance type list. When the DestinationResource parameter is set to SystemDisk, you must specify this parameter.
Cores	Integer	No	2	The number of vCPU cores of the instance type. For more information, see Instance families. This parameter is valid only when DestinationResource is set to InstanceType.
Memory	Float	No	8.0	The memory size of the instance type. Unit: GiB. For more information, see Instance families. This parameter is valid only when DestinationResource is set to InstanceType.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
AvailableZones	Array of AvailableZone		The list of available zones.
AvailableZone			
ZoneId	String	cn-hangzhou-e	The ID of the zone.
Status	String	Available	The status of the resource. Valid values: • Available • SoldOut
StatusCategory	String	WithStock	The stock status of the resource. Valid values: • WithStock: sufficient stock • ClosedWithStock: insufficient stock • WithoutStock: out of stock
RegionId	String	cn-hangzhou	The ID of the region.
AvailableResources	Array of AvailableResource		An array of available resources.
AvailableResource			

Parameter	Type	Example	Description
Type	String	InstanceType	The type of the resource. Valid values: • Zone • IoOptimized • InstanceType • SystemDisk • DataDisk • Network
SupportedResources	Array of SupportedResource		An array of supported resources.
SupportedResource			
Status	String	Available	The status of the resource. Valid values: • Available • SoldOut
Value	String	ecs.g5.large	The resource type.
Max	Integer	2	The maximum number of available resources of a specific resource type. No value is returned when the parameter value is null.
Unit	String	null	The unit of the resource type. No value is returned when the parameter value is null.
StatusCategory	String	WithStock	The stock status of the resource. Valid values: • WithStock: sufficient stock • ClosedWithStock: insufficient stock • WithoutStock: out of stock
Min	Integer	1	The minimum number of available resources of a specific resource type. No value is returned when the parameter value is null.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeResourcesModification
&DestinationResource=InstanceType
&RegionId=cn-hangzhou
&ResourceId=i-bp67acfmxazb4p****
&MigrateAcrossZone=true
&OperationType=Upgrade
&InstanceType=ecs.g5.large
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeResourcesModificationResponse>
    <RequestId>994F2B60-B050-49E3-9283-44655FAC7A4X</RequestId>
    <AvailableZones>
        <AvailableZone>
            <Status>Available</Status>
            <RegionId>cn-hangzhou</RegionId>
            <AvailableResources>
                <AvailableResource>
                    <Type>InstanceType</Type>
                    <SupportedResources>
                        <SupportedResource>
                            <Status>Available</Status>
                            <Value>ecs.g5.xlarge</Value>
                        </SupportedResource>
                        <SupportedResource>
                            <Status>Available</Status>
                            <Value>ecs.t5-lc1m2.large</Value>
                        </SupportedResource>
                        <SupportedResource>
                            <Status>Available</Status>
                            <Value>ecs.t5-c1m4.2xlarge</Value>
                        </SupportedResource>
                        <SupportedResource>
                            <Status>Available</Status>
                            <Value>ecs.c5.xlarge</Value>
                        </SupportedResource>
                    </SupportedResources>
                </AvailableResource>
            </AvailableResources>
            <ZoneId>cn-hangzhou-e</ZoneId>
        </AvailableZone>
    </AvailableZones>
</DescribeResourcesModificationResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "994F2B60-B050-49E3-9283-44655FAC7A4X",
  "AvailableZones" : {
    "AvailableZone" : [ {
      "Status" : "Available",
      "RegionId" : "cn-hangzhou",
      "AvailableResources" : {
        "AvailableResource" : [ {
          "Type" : "InstanceType",
          "SupportedResources" : {
            "SupportedResource" : [ {
              "Status" : "Available",
              "Value" : "ecs.g5.xlarge"
            }, {
              "Status" : "Available",
              "Value" : "ecs.t5-lc1m2.large"
            }, {
              "Status" : "Available",
              "Value" : "ecs.t5-c1m4.2xlarge"
            }, {
              "Status" : "Available",
              "Value" : "ecs.c5.xlarge"
            } ]
          }
        } ]
      },
      "ZoneId" : "cn-hangzhou-e"
    } ]
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
400	Invalid.OperationType	The specified operationType is not valid.	The error message returned because the specified OperationType parameter is invalid.
400	Invalid.Param	The input parameter DestinationResource that is mandatory for processing this request is not supplied.	The error message returned because the specified DestinationResource parameter is invalid.
400	Invalid.InstanceChargeType	The specified InstanceChargeType is not valid.	The error message returned because the specified InstanceChargeType parameter is invalid.
403	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist in our records.	The error message returned because the specified dedicated host does not exist within the current region.
403	InvalidParam.TypeAndCpuMem.Conflict	The specified 'InstanceType' and 'Cores','Memory' are not blank at the same time.	The error message returned because none of the InstanceType, Cores, and Memory parameters are specified.
403	InvalidParam.Cores	The specified parameter 'Cores' should be empty	The error message returned because the Cores parameter is specified.
403	InvalidParam.Memory	The specified parameter 'Memory' should be empty	The error message returned because the Memory parameter is specified.
404	Invalid.RegionId	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter is invalid.
404	Unavailable.Regions	The available regions does not exists	The error message returned because the specified RegionId parameter is invalid.
404	Invalid.ResourceType	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter is invalid.
404	Invalid.DestinationResource	The specified DestinationResource is not valid.	The error message returned because the specified DestinationResource parameter is invalid.
404	Invalid.IoOptimized	The specified IoOptimized is not valid.	The error message returned because the specified IoOptimized parameter is invalid.
404	Invalid.NetworkCategory	The specified NetworkCategory is not valid.	The error message returned because the specified NetworkCategory parameter is invalid.
404	Invalid.SpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
404	Invalid.ResourceId	The specified ResourceId is not valid.	The error message returned because the specified ResourceId parameter is invalid.
404	Invalid.InstancePayType	The specified InstancePayType is not valid.	The error message returned because the specified InstanceChargeType parameter is invalid.
404	OperationDenied	The specified operation is denied as this instanceType is not support.	The error message returned because the instance type does not support the current operation.
404	InvalidInstanceId.NotFound	The specified InstanceId provided does not exist in our records.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
404	InvalidResourceId.NotFound	The specified ResourceId is not found in our records	The error message returned because the specified ResourceId parameter is invalid. Check whether the resource exists.

For a list of error codes, visit the API Error Center.

28.4. DescribeAvailableResource

Queries resources in a specific zone. You can query the resources available in a zone before you create ECS instances by calling the RunInstances operation or before you modify instance types by calling the ModifyInstanceSpec operation.

Description

Values of the `DestinationResource` parameter have dependencies. When you select a value in the following chain for the DestinationResource parameter, the more to the right the selected value is ordered, the more parameters you must specify.

- Sequence: `Zone > IoOptimized > InstanceType = Network = ddh > SystemDisk > DataDisk`
- Example:
  - If you set `DestinationResource` to `DataDisk`, you must specify the `InstanceType` parameter or set the `ResourceType` parameter to `disk`.
  - If you set `DestinationResource` to `SystemDisk`, you must specify the `InstanceType` parameter.
  - If you set `DestinationResource` to `InstanceType`, you must specify the `IoOptimized` and `InstanceType` parameters.
  - If you want to query available ecs.g5.large resources in all zones of the China (Hangzhou) region, you must set `RegionId to cn-hangzhou, DestinationResource to InstanceType, IoOptimized to optimized, and InstanceType to ecs.g5.large`.
  - If you want to query the zones where ecs.g5.large resources are available in the China (Hangzhou) region, you must set `RegionId to cn-hangzhou, DestinationResource to Zone, IoOptimized to optimized, and InstanceType to ecs.g5.large`.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeAvailableResource	The operation that you want to perform. Set the value to **DescribeAvailableResource**.
RegionId	String	Yes	cn-hangzhou	The ID of the region for which to query resources. You can call the DescribeRegions operation to query the most recent region list.
InstanceChargeType	String	No	PrePaid	The billing method of the resource. For more information, see Billing overview. Valid values: • PrePaid: subscription • PostPaid: pay-as-you-go Default value: PostPaid.
SpotStrategy	String	No	NoSpot	The bidding policy for the pay-as-you-go instance. Valid values: • NoSpot: The instance is a regular pay-as-you-go instance. • SpotWithPriceLimit: The instance is a preemptible instance with a user-defined maximum hourly price. • SpotAsPriceGo: The instance is a preemptible instance for which the market price is automatically used as the bid price. The market price can be up to the pay-as-you-go price. Default value: NoSpot. The SpotStrategy parameter takes effect only when the InstanceChargeType parameter is set to PostPaid.

Parameter	Type	Required	Example	Description
DestinationResource	String	Yes	InstanceType	The resource type to query. Valid values: • Zone: zone • IoOptimized: I/O optimized resource • InstanceType: instance type • SystemDisk: system disk • DataDisk: data disk • Network: network type • ddh: dedicated host For more information about how to set the DestinationResource parameter, see the "Description" section in this topic.
ZoneId	String	No	cn-hangzhou-e	The ID of the zone for which to query resources. This parameter is empty by default. When this parameter is empty, the system returns resources that match the other criteria in all zones within the region specified by `RegionId`.
IoOptimized	String	No	optimized	Specifies whether the instance is an I/O optimized instance. Valid values: • none: The instance is a non-I/O optimized instance. • optimized: The instance is an I/O optimized instance. Default value: optimized.
DedicatedHostId	String	No	dh-bp165p6xk2tlw61e****	The ID of the dedicated host.
InstanceType	String	No	ecs.g5.large	The instance type. For more information, see Instance families or call the DescribeInstanceTypes operation to query the most recent instance type list. For more information about how to set the InstanceType parameter, see the "Description" section in this topic.
SystemDiskCategory	String	No	cloud_ssd	The category of the system disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • ephemeral_ssd: local SSD • cloud_essd: enhanced SSD (ESSD) Default value: cloud_efficiency. **Note** When the ResourceType parameter is set to instance and the DestinationResource parameter is set to DataDisk, you must set the SystemDiskCategory parameter. If you do not set this parameter, the default value takes effect.
DataDiskCategory	String	No	cloud_ssd	The category of the data disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • ephemeral_ssd: local SSD • cloud_essd: ESSD

Parameter	Type	Required	Example	Description
NetworkCategory	String	No	vpc	The network type. Valid values: • vpc • classic
Cores	Integer	No	2	The number of vCPUs of the instance type. For more information, see Instance families. The Cores parameter takes effect only when the DestinationResource parameter is set to InstanceType.
Memory	Float	No	8.0	The memory size of the instance type. Unit: GiB. For more information, see Instance families. The Memory parameter takes effect only when the DestinationResource parameter is set to InstanceType.
ResourceType	String	No	instance	The type of the resource. Valid values: • instance: ECS instance • disk: cloud disk • reservedinstance: reserved instance • ddh: dedicated host

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
AvailableZones	Array of AvailableZone		Details about the zones in which resources are available.
AvailableZone			
ZoneId	String	cn-hangzhou-e	The ID of the zone.
Status	String	Available	The state of the resource. Valid values: • Available • SoldOut
StatusCategory	String	WithStock	The resource category based on the stock. Valid values: • WithStock: Resources are in sufficient stock. • ClosedWithStock: Resources are insufficient. We recommend that you use other resources that are in sufficient stock. • WithoutStock: Resources are sold out and will be replenished. We recommend that you use other resources that are in sufficient stock. • ClosedWithoutStock: Resources are sold out and will not be replenished. We recommend that you use other resources that are in sufficient stock.
RegionId	String	cn-hangzhou	The ID of the region.
AvailableResources	Array of AvailableResource		Details about the resources available in the zone.
AvailableResource			

Parameter	Type	Example	Description
Type	String	InstanceType	The type of the resource. Valid values: • Zone: zone • IoOptimized: I/O optimized resource • InstanceType: instance type • SystemDisk: system disk • DataDisk: data disk • Network: network type • ddh: dedicated host
SupportedResources	Array of SupportedResource		Details about the resources.
SupportedResource			
Status	String	Available	The state of the resource. Valid values: • Available • SoldOut
Value	String	ecs.d1ne.xlarge	The resource type.
Max	Integer	2	The maximum number of available resources of a specific type. No value is returned when the parameter is empty.
Unit	String	null	The unit of the resource type. No value is returned when the parameter is empty.
StatusCategory	String	WithStock	The resource category based on the stock. Valid values: • WithStock: Resources are in sufficient stock. • ClosedWithStock: Resources are insufficient. We recommend that you use other resources that are in sufficient stock. • WithoutStock: Resources are sold out and will be replenished. We recommend that you use other resources that are in sufficient stock. • ClosedWithoutStock: Resources are sold out and will not be replenished. We recommend that you use other resources that are in sufficient stock.
Min	Integer	1	The minimum number of available resources of a specific type. No value is returned when the parameter is empty.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeAvailableResource
&RegionId=cn-hangzhou
&DestinationResource=InstanceType
&IoOptimized=optimized
&InstanceType=ecs.g5.large
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeAvailableResourceResponse>
    <RequestId>0041D94C-FB92-4C49-B115-259DA1CE1923</RequestId>
    <AvailableZones>
        <AvailableZone>
            <Status>Available</Status>
            <RegionId>cn-hangzhou</RegionId>
            <AvailableResources>
                <AvailableResource>
                    <Type>InstanceType</Type>
                    <SupportedResources>
                        <SupportedResource>
                            <Status>Available</Status>
                            <Value>ecs.g5.large</Value>
                            <StatusCategory>WithStock</StatusCategory>
                        </SupportedResource>
                    </SupportedResources>
                </AvailableResource>
            </AvailableResources>
            <ZoneId>cn-hangzhou-i</ZoneId>
            <StatusCategory>WithStock</StatusCategory>
        </AvailableZone>
    </AvailableZones>
</DescribeAvailableResourceResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "0041D94C-FB92-4C49-B115-259DA1CE1923",
  "AvailableZones" : {
    "AvailableZone" : [ {
      "Status" : "Available",
      "RegionId" : "cn-hangzhou",
      "AvailableResources" : {
        "AvailableResource" : [ {
          "Type" : "InstanceType",
          "SupportedResources" : {
            "SupportedResource" : [ {
              "Status" : "Available",
              "Value" : "ecs.g5.large",
              "StatusCategory" : "WithStock"
            } ]
          }
        } ]
      },
      "ZoneId" : "cn-hangzhou-i",
      "StatusCategory" : "WithStock"
    } ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	Invalid.InstanceChargeType	The specified InstanceChargeType is not valid.	The error message returned because the specified InstanceChargeType parameter is invalid.
400	Invalid.Param	The input parameter DestinationResource that is mandatory for processing this request is not supplied.	The error message returned because the specified DestinationResource parameter is invalid.
400	InvalidRegionId.MalFormed	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.
403	InvalidParam.TypeAndCpuMem.Conflict	The specified 'InstanceType' and 'Cores','Memory' are not blank at the same time.	The error message returned because none of the InstanceType, Cores, and Memory parameters are specified.
403	InvalidParam.Cores	The specified parameter 'Cores' should be empty	The error message returned because the Cores parameter is specified.
403	InvalidParam.Memory	The specified parameter 'Memory' should be empty	The error message returned because the Memory parameter is specified.
404	Invalid.RegionId	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter is invalid.
404	Unavailable.Regions	The available regions does not exists	The error message returned because the specified RegionId parameter is invalid.
404	Invalid.ResourceType	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter is invalid.
404	Invalid.DestinationResource	The specified DestinationResource is not valid.	The error message returned because the specified DestinationResource parameter is invalid.
404	Invalid.IoOptimized	The specified IoOptimized is not valid.	The error message returned because the specified IoOptimized parameter is invalid.
404	Invalid.NetworkCategory	The specified NetworkCategory is not valid.	The error message returned because the specified NetworkCategory parameter is invalid.
404	Invalid.SpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
404	Invalid.NetworkType	The specified NetworkType is not valid.	The error message returned because the specified NetworkType parameter is invalid.
404	InvalidResourceId.NotFound	The specified ResourceId is not found in our records	The error message returned because the specified ResourceId parameter is invalid. Check whether the resource exists.

For a list of error codes, visit the API Error Center.

29.Pricing

29.1. DescribePrice

Queries the most recent prices of Elastic Compute Resource (ECS) resources.

Description

- The required parameters vary based on the types of resources whose prices you are querying.
  - When the `ResourceType` parameter is set to instance, you must specify the `InstanceType` parameter.
  - When the `ResourceType` parameter is set to disk, you must specify both the `DataDisk.1.Category` and `DataDisk.1.Size` parameters. When the `ResourceType` parameter is set to disk, only pay-as-you-go disk prices are returned. In this scenario, the `PriceUnit` parameter can be set only to `Hour`.
  - When the `ResourceType` parameter is set to ddh, you must specify the `DedicatedHostType` parameter.
  - When the `ResourceType` parameter is set to ElasticityAssurance, you must specify the `InstanceType` parameter.
  - When the `ResourceType` parameter is set to CapacityReservation, you must specify the `InstanceType` parameter.
- When the `ResourceType` parameter is set to bandwidth, only the pay-by-traffic (`PayByTraffic`) price for network usage is returned.
- When the `ResourceType` parameter is set to instance, the prices of up to four data disks can be queried.
- By default, the `ChargeType` parameter is set to `PostPaid`. You can specify the `PriceUnit` parameter to query prices of ECS resources that have different billing cycles.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribePrice	The operation that you want to perform. Set the value to DescribePrice.
RegionId	String	Yes	cn-hangzhou	The region ID of the ECS resource. You can call the DescribeRegions operation to query the most recent region list.
ResourceType	String	No	instance	The type of the resource. Valid values: • instance: queries the most recent prices of ECS instances. When this parameter is set to `instance`, you must specify the `InstanceType` parameter. • disk: queries the most recent prices of disks. When this parameter is set to `disk`, you must specify both the `DataDisk.1.Category` and `DataDisk.1.Size` parameters. • bandwidth: queries the most recent prices for network usage. • ddh: queries the most recent prices of dedicated hosts. • ElasticityAssurance: queries the most recent prices of elasticity assurances. When this parameter is set to `ElasticityAssurance`, you must specify the `InstanceType` parameter. • ElasticityAssurance: queries the most recent prices of capacity reservations. When this parameter is set to `CapacityReservation`, you must specify the `InstanceType` parameter. Default value: instance.

Parameter	Type	Required	Example	Description
ImageId	String	No	centos_7_05_64_20G_alibase_20181212.vhd	The ID of the image, which indicates the runtime environment to load when the instance starts. You can call the DescribeImages operation to query the available images. If you do not specify this parameter, the system queries the prices of Linux images.
InstanceType	String	No	ecs.g6.large	The instance type. When the `ResourceType` parameter is set to `instance`, you must specify the InstanceType parameter. For more information, see Instance families or call the DescribeInstanceTypes operation to query the most recent instance type list.
IoOptimized	String	No	optimized	Specifies whether the instance is I/O optimized. Valid values: • none: The instance is not I/O optimized. • optimized: The instance is I/O optimized. If the instance type specified by the InstanceType parameter belongs to Generation I instance families, the default value is none. If the instance type specified by the InstanceType parameter does not belong to Generation I instance families, the default value is optimized.
InstanceNetworkType	String	No	vpc	The network type of the instance. Valid values: • classic: classic network • vpc: Virtual Private Cloud (VPC) Default value: vpc.
InternetChargeType	String	No	PayByTraffic	The billing method for network usage. Valid values: • PayByBandwidth: pay-by-bandwidth • PayByTraffic: pay-by-traffic Default value: PayByTraffic.
InternetMaxBandwidthOut	Integer	No	5	The maximum outbound public bandwidth. Unit: Mbit/s. Valid values: 0 to 100. Default value: 0.
SystemDisk.Category	String	No	cloud_ssd	The category of the system disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • ephemeral_ssd: local SSD • cloud_essd: enhanced SSD (ESSD) Description of the default values: • When the InstanceType parameter is set to a retired instance type and the `IoOptimized` parameter is set to `none`, the default value is `cloud`. • In other cases, the default value is `cloud_efficiency`.

Parameter	Type	Required	Example	Description
SystemDisk.Size	Integer	No	80	The size of the system disk. Unit: GiB. Valid values: 20 to 500. The default value is 40 or the size of the image, whichever is greater. **Note** The value of this parameter must be at least 20 and greater than or equal to the size of the image.
SystemDisk.PerformanceLevel	String	No	PL1	The performance level of the system disk when it is an ESSD. This parameter is valid only when the `SystemDiskCategory` parameter is set to cloud_essd. Default value: PL1. Valid values: • PL0 • PL1 • PL2 • PL3
DataDisk.1.Size	Integer	No	2000	The size of the first data disk. Unit: GiB. Valid values: • Valid values when DataDisk.1.Category is set to cloud: 5 to 2000 • Valid values when DataDisk.1.Category is set to cloud_efficiency: 20 to 32768 • Valid values when DataDisk.1.Category is set to cloud_ssd: 20 to 32768 • Valid values when DataDisk.1.Category is set to cloud_essd: 20 to 32768 • Valid values when DataDisk.1.Category is set to ephemeral_ssd: 5 to 800
DataDisk.1.Category	String	No	cloud_ssd	The category of the first data disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • ephemeral_ssd: local SSD • cloud_essd: ESSD
DataDisk.1.PerformanceLevel	String	No	PL1	The performance level of the first data disk when it is an ESSD. This parameter is valid only when the `DataDisk.1.Category` parameter is set to cloud_essd. Default value: PL1. Valid values: • PL0 • PL1 • PL2 • PL3
DataDisk.2.Size	Integer	No	200	The size of the second data disk. Unit: GiB. Valid values: • Valid values when DataDisk.2.Category is set to cloud: 5 to 2000 • Valid values when DataDisk.2.Category is set to cloud_efficiency: 20 to 32768 • Valid values when DataDisk.2.Category is set to cloud_ssd: 20 to 32768 • Valid values when DataDisk.2.Category is set to cloud_essd: 20 to 32768 • Valid values when DataDisk.2.Category is set to ephemeral_ssd: 5 to 800

Parameter	Type	Required	Example	Description
DataDisk.2.Category	String	No	cloud_ssd	The category of the second data disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • ephemeral_ssd: local SSD • cloud_essd: ESSD
DataDisk.2.PerformanceLevel	String	No	PL1	The performance level of the second data disk when it is an ESSD. This parameter is valid only when the `DataDisk.2.Category` parameter is set to cloud_essd. Default value: PL1. Valid values: • PL0 • PL1 • PL2 • PL3
DataDisk.3.Size	Integer	No	2000	The size of the third data disk. Unit: GiB. Valid values: • Valid values when DataDisk.3.Category is set to cloud: 5 to 2000 • Valid values when DataDisk.3.Category is set to cloud_efficiency: 20 to 32768 • Valid values when DataDisk.3.Category is set to cloud_ssd: 20 to 32768 • Valid values when DataDisk.3.Category is set to cloud_essd: 20 to 32768 • Valid values when DataDisk.3.Category is set to ephemeral_ssd: 5 to 800
DataDisk.3.Category	String	No	cloud_ssd	The category of the third data disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • ephemeral_ssd: local SSD • cloud_essd: ESSD
DataDisk.3.PerformanceLevel	String	No	PL1	The performance level of the third data disk when it is an ESSD. This parameter is valid only when the `DataDisk.3.Category` parameter is set to cloud_essd. Default value: PL1. Valid values: • PL0 • PL1 • PL2 • PL3
DataDisk.4.Size	Integer	No	2000	The size of the fourth data disk. Unit: GiB. Valid values: • Valid values when DataDisk.4.Category is set to cloud: 5 to 2000 • Valid values when DataDisk.4.Category is set to cloud_efficiency: 20 to 32768 • Valid values when DataDisk.4.Category is set to cloud_ssd: 20 to 32768 • Valid values when DataDisk.4.Category is set to cloud_essd: 20 to 32768 • Valid values when DataDisk.4.Category is set to ephemeral_ssd: 5 to 800

Parameter	Type	Required	Example	Description
DataDisk.4.Category	String	No	cloud_ssd	The category of the fourth data disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • ephemeral_ssd: local SSD • cloud_essd: ESSD
DataDisk.4.PerformanceLevel	String	No	PL1	The performance level of the fourth data disk when it is an ESSD. This parameter is valid only when the `DataDisk.4.Category` parameter is set to cloud_essd. Default value: PL1. Valid values: • PL0 • PL1 • PL2 • PL3
Period	Integer	No	1	The billing duration of the ECS instance. Valid values: • Valid values when PriceUnit is set to Month: 1, 2, 3, 4, 5, 6, 7, 8, and 9. • Valid values when PriceUnit is set to Year: 1, 2, 3, 4, and 5. • Set the value to 1 when PriceUnit is set to Hour. Default value: 1.
PriceUnit	String	No	Year	The pricing unit of the ECS resource. Default value: Hour. Valid values: • Month • Year • Hour
Amount	Integer	No	1	The number of ECS instances that you want to purchase. You can specify this parameter when you want to query the prices of multiple instances that have specific specifications. Valid values: 1 to 1000. Default value: 1.
AssuranceTimes	String	No	Unlimited	The total number of times that the elasticity assurance can be applied. Set the value to Unlimited. This value indicates that the elasticity assurance can be applied an unlimited number of times within its effective duration. Default value: Unlimited.
InstanceTypeList.N	RepeatList	No	ecs.g6.xlarge	Instance type N. You can select only a single instance type when you configure an elasticity assurance in unlimited mode.
DedicatedHostType	String	No	ddh.c5	The dedicated host type. You can call the DescribeDedicatedHostTypes operation to obtain the most recent list of dedicated host types.

Parameter	Type	Required	Example	Description
SpotStrategy	String	No	NoSpot	The preemption policy for the pay-as-you-go instance. Valid values: • NoSpot: The instance is a regular pay-as-you-go instance. • SpotWithPriceLimit: The instance is a preemptible instance with a maximum hourly price. • SpotAsPriceGo: The instance is a preemptible instance for which the market price is automatically used as the bid price. The market price can be up to the pay-as-you-go price. Default value: NoSpot. **Note** This parameter is valid only when the `PriceUnit` parameter is set to Hour and the `Period` parameter is set to 1. The default value of the `PriceUnit` parameter is `Hour` and the default value of the `Period` parameter is `1`. Therefore, you do not need to set the `PriceUnit` and `Period` parameters when you set the SpotStrategy parameter.
SpotDuration	Integer	No	1	The protection period of the preemptible instance. Unit: hours. Valid values: 0, 1, 2, 3, 4, 5, and 6. • Protection periods of 2, 3, 4, 5, and 6 hours are in invitational preview. If you want to set this parameter to one of these values, submit a ticket. • If this parameter is set to 0, no protection period is configured for the preemptible instance. Default value: 1.
ZoneId	String	No	cn-hagzhou-i	The zone ID of the resource.

Response parameters

Parameter	Type	Example	Description
PriceInfo	Struct		Details about the prices and discount rules.
Price	Struct		The price.
Currency	String	USD	The currency unit.
DetailInfos	Array of ResourcePriceModel		Details about the price. **Note** This parameter is in invitational preview and unavailable.
ResourcePriceModel			
DiscountPrice	Float	655.2	The discount.
OriginalPrice	Float	4368	The original price.
Resource	String	instance	The name of the resource.
SubRules	Array of Rule		Details about the pricing rules.

Parameter	Type	Example	Description
Rule			
Description	String	Receive a 15% discount on a 1-year subscription	The description of the pricing rule.
RuleId	Long	587	The ID of the pricing rule.
TradePrice	Float	3712.8	The transaction price.
DiscountPrice	Float	655.2	The discount.
OriginalPrice	Float	4368	The original price.
ReservedInstanceHourPrice	Float	1	The hourly price of the reserved instance for which the No Upfront or Partial Upfront payment option is used.
TradePrice	Float	3712.8	The transaction price, which is equal to the original price minus the discount.
Rules	Array of Rule		Details about the promotion rules.
Rule			
Description	String	Receive a 15% discount on a 1-year subscription	The description of the promotion rule.
RuleId	Long	587	The ID of the promotion rule.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribePrice
&RegionId=cn-hangzhou
&ResourceType=instance
&InstanceType=ecs.g6.large
&ImageId=centos_7_05_64_20G_alibase_20181212.vhd
&InstanceNetworkType=vpc
&InternetChargeType=PayByTraffic
&InternetMaxBandwidthOut=5
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribePriceResponse>
      <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
      <PriceInfo>
            <Price>
                  <Currency>USD</Currency>
                  <DiscountPrice>655.2</DiscountPrice>
                  <OriginalPrice>4368</OriginalPrice>
                  <TradePrice>3712.8</TradePrice>
            </Price>
            <Rules>
                  <Rule>
                        <Description>Receive a 15% discount on a 1-year subscription. </Description>
                        <RuleId>ONE_YEAR_85_PERCENT</RuleId>
                  </Rule>
            </Rules>
      </PriceInfo>
</DescribePriceResponse>
```

`JSON` format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368",
  "PriceInfo": {
    "Price": {
      "Currency": "USD",
      "DiscountPrice": 655.2,
      "OriginalPrice": 4368,
      "TradePrice": 3712.8
    },
    "Rules": {
      "Rule": [
        {
          "Description": "Receive a 15% discount on a 1-year subscription",
          "RuleId": "ONE_YEAR_85_PERCENT"
        }
      ]
    }
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidSpotAuthorized	The specified Spot param is unauthorized.	The error message returned because you are not authorized to set the SpotDuration parameter.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or because you are not authorized to manage instances of this instance type.
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid.	The error message returned because the specified InternetChargeType parameter is invalid.
400	InvalidInternetMaxBandwidthOut.ValueNotSupported	The specified parameter "InternetMaxBandwidthOut" is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidDataDiskSize.ValueNotSupported	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified DataDisk.N.Size parameter is invalid or because the snapshot size exceeds the maximum capacity allowed for the specified disk category.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified DataDisk.N.Category parameter is invalid.
400	InvalidParameter.Conflict	The specified image does not support the specified instance type.	The error message returned because the specified image cannot be used for instances of the specified instance type.
400	InvalidNetworkType.Mismatch	Specified parameter "InternetChargeType" conflict with instance network type.	The error message returned because the network type of the instance does not support the specified billing method for network usage.
400	InvalidDiskCategory.Mismatch	The specified disk categories' combination is not supported.	The error message returned because the combination of the specified disk categories is not supported.
400	InvalidIoOptimizedValue.ValueNotSupported	IoOptimized value not supported.	The error message returned because the specified IoOptimized parameter is invalid.
400	InvalidPeriod	The specified period is not valid.	The error message returned because the specified Period parameter is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter " DataDisk.n.Category " is not valid.	The error message returned because the specified DataDisk.N.Category parameter is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter " SystemDisk.Category " is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InstanceDiskCategoryLimitExceed	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified DataDisk.N.Size parameter is invalid or because the snapshot size exceeds the maximum capacity allowed for the specified disk category.
400	InvalidInternetMaxBandwidthOut.ValueNotSupported	The specified vm bandwidth is not valid.	The error message returned because the specified bandwidth of the instance is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter SystemDisk.Category is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidInternetMaxBandwidthOut.ValueNotSupported	The specified parameter Bandwidth is not valid.	The error message returned because the specified bandwidth is invalid.
400	InstanceDiskNumber.LimitExceed	The total number of specified disk in an instance exceeds.	The error message returned because the maximum number of disks that can be attached to the instance has been reached.
400	InvalidDiskCategory.ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidInternetMaxBandwidthOut.ValueNotSupported	%s	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned because the specified data disk category is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	%s	The error message returned because the operation is not applicable to the specified system disk category.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.Conflict	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified InternetChargeType parameter is invalid.
400	InvalidInstanceType.ValueNotSupported	%s	The error message returned because the operation is not applicable to the specified instance type.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to perform the operation in the specified region.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	InvalidDataDiskSize.ValueNotSupported	%s	The error message returned because the specified data disk size is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Size" is not valid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	InvalidSystemDiskSize.LessThanImageSize	The specified parameter "SystemDisk.Size" is less than the image size.	The error message returned because the specified system disk size is smaller than the image size.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.Category" is not valid.	The error message returned because the specified DataDisk.N.Category parameter is invalid.
400	InvalidDataDiskSize.ValueNotSupported	The specified parameter "DataDisk.Size" is not valid.	The error message returned because the specified DataDisk.N.Size parameter is invalid.
400	Throttling	Request was denied due to request throttling.	The error message returned because the request is denied due to throttling. Try again later.
400	PriceNotFound	The price of your queried resource is not available now, please try other resources.	The error message returned because the price of the specified resource is not found. Modify the parameter value and try again later.
400	InvalidResourceType.ValueNotSupported	The specified parameter ResourceType is not valid.	The error message returned because the specified ResourceType parameter is invalid.
400	InvalidPriceUnit.ValueNotSupported	The specified parameter PriceUnit is not valid.	The error message returned because the specified PriceUnit parameter is invalid.
400	InvalidInternetMaxBandwidthOut.ValueNotSupported	The specified parameter InternetMaxBandwidthOut is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
400	EncryptedOption.Conflict	%s	The error message returned because the parameter used to encrypt disks is not supported.
403	ImageNotSubscribed	The specified image has not be subscribed.	The error message returned because you have not subscribed to the specified Alibaba Cloud Marketplace image.
403	OperationDenied	The specified Image is disabled or is deleted.	The error message returned because the specified image has been disabled or deleted.
403	InvalidSystemDiskCategory.ValueUnauthorized	The disk category is not authorized.	The error message returned because you are not authorized to use the specified disk category.
403	InstanceDiskCategoryLimitExceed	The total size of specified disk category in an instance exceeds.	The error message returned because the total size of disks of the specified category exceeds the maximum capacity allowed for an instance.

HTTP status code	Error code	Error message	Description
403	ImageRemovedInMarket	The specified market image is not available, Or the specified user defined image includes product code because it is based on an image subscribed from marketplace, and that image in marketplace includeing exact the same product code has been removed.	The error message returned because the specified Alibaba Cloud Marketplace image is unavailable, or because the specified custom image contains the product code of the Alibaba Cloud Marketplace image from which the custom image is derived, and the Alibaba Cloud Marketplace image has been removed from Alibaba Cloud Marketplace.
403	QuotaExceed.PortableCloudDisk	The quota of portable cloud disk exceeds.	The error message returned because the maximum number of removable disks has been reached.
403	Forbbiden	User not authorized to operate on the specified resource.	The error message returned because you are not authorized to perform operations on the specified resource.
403	InstanceDiskNumLimitExceed	The number of specified disk in an instance exceeds.	The error message returned because the maximum number of disks that can be attached to the instance has been reached.
403	IoOptimized.NotSupported	The specified image is not support IoOptimized Instance.	The error message returned because the specified image does not support I/O optimized instances.
403	ImageNotSupportInstanceType	The specified image don't support the InstanceType instance.	The error message returned because the specified image does not support the instance type.
403	InvalidDiskSize.TooSmall	Specified disk size is less than the size of snapshot	The error message returned because the specified disk size is smaller than the snapshot size.
403	OperationDenied	The type of the disk does not support the operation	The error message returned because the disk category does not support the specified operation.
403	InvalidDiskCategory.Mismatch	The specified disk categories combination is not supported.	The error message returned because the combination of the specified disk categories is not supported.
403	InvalidDiskCategory.NotSupported	The specified disk category is not support the specified instance type.	The error message returned because the specified disk category does not support the instance type.
403	InvalidDiskCategory.NotSupported	The upgrade operation of instance does not support this category of disk.	The error message returned because the upgrade operations of instances do not support the specified disk category.
403	InvalidParameter.ResourceOwnerAccount	ResourceOwnerAccount is Invalid.	The error message returned because the specified ResourceOwnerAccount parameter is invalid.
403	RegionUnauthorized	There is no authority to create instance in the specified region.	The error message returned because you are not authorized to create instances in the specified region.
403	OperationDenied	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the specified operation is valid.
403	InstanceType.Offline	%s	The error message returned because the operation is not supported while the instance type is retired or while resources of the instance type are insufficient.
403	OperationDenied	The specified parameter InstanceNetworkType is not authorized.	The error message returned because you are not authorized to use the specified network type.
403	InvalidAmount.Malformed	The specified parameter Amount is not valid.	The error message returned because the specified Amount parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidDiskSize.TooSmall	Specified system disk size is less than the size of image	The error message returned because the specified system disk size is smaller than the image size.
403	InvalidChargeType.MarketImage	The specified chargeType of marketplace image is invalid	The error message returned because the billing method for the Alibaba Cloud Marketplace image is not supported.
403	InvalidDiskIds.NotFound	Some of the specified disks do not exist.	The error message returned because the specified disk does not exist.
403	InvalidDiskCategory.NotSupported	The specified disk category is not supported.	The error message returned because the specified disk category does not support the operation.
403	PrePaidInstance.Expired	The prePaid instance has expired.	The error message returned because the subscription instance has expired.
403	InvalidAction.Unauthorized	The specified action is not valid.	The error message returned because the specified operation is invalid.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist within this account. Check whether the image ID is correct.
404	IoOptimized.NotSupported	The specified instancetype is not support IoOptimized instance	The error message returned because the specified instance type does not support I/O optimization.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified instance billing method does not exist.
404	DependencyViolation.IoOptimized	The specified instancetype must be IoOptimized instance.	The error message returned because the specified instance type is not I/O optimized.
404	InvalidSystemDiskSize.LessThanImageSize	The specified parameter SystemDisk.Size is less than the image size.	The error message returned because the specified system disk size is smaller than the image size.
404	InvalidSystemDiskSize.LessThanMinSize	The specified parameter SystemDisk.Size is less than the minimum size.	The error message returned because the specified system disk size is smaller than the lower limit.
404	InvalidSystemDiskSize.MoreThanMaxSize	The specified parameter SystemDisk.Size is more than the maximum size	The error message returned because the maximum size of the specified system disk has been reached.
404	InvalidSystemDiskSize.ValueNotSupported	The specified parameter SystemDisk.Size is invalid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
404	InvalidInstanceType.Missing	The InstanceType parameter that is mandatory for processing the request is not provided.	The error message returned because the InstanceType parameter is not specified.
404	InvalidNetworkType.ValueNotSupported	The specified parameter NetworkType is not valid.	The error message returned because the specified NetworkType parameter is invalid.
404	InvalidDiskCategory.Missing	The DataDisk.1.Category parameter that is mandatory for processing the request is not provided.	The error message returned because the DataDisk.1.Category parameter is not specified.
404	Invalid.InstanceId.NotFound	The Instance provided does not exist.	The error message returned because the specified instance does not exist.
404	InvalidMarketImage.NotFound	The specified marketplace image does not exist, please change the imageId and try again.	The error message returned because the specified Alibaba Cloud Marketplace image does not exist. Modify the ImageId parameter value and try again later.
404	InvalidDiskIds.NotPortable	The specified DiskId is not portable.	The error message returned because the specified disk is not removable.

HTTP status code	Error code	Error message	Description
404	InvalidSystemDisk.NotFound	The specified system disk does not exist.	The error message returned because the specified system disk does not exist.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified resource group does not exist.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the error persists, submit a ticket.
500	InternalError	%s	The error message returned because an internal error has occurred. Try again later.

For a list of error codes, visit the API Error Center.

29.2. DescribeRenewalPrice

You can call this operation to query the renewal prices of subscription ECS instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeRenewalPrice	The operation that you want to perform. Set the value to DescribeRenewalPrice.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
ResourceId	String	Yes	i-bp1f2o4ldh8l29zv****	The ID of the specified resource whose renewal price is to be queried. When the `ResourceType` parameter is set to `instance`, the value of `ResourceId` is that of `InstanceId`.
ResourceType	String	No	instance	The type of the specified resource whose renewal price is to be queried. Set the value to instance. Default value: instance.
Period	Integer	No	1	The renewal period. The valid values of this parameter depend on the value specified for the PriceUnit parameter. Valid values: • When `PriceUnit` is set to `Month`: 1, 2, 3, 4, 5, 6, 7, 8, and 9. • When `PriceUnit` is set to `Year`: 1, 2, and 3. Default value: 1.
PriceUnit	String	No	Month	The unit of the renewal period. Valid values: • Month • Year Default value: Month.

Response parameters

Parameter	Type	Example	Description
PriceInfo	Struct		Details about the PriceInfo data, including the price and discount rules.
Price	Struct		The price.
Currency	String	USD	The currency unit.
DetailInfos	Array of ResourcePriceModel		Details about the resource prices.
ResourcePriceModel			
DiscountPrice	Float	655.2	The discount.
OriginalPrice	Float	4368	The original price.
Resource	String	instance	The name of the resource corresponding to the price.
SubRules	Array of Rule		Details about the pricing rules.
Rule			
Description	String	Receive a 15% discount on a 1-year subscription	The description of the pricing rule.
RuleId	Long	1234567890	The ID of the pricing rule.
TradePrice	Float	3712.8	The transaction price.
DiscountPrice	Float	655.2	The discount.
OriginalPrice	Float	4368	The original price.
TradePrice	Float	3712.8	The final transaction price after discounts are applied.
Rules	Array of Rule		The promotion rules.
Rule			
Description	String	Receive a 15% discount on a 1-year subscription	The description of the promotion rule.
RuleId	Long	1234567890	The ID of the rule.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeRenewalPrice
&RegionId=cn-hangzhou
&ResourceId=i-bp1f2o4ldh8l29zv****
&Period=1
&PriceUnit=Month
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeRenewalPriceResponse>
      <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
      <PriceInfo>
            <Price>
                  <Currency>USD</Currency>
                  <DiscountPrice>655.2</DiscountPrice>
                  <OriginalPrice>4368</OriginalPrice>
                  <TradePrice>3712.8</TradePrice>
            </Price>
            <Rules>
                  <Rule>
                        <Description>Receive a 15% discount on a 1-year subscription. </Description>
                        <RuleId>ONE_YEAR_85_PERCENT</RuleId>
                  </Rule>
            </Rules>
      </PriceInfo>
</DescribeRenewalPriceResponse>
```

`JSON` format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368",
  "PriceInfo": {
    "Price": {
      "Currency": "USD",
      "DiscountPrice": 655.2,
      "OriginalPrice": 4368,
      "TradePrice": 3712.8
    },
    "Rules": {
      "Rule": [
        {
          "Description":"Receive a 15% discount on 1-year subscription",
          "Code": "ONE_YEAR_85_PERCENT"
        }
      ]
    }
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
500	InternalError	%s	The error message returned because an internal error has occurred.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
400	InvalidResourceType.ValueNotSupported	The specified parameter ResourceType is not valid.	The error message returned because the specified ResourceType parameter is invalid.
400	InvalidPeriod	The specified period is not valid.	The error message returned because the specified period of time is invalid.
400	InvalidPriceUnit.ValueNotSupported	The specified parameter PriceUnit is not valid.	The error message returned because the specified PriceUnit parameter is invalid.
400	Throttling	Request was denied due to request throttling.	The error message returned because the request was throttled. Try again later.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the operation is not supported while the instance uses the current billing method.
400	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

HttpCode	Error code	Error message	Description
403	InvalidAction.Unauthorized	The specified action is not valid.	The error message returned because the specified operation is invalid.

For a list of error codes, visit the API Error Center.

29.3. DescribeInstanceModificationPrice

Queries the pricing information about newly attached subscription data disks or about the new Elastic Compute Service (ECS) instance types when you upgrade the configurations of unexpired subscription ECS instances.

Description

- Pricing information can be queried for unexpired subscription ECS instances only when you upgrade their configurations. The pricing information cannot be queried when the instance configurations are downgraded.
- Pricing information cannot be queried for pay-as-you-go ECS instances when you downgrade their configurations. Prices of existing pay-as-you-go ECS instances whose configurations are changed are the same as those of new pay-as-you-go instances. You can call the DescribePrice operation to query the latest prices of ECS instances.
- Before you upgrade the configurations of an instance, we recommend that you call the DescribeResourcesModification operation to query the instance types that can be used for the upgrade in the specified zone.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceModificationPrice	The operation that you want to perform. Set the value to DescribeInstanceModificationPrice.
InstanceId	String	Yes	i-bp1f2o4ldh8l****	The ID of the instance for which you want to query pricing information for a configuration upgrade.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceType	String	No	ecs.g6e.large	The new instance type. We recommend that you call the DescribeResourcesModification operation to query the instance types available for a configuration upgrade in the specified zone. **Note** When you call the DescribeInstanceModificationPrice operation, you must specify at least one of the following parameters: `InstanceType` and disk-related parameters (`DataDisk.N.*`).

Parameter	Type	Required	Example	Description
SystemDisk.Category	String	No	cloud_ssd	The category of the system disk. You must specify this parameter only when you upgrade a non-I/O optimized instance of a retired instance type to an I/O optimized instance of an available instance type. For more information about instance types, see Instance families and Retired instance types. Valid values: • cloud_efficiency: ultra disk • cloud_ssd: standard SSD This parameter is empty by default.
DataDisk.N.Category	String	No	cloud_essd	The category of data disk N. You can specify this parameter if you want to query the pricing information about newly attached subscription data disks. Valid values of N: 1 to 16. Valid values: • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • cloud_essd: enhanced SSD (ESSD) • cloud: basic disk This parameter is empty by default. **Note** When you call the DescribeInstanceModificationPrice operation, you must specify at least one of the following parameters: `InstanceType` and disk-related parameters (`DataDisk.N.*`).
DataDisk.N.Size	Integer	No	100	The capacity of data disk N. Valid values of N: 1 to 16. Unit: GiB. Valid values: • Valid values when DataDisk.N.Category is set to cloud_efficiency: 20 to 32768 • Valid values when DataDisk.N.Category is set to cloud_ssd: 20 to 32768 • Valid values when DataDisk.N.Category is set to cloud_essd: 20 to 32768 • Valid values when DataDisk.N.Category is set to cloud: 5 to 2000 The default value is the minimum capacity allowed for the specified data disk category.
DataDisk.N.PerformanceLevel	String	No	PL1	The performance level of data disk N that is an ESSD. The N value must be the same as that in DataDisk.N.Category when `DataDisk.N.Category` is set to cloud_essd. Valid values: • PL0: A single ESSD can deliver up to 10,000 random read/write IOPS. • PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. • PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. • PL3: A single ESSD can deliver up to 1,000,000 random read/write IOPS. Default value: PL1. For more information about ESSD performance levels, see ESSDs.

Response parameters

Parameter	Type	Example	Description
PriceInfo	Struct		Details about the prices and discount rules.
Price	Struct		The price.
Currency	String	CNY	The currency unit. Valid values: • CNY • USD
DiscountPrice	Float	61.320	The discount.
OriginalPrice	Float	175.200	The original price.
TradePrice	Float	113.880	The transaction price, which is equal to the original price minus the discount.
Rules	Array of Rule		The promotion rules.
Rule			
Description	String	Upgrade offers	The description of the promotion rule.
RuleId	Long	1234567890	The ID of the rule.
RequestId	String	A3DC3196-379B-4F32-A2C5-B937134FAD8A	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceModificationPrice
&RegionId=cn-hangzhou
&InstanceId=i-bp1f2o4ldh8l****
&InstanceType=ecs.g6e.large
&DataDisk.1.Category=cloud_essd
&DataDisk.1.Size=100
&DataDisk.1.PerformanceLevel=PL1
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeInstanceModificationPriceResponse>
      <RequestId>A3DC3196-379B-4F32-A2C5-B937134FAD8A</RequestId>
      <PriceInfo>
            <Rules>
                  <Rule>
                        <Description>Upgrade offers</Description>
                        <RuleId>1234567890</RuleId>
                  </Rule>
            </Rules>
            <Price>
                  <OriginalPrice>175.200</OriginalPrice>
                  <Currency>CNY</Currency>
                  <DiscountPrice>61.320</DiscountPrice>
                  <TradePrice>113.880</TradePrice>
            </Price>
      </PriceInfo>
</DescribeInstanceModificationPriceResponse>
```

`JSON` format

```
{
    "RequestId": "A3DC3196-379B-4F32-A2C5-B937134FAD8A",
    "PriceInfo": {
        "Rules": {
            "Rule": [
                {
                    "Description": "Upgrade offers",
                    "RuleId": "1234567890"
                }
            ]
        },
        "Price": {
            "OriginalPrice": "175.200",
            "Currency": "CNY",
            "DiscountPrice": "61.320",
            "TradePrice": "113.880"
        }
    }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter.InstanceTypeOrDataDisk	You must specify the parameter InstanceType or DataDisk.	The error message returned because InstanceType and disk-related parameters (DataDisk.N.*) are all empty.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidDiskCategory.Missing	The DataDisk.1.Category parameter that is mandatory for processing the request is not provided.	The error message returned because the DataDisk.1.Category parameter is not specified.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified DataDisk.N.Category parameter is invalid.
400	InvalidDiskCategory.ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or because you are not authorized to manage instances of the specified instance type.
400	InstanceType.Offline	%s	The error message returned because the operation is not supported while the instance type is retired or resources of the instance type are insufficient.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to perform the operation in the specified region.
400	InvalidAction.WithActiveElasticUpgrade	The instance has active Elastic Upgrade.	The error message returned because the operation is not supported while the configurations of the instance are being temporarily upgraded. The configurations of the instance go through a temporary upgrade if the EndTime parameter is specified to call the ModifyPrepayInstanceSpec operation.
400	PriceNotFound	The price of your queried resource is not available now, please try other resources.	The error message returned because the price of the specified resource is not found. Modify the parameter value and try again later.

HTTP status code	Error code	Error message	Description
403	InvalidParameter.ResourceOwnerAccount	ResourceOwnerAccount is Invalid.	The error message returned because the specified ResourceOwnerAccount parameter is invalid.
403	ChargeTypeViolation	PostPaid instance do not support this operation.	The error message returned because this operation cannot be used to query pricing information for configuration changes of pay-as-you-go ECS instances.
403	InvalidInstanceType.NotSupportUpgrade	The specified InstanceType can only be downgraded. This API supports querying prices only of InstanceType that can be upgraded.	The error message returned because the specified instance type can be used only for a configuration downgrade of the specified instance and the operation can be used to query pricing information only for instance configuration upgrades. We recommend that you call the DescribeResourcesModification operation to query the instance types available for instance configuration upgrades.
403	InstanceExpired	The PrePaid instance has been expired.	The error message returned because the operation is not supported for expired instances.
403	Throttling	Request was denied due to request throttling.	The error message returned because the request is denied due to throttling. Try again later.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
500	InternalError	%s	The error message returned because an internal error has occurred.

For a list of error codes, visit the API Error Center.

30.Others

30.1. CancelTask

You can call this operation to cancel a running task. You can cancel the running tasks generated by the ImportImage or ExportImage operation.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CancelTask	The operation that you want to perform. Set the value to CancelTask.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call the DescribeRegions operation to query the most recent region list.
TaskId	String	Yes	t-bp198jigq7l0h5ac****	The ID of the task. You can call the DescribeTasks operation to query the list of task IDs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CancelTask
&RegionId=cn-hangzhou
&TaskId=t-bp198jigq7l0h5ac****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CancelTaskResponse>
      <RequestId>4BE2C7FE-C7A4-4675-A153-174E032AABFB</RequestId>
</CancelTaskResponse>
```

`JSON` format

```
{
    "RequestId": "4BE2C7FE-C7A4-4675-A153-174E032AABFB"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied.	The error message returned because the RegionId parameter is not specified.
400	MissingParameter	An input parameter "TaskId" that is mandatory for processing the request is not supplied.	The error message returned because the TaskId parameter is not specified.
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.

HTTP status code	Error code	Error message	Description
400	InvalidTaskId.NotFound	The specified "TaskId" is not found.	The error message returned because the specified TaskId parameter does not exist.
403	InvalidTaskId.TaskActionNotSupport	The specified task action not support.	The error message returned because the specified task is not supported.
403	InvalidTaskId.IncorrectTaskStatus	The specified task status is invalid.	The error message returned because the specified task status is invalid.
403	CancelTaskFailed	The task is failed to cancel, Please contact the administrator.	The error message returned because the task cannot be canceled. Contact the administrator.

For a list of error codes, visit the API Error Center.

30.2. DescribeTasks

Queries the progress of one or more asynchronous requests.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeTasks	The operation that you want to perform. Set the value to **DescribeTasks**.
PageNumber	Integer	No	1	The page number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.
RegionId	String	Yes	cn-hangzhou	The region ID of the task. You can call the DescribeRegions operation to query the most recent region list.
TaskIds	String	No	t-bp1hvgwromzv32iq****,t-bp179lofu2pv768w****	The IDs of the tasks. You can specify up to 100 tasks at a time. Separate multiple task IDs with commas (,).
TaskAction	String	No	ImportImage	The name of the operation that generates the task. Valid values: • ImportImage • ExportImage • RedeployInstance • ModifyDiskSpec

Parameter	Type	Required	Example	Description
TaskStatus	String	No	Finished	The status of the task. Valid values: • Finished • Processing • Failed This parameter has no default value. Note The system only retrieves tasks in the Finished, Processing, and Failed states and ignores other values.
StartTime	String	No	2020-11-23T15:10:00Z	The start point of the time period for which to query created tasks. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
EndTime	String	No	2020-11-23T15:16:00Z	The end point of the time period for which to query created tasks. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.

Response parameters

Parameter	Type	Example	Description
PageSize	Integer	10	The number of entries returned per page.
PageNumber	Integer	1	The page number of the returned page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of entries returned.
RegionId	String	cn-hangzhou	The region ID of the task.
TaskSet	Array of Task		Details about the tasks.
Task			
CreationTime	String	2020-11-24T12:50Z	The time when the task was created.
TaskStatus	String	Finished	The status of the task.
FinishedTime	String	2020-11-24T12:50Z	The time when the task was completed.
SupportCancel	String	true	Indicates whether the task can be canceled.
TaskId	String	t-bp1hvgwromzv32iq****	The ID of the task.
TaskAction	String	ImportImage	The name of the task.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeTasks
&RegionId=cn-hangzhou
&PageNumber=1
&PageSize=10
&TaskIds=t-bp1hvgwromzv32iq****
&TaskAction=ImportImage
&TaskStatus=Finished
&StartTime=2020-11-23T15:10:00Z
&EndTime=2020-11-23T15:16:00Z
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeTasksResponse>
    <TotalCount>1</TotalCount>
    <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
    <PageSize>10</PageSize>
    <PageNumber>1</PageNumber>
    <TaskSet>
        <Task>
            <TaskId>t-bp1hvgwromzv32iq****</TaskId>
            <TaskAction>ImportImage</TaskAction>
            <SupportCancel>true</SupportCancel>
            <CreationTime>2020-11-24T12:50Z</CreationTime>
            <TaskStatus>Finished</TaskStatus>
            <FinishedTime>2020-11-24T12:50Z</FinishedTime>
        </Task>
    </TaskSet>
    <RegionId>cn-hangzhou</RegionId>
</DescribeTasksResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalCount" : 1,
  "RequestId" : "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "PageSize" : 10,
  "PageNumber" : 1,
  "TaskSet" : {
    "Task" : [ {
      "TaskId" : "t-bp1hvgwromzv32iq****",
      "TaskAction" : "ImportImage",
      "SupportCancel" : true,
      "CreationTime" : "2020-11-24T12:50Z",
      "TaskStatus" : "Finished",
      "FinishedTime" : "2020-11-24T12:50Z"
    } ]
  },
  "RegionId" : "cn-hangzhou"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied.	The error message returned because the RegionId parameter is not specified.
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified value of the RegionId parameter does not exist.

For a list of error codes, visit the API Error Center.

30.3. DescribeTaskAttribute

You can call this operation to query the details of an asynchronous task. You can query the asynchronous tasks including importing images, exporting images, and modifying disk categories. The asynchronous tasks are generated by the ImportImage, ExportImage, and ModifyDiskSpec operations.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeTaskAttribute	The operation that you want to perform. Set the value to DescribeTaskAttribute.
RegionId	String	Yes	cn-hangzhou	The region ID of the task. You can call the DescribeRegions operation to query the most recent region list.
TaskId	String	Yes	t-ce946ntx4wr****	The ID of the task. You can call the DescribeTasks operation to query the list of task IDs.

Response parameters

Parameter	Type	Example	Description
CreationTime	String	2015-11-23T02:13Z	The time when the task was created.
FailedCount	Integer	0	The number of failed tasks.
FinishedTime	String	2015-11-23T02:19Z	The time when the task was complete.
OperationProgressSet	Array of OperationProgress		An array consisting of OperationProgress data of each subtask.
OperationProgress			
ErrorCode	String	ParameterInvalid	The error code.
ErrorMsg	String	The specified RegionId parameter is invalid.	The error message.
OperationStatus	String	Success	The status of the operation.
RelatedItemSet	Array of RelatedItem		An array consisting of RelatedItem data.
RelatedItem			
Name	String	OSSObject	The name of the related item.
Value	String	MYOSSPRE_m-23f8tcp***_t-23ym6mv***.vhd	The value of the related item.
RegionId	String	cn-hangzhou	The region ID of the task.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SuccessCount	Integer	1	The number of completed tasks.

Parameter	Type	Example	Description
SupportCancel	String	true	Indicates whether the task can be canceled (CancelTask). Valid values: • true: The task can be canceled. • false: The task cannot be canceled.
TaskAction	String	ExportImage	The operation name of the task.
TaskId	String	t-ce946ntx4wr****	The ID of the task.
TaskProcess	String	100%	The progress of the task.
TaskStatus	String	Finished	The status of the task.
TotalCount	Integer	1	The total number of tasks.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeTaskAttribute
&RegionId=cn-hangzhou
&TaskId=t-ce946ntx4wr****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeTaskAttributeResponse>
    <CreationTime>2015-11-23T02:13Z</CreationTime>
    <OperationProgressSet>
        <OperationProgress>
            <RelatedItemSet>
                <RelatedItem>
                    <Name>OSSBucket</Name>
                    <Value>image-temp</Value>
                </RelatedItem>
                <RelatedItem>
                    <Name>OSSObject</Name>
                    <Value>MYOSSPRE_m-23f8tcp***_t-23ym6mv***.vhd</Value>
                </RelatedItem>
                <RelatedItem>
                    <Name>ImageFormat</Name>
                    <Value>vhd</Value>
                </RelatedItem>
            </RelatedItemSet>
            <ErrorMsg></ErrorMsg>
            <ErrorCode></ErrorCode>
            <OperationStatus>Success</OperationStatus>
        </OperationProgress>
    </OperationProgressSet>
    <FinishedTime>2015-11-23T02:19Z</FinishedTime>
    <FailedCount>0</FailedCount>
    <SupportCancel>true</SupportCancel>
    <TotalCount>1</TotalCount>
    <SuccessCount>1</SuccessCount>
    <RequestId>EF0C5969-279B-49C8-AD83-BACCC74DD38C</RequestId>
    <RegionId>cn-hangzhou</RegionId>
    <TaskAction>ExportImage</TaskAction>
    <TaskStatus>Finished</TaskStatus>
    <TaskProcess>100%</TaskProcess>
    <TaskId>t-ce946ntx4wr****</TaskId>
</DescribeTaskAttributeResponse>
```

`JSON` format

```
{
    "CreationTime": "2015-11-23T02:13Z",
    "OperationProgressSet": {
        "OperationProgress": [
            {
                "RelatedItemSet": {
                    "RelatedItem": [
                        {
                            "Name": "OSSBucket",
                            "Value": "image-temp"
                        },
                        {
                            "Name": "OSSObject",
                            "Value": "MYOSSPRE_m-23f8tcp***_t-23ym6mv***.vhd"
                        },
                        {
                            "Name": "ImageFormat",
                            "Value": "vhd"
                        }
                    ]
                },
                "ErrorMsg": "",
                "ErrorCode": "",
                "OperationStatus": "Success"
            }
        ]
    },
    "FinishedTime": "2015-11-23T02:19Z",
    "FailedCount": 0,
    "SupportCancel": true,
    "TotalCount": 1,
    "SuccessCount": 1,
    "RequestId": "4BE2C7FE-C7A4-4675-A153-174E032AABFB",
    "RegionId": "cn-hangzhou",
    "TaskAction": "ExportImage",
    "TaskStatus": "Finished",
    "TaskProcess": "100%",
    "TaskId": "t-ce946ntx4wr****"
}
```


Error codes

HttpCode	Error code	Error message	Description
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied.	The error message returned because the required RegionId parameter is not specified.
400	MissingParameter	An input parameter "TaskId" that is mandatory for processing the request is not supplied.	The error message returned because the required TaskId parameter is not specified.
400	InvalidTaskId.NotFound	The specified "TaskId" is not found.	The error message returned because the specified TaskId parameter does not exist.

For a list of error codes, visit the API Error Center.

30.4. DescribeDemands

You can call this operation to query the delivery and usage status of filed resources.

Description

You can call this operation to query the details of resources filed by Alibaba Cloud, including the types, delivery status, and consumption status of the resources.

By default, the filing tickets of I/O optimized VPC-type instances are queried.

For information about how to create (CreateDemand), modify (ModifyDemand), and delete (DeleteDemand) filing tickets on ECS resources, contact your account manager.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDemands	The operation that you want to perform. Set the value to DescribeDemands.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call the DescribeRegions operation to query the most recent region list.
DemandId	String	No	ed-bp11n21kq00sl71p****	The ID of the filing ticket. If this parameter is specified, other optional request parameters are ignored.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
ZoneId	String	No	cn-hangzhou-g	The zone ID. You can call the DescribeZones operation to query the most recent zone list.
InstanceChargeType	String	No	PostPaid	The billing method of the instance. Valid values: • PostPaid: pay-as-you-go • PrePaid: subscription
InstanceTypeFamily	String	No	ecs.g6	The instance family of the filed instance.
InstanceType	String	No	ecs.g6.xlarge	The instance type of the filed instance.
DemandType	String	No	Custom	The source of the filed instance. Default value: System. Valid values: • Custom: filed on your own. • System: filed by Alibaba Cloud.
DemandStatus.N	RepeatList	No	Active	The status of the filing ticket or resource usage. Valid values: • Creating: The filing ticket is being created. • Active: The filed resources are being supplied. • Expired: The filing ticket expires. • Finished: The filed resources are consumed. • Refused: The filing request is denied. For reasons why the request is denied, see the `Comment` response parameter. • Cancelled: The filing request is canceled.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Default value: false. Valid values: • true: sends a check request, without querying the status of the filing ticket. The system checks whether your AccessKey pair is valid, whether RAM users are authorized, and whether the required parameters are set. If the check fails, the corresponding error is returned. If the check succeeds, the DryRunOperation error code is returned. • false: sends an API request. If the request succeeds, a 2XX HTTP status code is returned and the status of the filing ticket is queried.

Response parameters

Parameter	Type	Example	Description
Demands	Array		Details about the filing tickets whose regions meet the filter condition.
Demand			
AvailableAmount	Integer	10	The number of instances available for the filed resources.
Comment	String	test-for-comment	The feedback on the denied request for filing resources.
DeliveringAmount	Integer	20	The number of instances to be delivered in the filed resources.
DemandDescription	String	test-DemandDescription	The description of the filing ticket.
DemandId	String	ed-bp11n21kq00sl71p****	The ID of the filing ticket.
DemandName	String	k8s-node-demand	The name of the filing ticket.
DemandStatus	String	Active	The status of the filing ticket or resource usage. Valid values: • Creating: The filing ticket is being created. • Active: The filed resources are being supplied. • Expired: The filing ticket expires. • Finished: The filed resources are consumed. • Refused: The filing request is denied. For reasons why the request is denied, see the `Comment` response parameter. • Cancelled: The filing request is canceled. After the filing request is canceled, the delivery status of the resources becomes invalid.
DemandTime	String	2019-02-26T12:00:00Z	The time when the filing ticket was created. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
EndTime	String	2019-03-03T15:00:00Z	The expected end time for the purchase of the filed resources. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.

Parameter	Type	Example	Description
InstanceChargeType	String	Prepaid	The billing method of the filed resources. Valid values: • Prepaid: subscription • Postpaid: pay-as-you-go
InstanceType	String	ecs.g6.xlarge	The instance type of the filed instance.
InstanceTypeFamily	String	ecs.g6	The instance family of the filed instance.
Period	Integer	3	The usage duration of the filed resource.
PeriodUnit	String	Month	The unit of the usage duration of the filed resource. Valid values: • Hour • Day • Month
StartTime	String	2019-02-27T12:00:00Z	The expected start time for the purchase of the filed resources. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
SupplyInfos	Array		Details about the delivery status of the filed resources.
SupplyInfo			
Amount	Integer	30	The number of delivered instances.
SupplyEndTime	String	2019-03-03T15:00:00Z	The end time when the filed resources are delivered and available. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
SupplyStartTime	String	2019-03-01T14:00:00Z	The start time when the filed resources are delivered and available. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
SupplyStatus	String	Delivering	The delivery status of the filed resource. Valid values: • Delivered: The filed resource is delivered. • Delivering: The filed resource is being delivered.
TotalAmount	Integer	50	The number of filed instances.
UsedAmount	Integer	20	The number of consumed instances.
ZoneId	String	cn-hangzhou-g	The ID of the zone where the filed resource resides.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RegionId	String	cn-hangzhou	The region ID.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	6	The number of queried filing tickets.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDemands
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeDemandsResponse>
      <Demands>
            <AvailableAmount>0</AvailableAmount>
            <DeliveringAmount>50</DeliveringAmount>
            <DemandStatus>Expired</DemandStatus>
            <DemandTime>2019-02-26T12:00:00Z</DemandTime>
            <EndTime>2019-03-03T15:00:00Z</EndTime>
            <InstanceChargeType>PrePaid</InstanceChargeType>
            <DemandName>testnames</DemandName>
            <DemandDescription>testDesc</DemandDescription>
            <InstanceType>ecs.g6.xlarge</InstanceType>
            <DemandId>ed-bp16iilptf1tnc0y2***</DemandId>
            <Comment>zone closed</Comment>
            <InstanceTypeFamily>ecs.g6</InstanceTypeFamily>
            <Period>3</Period>
            <PeriodUnit>Month</PeriodUnit>
            <StartTime>2019-02-27T12:00:00Z</StartTime>
            <SupplyInfos>
                  <Amount>50</Amount>
                  <SupplyEndTime>2019-03-03T15:00:00Z</SupplyEndTime>
                  <SupplyStartTime>2019-03-01T14:00:00Z</SupplyStartTime>
                  <SupplyStatus>Delivering</SupplyStatus>
            </SupplyInfos>
            <TotalAmount>50</TotalAmount>
            <UsedAmount>0</UsedAmount>
            <ZoneId>cn-hangzhou-g</ZoneId>
      </Demands>
      <PageNumber>1</PageNumber>
      <PageSize>10</PageSize>
      <RegionId>cn-hangzhou</RegionId>
      <RequestId>04066112-BF3A-4FCD-ABBD-B4B5EDAE9DXX</RequestId>
      <TotalCount>1</TotalCount>
</DescribeDemandsResponse>
```

`JSON` format

```
{
    "Demands": [
        {
            "AvailableAmount": 0,
            "DeliveringAmount": 50,
            "DemandStatus": "Expired",
            "DemandTime": "2019-02-26T12:00:00Z",
            "EndTime": "2019-03-03T15:00:00Z",
            "InstanceChargeType": "PrePaid",
            "DemandName": "testnames",
            "DemandDescription": "testDesc",
            "InstanceType": "ecs.g6.xlarge",
            "DemandId": "ed-bp16iilptf1tnc0y2***",
             "Comment": "zone closed",
            "InstanceTypeFamily": "ecs.g6",
            "Period": 3,
            "PeriodUnit": "Month",
            "StartTime": "2019-02-27T12:00:00Z",
            "SupplyInfos": [
                {
                    "Amount": "50",
                    "SupplyEndTime": "2019-03-03T15:00:00Z",
                    "SupplyStartTime": "2019-03-01T14:00:00Z",
                    "SupplyStatus": "Delivering"
                }
            ],
            "TotalAmount": 50,
            "UsedAmount": 0,
            "ZoneId": "cn-hangzhou-g"
        }
    ],
    "PageNumber": 1,
    "PageSize": 10,
    "RegionId": "cn-hangzhou",
    "RequestId": "04066112-BF3A-4FCD-ABBD-B4B5EDAE9DXX",
    "TotalCount": 1
}
```


Error codes

HTTP status code	Error code	Error message	Description
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified InstanceChargeType parameter does not exist.
403	Forbidden.RAM	User not authorized to operate on the specified resource, or this API doesn't support RAM.	The error message returned because you are not authorized to manage this resource, or this API operation does not support RAM roles.

For a list of error codes, visit the API Error Center.

30.5. DescribeAccountAttributes

You can call this operation to query the quotas of ECS resources that you can create in an Alibaba Cloud region. The resources that you can query include the numbers of security groups, elastic network interfaces (ENIs), pay-as-you-go instance vCPUs, preemptible instance vCPUs, dedicated hosts, and capacity quotas of all pay-as-you-go disks. You can also query the information such as the network type or whether an account has passed the real-name verification.

Description

After you register for an Alibaba Cloud account, you can create a specific number of ECS resources in different regions. For more information, see Limits.

You can also submit a ticket to increase the resource usage quota.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeAccountAttributes	The operation that you want to perform. Set the value to DescribeAccountAttributes.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-hangzhou-b	The zone ID.
AttributeName.N	RepeatList	No	max-security-groups	The type of resource quota N to be queried in the specified region. Valid values of N: 1 to 8. Valid values: • instance-network-type: available network types • max-security-groups: the maximum number of security groups • max-elastic-network-interfaces: the maximum number of ENIs • max-postpaid-instance-vcpu-count: the maximum number of pay-as-you-go instance vCPUs • max-spot-instance-vcpu-count: the maximum number of preemptible instance vCPUs • used-postpaid-instance-vcpu-count: the number of pay-as-you-go instance vCPUs that have been used • used-spot-instance-vcpu-count: the number of preemptible instance vCPUs that have been used • max-postpaid-yundisk-capacity: the maximum capacity of pay-as-you-go data disks • used-postpaid-yundisk-capacity: the capacity of pay-as-you-go data disks that have been used • max-dedicated-hosts: the maximum number of dedicated hosts • supported-postpaid-instance-types: the instance types of pay-as-you-go I/O optimized instances • max-axt-command-count: the maximum number of Cloud Assistant scripts • max-axt-invocation-daily: the maximum number of Cloud Assistant scripts that can be run each day • real-name-authentication: whether the account has passed the real-name verification **Note** You must pass the real-name verification before you create an ECS instance in mainland China regions. This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
AccountAttributeItems	Array of AccountAttributeItem		The collection of AccountAttributeItem information in the specified region.
AccountAttributeItem			

Parameter	Type	Example	Description
AttributeName	String	max-security-groups	The type of the resource quota in the specified region. Valid values: • instance-network-type: available network types • max-security-groups: the maximum number of security groups • max-elastic-network-interfaces: the maximum number of ENIs • max-postpaid-instance-vcpu-count: the maximum number of pay-as-you-go instance vCPUs • max-spot-instance-vcpu-count: the maximum number of preemptible instance vCPUs • used-postpaid-instance-vcpu-count: the number of pay-as-you-go instance vCPUs that have been used • used-spot-instance-vcpu-count: the number of preemptible instance vCPUs that have been used • max-postpaid-yundisk-capacity: the maximum capacity of pay-as-you-go data disks • used-postpaid-yundisk-capacity: the capacity of pay-as-you-go data disks that have been used • max-dedicated-hosts: the maximum number of dedicated hosts • supported-postpaid-instance-types: the instance types of pay-as-you-go I/O optimized instances • max-axt-command-count: the maximum number of Cloud Assistant scripts • max-axt-invocation-daily: the maximum number of Cloud Assistant scripts that can be run each day • real-name-authentication: whether the account has passed the real-name verification
AttributeValues	Array of ValueItem		The specific values of resource quotas.
ValueItem			
Count	Integer	3	The number of privilege attribute types.
DiskCategory	String	cloud_ssd	The category of the data disk. Valid values: • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • cloud_essd: enhanced SSD (ESSD)
ExpiredTime	String	2019-01-01T12:30:00Z	The expiration time of a privilege. This parameter is returned only when the account privilege has an expiration time. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
InstanceChargeType	String	PrePaid	The billing method of the instance.
InstanceType	String	ecs.g5.large	The instance type.

Parameter	Type	Example	Description
Value	String	800	The specific quota of the specified resource in the current region or all regions. Valid values: The return values of the following parameters are 0 or positive integers: • max-security-groups • max-elastic-network-interfaces • max-postpaid-instance-vcpu-count • max-spot-instance-vcpu-count • used-postpaid-instance-vcpu-count • used-spot-instance-vcpu-count • max-postpaid-yundisk-capacity • used-postpaid-yundisk-capacity • max-dedicated-hosts • max-axt-command-count • max-axt-invocation-daily When the AttributeName parameter is set to supported-postpay-instance-types, an instance type is returned. For more information, see Instance families. When the AttributeName parameter is set to real-name-authentications, the following values are returned: • yes • none • unnecessary When the AttributeName parameter is set to instance-network-type, the following values are returned: • vpc • classic
ZoneId	String	cn-hangzhou-b	The zone ID.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeAccountAttributes
&RegionId=cn-hangzhou
&ZoneId=cn-hangzhou-b
&AttributeName.1=max-security-groups
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeAccountAttributesResponse>
      <AccountAttributeItems>
            <AccountAttributeItem>
                  <AttributeValues>
                        <ValueItem>
                              <Value>100</Value>
                        </ValueItem>
                  </AttributeValues>
                  <AttributeName>max-security-groups</AttributeName>
            </AccountAttributeItem>
            <AccountAttributeItem>
                  <AttributeValues>
                        <ValueItem>
                              <Value>2</Value>
                        </ValueItem>
                  </AttributeValues>
                  <AttributeName>max-dedicated-hosts</AttributeName>
            </AccountAttributeItem>
```

```
        <AccountAttributeItem>
            <AttributeValues>
                <ValueItem>
                    <Value>1000</Value>
                </ValueItem>
            </AttributeValues>
            <AttributeName>max-postpaid-instance-vcpu-count</AttributeName>
        </AccountAttributeItem>
        <AccountAttributeItem>
            <AttributeValues>
                <ValueItem>
                    <Value>1000</Value>
                </ValueItem>
            </AttributeValues>
            <AttributeName>max-spot-instance-vcpu-count</AttributeName>
        </AccountAttributeItem>
        <AccountAttributeItem>
            <AttributeValues>
                <ValueItem>
                    <Value>5000</Value>
                </ValueItem>
            </AttributeValues>
            <AttributeName>max-elastic-network-interfaces</AttributeName>
        </AccountAttributeItem>
        <AccountAttributeItem>
            <AttributeValues>
                <ValueItem>
                    <Value>yes</Value>
                </ValueItem>
            </AttributeValues>
            <AttributeName>real-name-authentication</AttributeName>
        </AccountAttributeItem>
        <AccountAttributeItem>
            <AttributeValues>
                <ValueItem>
                    <Value>vpc</Value>
                </ValueItem>
            </AttributeValues>
            <AttributeName>instance-network-type</AttributeName>
        </AccountAttributeItem>
        <AccountAttributeItem>
            <AttributeValues>
                <ValueItem>
                    <Value>229376</Value>
                    <DiskCategory>cloud_efficiency</DiskCategory>
                </ValueItem>
                <ValueItem>
                    <Value>204800</Value>
                    <DiskCategory>cloud_ssd</DiskCategory>
                </ValueItem>
                <ValueItem>
                    <Value>204800</Value>
                    <DiskCategory>cloud_essd</DiskCategory>
                </ValueItem>
            </AttributeValues>
            <AttributeName>max-postpaid-yundisk-capacity</AttributeName>
        </AccountAttributeItem>
        <AccountAttributeItem>
            <AttributeValues>
                <ValueItem>
                    <Value>ecs.f3-c16f1.4xlarge</Value>
                </ValueItem>
                <ValueItem>
                    <Value>ecs.g5.2xlarge</Value>
                </ValueItem>
            </AttributeValues>
            <AttributeName>supported-postpaid-instance-types</AttributeName>
        </AccountAttributeItem>
    </AccountAttributeItems>
    <RequestId>8CE45CD5-31FB-47C2-959D-CA8144CE9F42</RequestId>
</DescribeAccountAttributesResponse>
```


`JSON` format

```
{
    "AccountAttributeItems": {
        "AccountAttributeItem": [
            {
                "AttributeValues": {
                    "ValueItem": [
                        {
                            "Value": "100"
                        }
                    ]
                },
                "AttributeName": "max-security-groups"
            },
            {
                "AttributeValues": {
                    "ValueItem": [
                        {
                            "Value": "2"
                        }
                    ]
                },
                "AttributeName": "max-dedicated-hosts"
            },
            {
                "AttributeValues": {
                    "ValueItem": [
                        {
                            "Value": "1000"
                        }
                    ]
                },
                "AttributeName": "max-postpaid-instance-vcpu-count"
            },
            {
                "AttributeValues": {
                    "ValueItem": [
                        {
                            "Value": "1000"
                        }
                    ]
                },
                "AttributeName": "max-spot-instance-vcpu-count"
            },
            {
                "AttributeValues": {
                    "ValueItem": [
                        {
                            "Value": "5000"
                        }
                    ]
                },
                "AttributeName": "max-elastic-network-interfaces"
            },
            {
                "AttributeValues": {
                    "ValueItem": [
                        {
                            "Value": "yes"
                        }
                    ]
                },
                "AttributeName": "real-name-authentication"
            },
            {
                "AttributeValues": {
                    "ValueItem": [
                        {
                            "Value": "vpc"
                        }
                    ]
                },
                "AttributeName": "instance-network-type"
            },
            {
                "AttributeValues": {
```

```
                    "ValueItem": [
                        {
                            "Value": "229376",
                            "DiskCategory": "cloud_efficiency"
                        },
                        {
                            "Value": "204800",
                            "DiskCategory": "cloud_ssd"
                        },
                        {
                            "Value": "204800",
                            "DiskCategory": "cloud_essd"
                        }
                    ]
                },
                "AttributeName": "max-postpaid-yundisk-capacity"
            },
            {
                "AttributeValues": {
                    "ValueItem": [
                        {
                            "Value": "ecs.f3-c16f1.4xlarge"
                        },
                        {
                            "Value": "ecs.g5.2xlarge"
                        }
                    ]
                },
                "AttributeName": "supported-postpaid-instance-types"
            }
        ]
    },
    "RequestId": "8CE45CD5-31FB-47C2-959D-CA8144CE9F42"
}
```


Error codes

HTTP status code	Error code	Error message	Description
403	Invalid.Parameter	The required parameter regionId must be not null.	The error message returned because the RegionId parameter is not specified.

For a list of error codes, visit the API Error Center.

30.6. JoinResourceGroup

You can call this operation to add an ECS resource or service to a resource group.

Description

A resource is a cloud service entity that you create in Alibaba Cloud, such as an ECS instance, elastic network interface (ENI), or image. A resource group is a collection of infrastructure for projects, environments, or stacks. In a resource group, you can manage resources and monitor and run tasks in a centralized manner without switching between Alibaba Cloud services.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	JoinResourceGroup	The operation that you want to perform. Set the value to JoinResourceGroup.

Parameter	Type	Required	Example	Description
ResourceType	String	No	securitygroup	The type of the ECS resource. Valid values: • instance: instance • disk: Elastic Block Storage device • snapshot: snapshot • image: image • securitygroup: security group • ddh: dedicated host • ddhcluster: dedicated host cluster • eni: ENI • keypair: SSH key pair • launchtemplate: launch template These values are case-sensitive.
ResourceId	String	No	sg-bp67acfmxazb4p****	The ID of the resource. This parameter depends on the ResourceType value. For example, when ResourceType is set to instance, ResourceId can be interpreted as InstanceId.
RegionId	String	No	cn-hangzhou	The region ID of the resource. You can call the DescribeRegions operation to query the most recent region list.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to add the resource.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=JoinResourceGroup
&RegionId=cn-hangzhou
&RsourceType=securitygroup
&ResourceId=sg-bp67acfmxazb4p****
&ResourceGroupId=rg-bp67acfmxazb4p****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<JoinResourceGroupResponse>
      <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</JoinResourceGroupResponse>
```

`JSON` format

```
{
    "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
403	MissingParameter	The input parameter "ResourceId" that is mandatory for processing this request is not supplied.	The error message returned because the ResourceId parameter is not specified.
403	MissingParameter	The input parameter "ResourceGroupId" that is mandatory for processing this request is not supplied.	The error message returned because the ResourceGroupId parameter is not specified.
403	MissingParameter	The input parameter "RegionId" that is mandatory for processing this request is not supplied.	The error message returned because the RegionId parameter is not specified.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter does not exist.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
404	InvalidResourceId.NotFound	The ResourceId provided does not exist in our records.	The error message returned because the specified ResourceId parameter does not exist.
403	InvalidResourceGroup.Duplicate	The ResourceId provided has a ResourceGroup in our records.	The error message returned because the specified resource has already been added to another resource group.

For a list of error codes, visit the API Error Center.

31.Appendix

31.1. Error code table

Client errors

For the remaining client errors, see the interface-specific error codes.

Server errors

Error code	Description	HTTP status code	Meaning
ServiceUnavailable	The request has failed due to a temporary failure of the server.	503	The service is unavailable.
InternalError	The request processing has failed due to some unknown error, exception or failure.	500	Internal error.

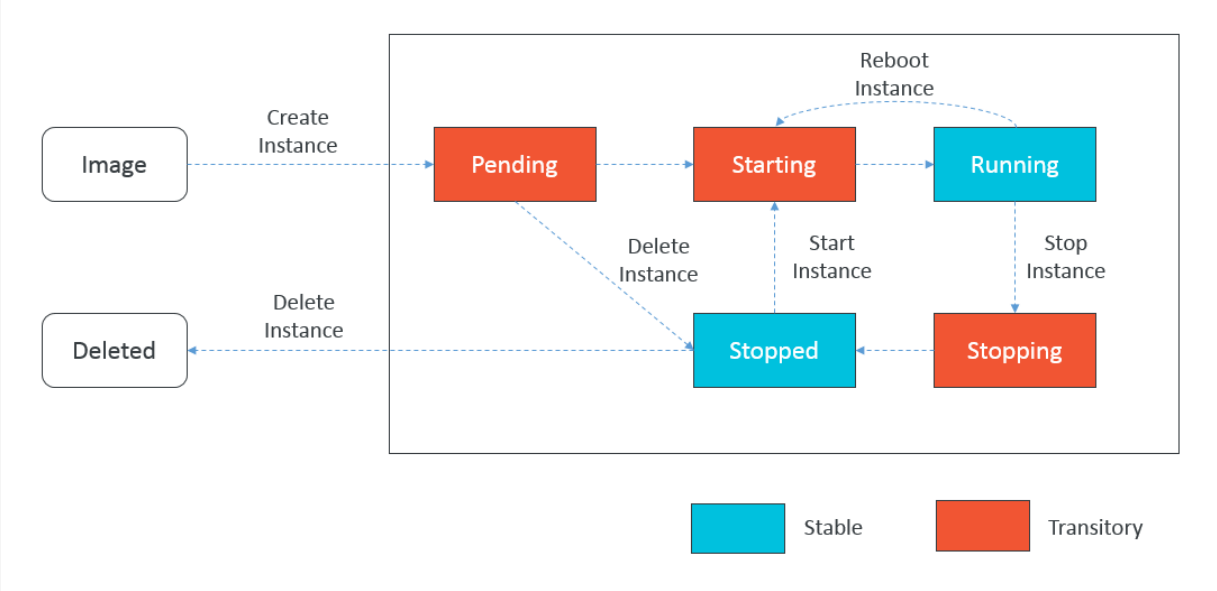
31.2. Instance states

This topic describes the possible states of ECS instances.

State	Description
Pending	The initial state of an ECS instance when you create the ECS instance in the ECS console or by calling the RunInstances operation. Instances are only in the *Pending* state only during the creation process, and this state lasts for a few seconds. **Note** If the instance is being created by calling CreateInstance, you must then call StartInstance to manually change the instance state from *Pending* to *Starting*. If the instance is being created by calling RunInstances, the instance automatically enters the *Starting* state.
Starting	The transient state when an instance is enabled in the ECS console or by calling StartInstance.
Running	The stable state after an instance is enabled in the ECS console or by calling StartInstance. The instance owner can use, manage, and modify business and applications on an instance when the instance is in this state.
Stopping	The transient state when an instance is stopped in the ECS console or by calling StopInstance.
Stopped	The stable state after an instance has been stopped.

31.3. Instance status chart

The following figure shows the transitions between API-based instance states.



31.4. Disk states

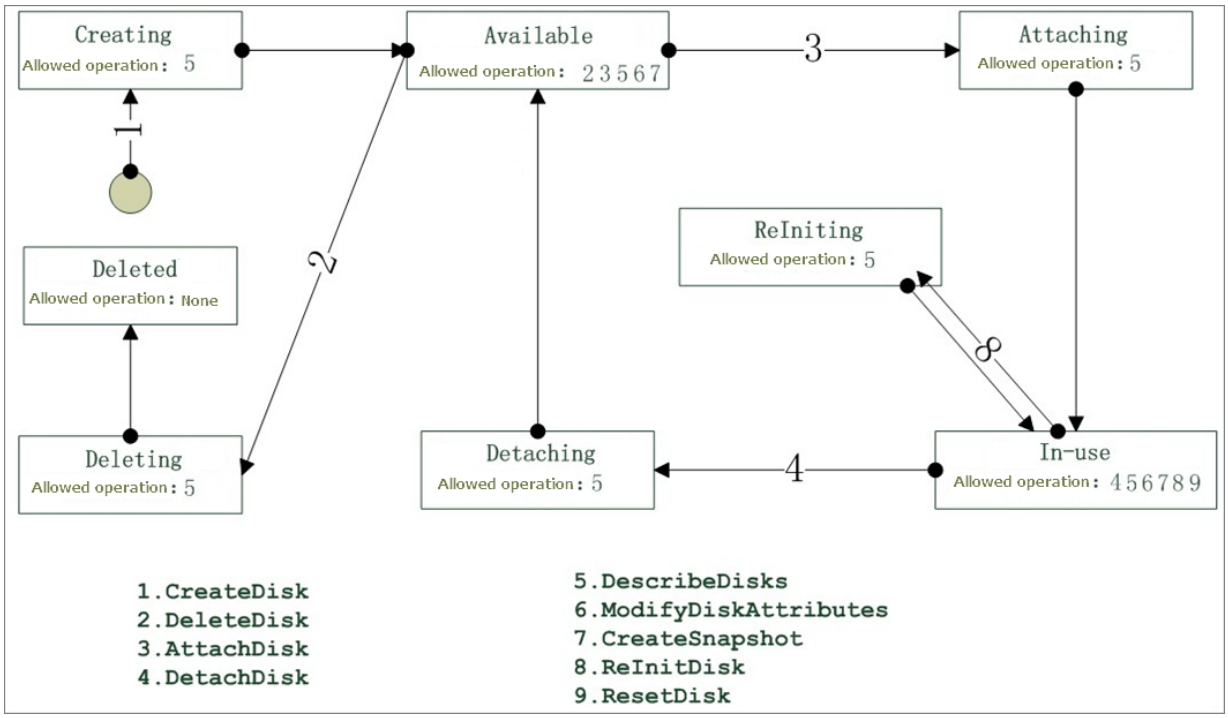
This topic describes the status and information of disks supported by ECS.

State	Description
Creating	Creating. After a disk is created by calling the RunInstances, CreateInstance, or CreateDisk operation, the disk enters the Creating state.
Available	Unattached. After a pay-as-you-go disk is created by calling the CreateDisk operation or a pay-as-you-go data disk is detached by calling the DetachDisk operation, the disk enters the Unattached state.
In_Use	In use. The stable status of a disk is changed in the following ways: • A subscription data disk is created by using RunInstances, CreateInstance, or CreateDisk. • A system or data disk is created by calling the RunInstances and CreateInstance operations. • A pay-as-you-go data disk is attached by using AttachDisk.
ReInit ing	Initializing. After you reinitialize a system or data disk by calling the ReInitDisk operation, the disk enters the Initializing state.
Detaching	Detaching. After a pay-as-you-go data disk is detached by calling the DetachDisk operation, the disk enters the Detaching state.
*Deleting**	Deleting. After a pay-as-you-go data disk is released by calling the DeleteDisk operation, the disk enters the Deleting state.
*Deleted**	Deleted. When a pay-as-you-go data disk is released by calling the DeleteDisk operation, the disk enters the Deleted state.

* The error message returned because *Deleting* and *Deleted* are unavailable states. You cannot query the list of disks in these states by calling the DescribeDisks operation.

31.5. Disk status chart

The following figure shows the transitions between API-based disk states.



31.6. ISO 8601 Time Format

ISO 8601 Data elements and interchange formats - Information interchange - Representation of dates and times is an international standard covering the exchange of date and time-related data. It was issued by the International Organization for Standardization (ISO). For more information, see ISO8601.

31.7. Disk categories

This topic describes the categories and information of disks supported by ECS.

Category	Code	Maximum capacity of a single disk (GiB)	Volume limit per instance	Maximum capacity of a single disk allowed per instance (GiB)
Basic disk	cloud	2000	17	2000 * 17
Ultra disk	cloud_efficiency	32768	17	32768 * 17
Standard SSD	cloud_ssd	32768	17	32768 * 17
Enhanced SSD (ESSD)	cloud_essd	32768	17	32768 * 17

For more information about disk performance, see EBS performance.

31.8. API behavior for accounts that have overdue payments

This topic describes the API behavior when your account has an overdue payment or your subscription resources expire.

API behavior

When `OperationLocks` in the response returned for an instance by the DescribeInstances or DescribeDisks operation contains `LockReason: financial`, overdue payments are generated.

In the following table, **Normal logic** indicates that the operation is called and the result is returned.

API behavior for instances of accounts that have overdue payments

Operation	Instance for which overdue payments are generated
AllocatePublicIpAddress	Error
AttachDisk	Error
AuthorizeSecurityGroup	Normal logic
CreateDisk	Error
CreateImage	Normal logic
CreateInstance	Error
CreateSecurityGroup	Normal logic
CreateSnapshot	Normal logic
DeleteDisk	Normal logic
DeleteImage	Normal logic
DeleteInstance	Normal logic
DeleteSecurityGroup	Normal logic
DeleteSnapshot	Normal logic
DescribeAutoSnapshotPolicy	Normal logic
DescribeDisks	Normal logic
DescribeImages	Normal logic
DescribeInstances	Normal logic
DescribeInstanceStatus	Normal logic
DescribeInstanceTypes	Normal logic
DescribeInstanceMonitorData	Normal logic
DescribeRegions	Normal logic
DescribeSecurityGroupAttribute	Normal logic
DescribeSecurityGroups	Normal logic
DescribeSnapshotAttribute	Normal logic
DescribeSnapshots	Normal logic
DescribeZones	Normal logic
DetachDisk	Normal logic
JoinSecurityGroup	Normal logic
LeaveSecurityGroup	Normal logic
ModifyAutoSnapshotPolicy	Normal logic
ModifyDiskAttribute	Normal logic
ModifyInstanceAttribute	Normal logic
RebootInstance	Error
ReInitDisk	Error
ReplaceSystemDisk	Error
ResetDisk	Error
RevokeSecurityGroup	Normal logic

Operation	Instance for which overdue payments are generated
StartInstance	Error
StopInstance	Error

API behavior for disks of accounts that have overdue payments

Operation	Disk for which overdue payments are generated
AllocatePublicIpAddress	Error
AttachDisk	Error
AuthorizeSecurityGroup	Normal logic
CreateDisk	Error
CreateImage	Normal logic
CreateInstance	Error
CreateSecurityGroup	Normal logic
CreateSnapshot	Normal logic
DeleteDisk	Normal logic
DeleteImage	Normal logic
DeleteInstance	Normal logic
DeleteSecurityGroup	Normal logic
DeleteSnapshot	Normal logic
DescribeAutoSnapshotPolicy	Normal logic
DescribeDisks	Normal logic
DescribeImages	Normal logic
DescribeInstances	Normal logic
DescribeInstanceStatus	Normal logic
DescribeInstanceMonitorData	Normal logic
DescribeRegions	Normal logic
DescribeSecurityGroupAttribute	Normal logic
DescribeSecurityGroups	Normal logic
DescribeSnapshotAttribute	Normal logic
DescribeSnapshots	Normal logic
DescribeZones	Normal logic
DetachDisk	Normal logic
JoinSecurityGroup	Normal logic
LeaveSecurityGroup	Normal logic
ModifyAutoSnapshotPolicy	Normal logic
ModifyDiskAttribute	Normal logic
ModifyInstanceAttribute	Error
ModifyInstanceSpec	Error
RebootInstance	Error

Operation	Disk for which overdue payments are generated
ReInitDisk	Error
ReplaceSystemDisk	Error
ResetDisk	Error
RevokeSecurityGroup	Normal logic
StartInstance	Error
StopInstance	Error

31.9. API behavior when an instance is locked for security reasons

This topic describes the API behavior when your resource is locked due to security concerns.

API behavior

When `OperationLocks` in the response returned for an instance by the DescribeInstances operation contains `LockReason: security`, the instance is locked for security reasons.

> **Note** If a disk on the instance is in the `In_use` state, the behavior of API operations related to the disk is subject to the `OperationLocks` settings of the instance. If the disk is in another state, the `OperationLocks` settings can be ignored.

In the following table, **Normal logic** indicates that the operation is called and the result is returned.

Operation	Behavior
AllocatePublicIpAddress	Error
AttachDisk	Error
AuthorizeSecurityGroup	Normal logic
CreateDisk	Normal logic
CreateImage	Normal logic
CreateInstance	Error
CreateSecurityGroup	Normal logic
CreateSnapshot	Returns an error only when the disk is attached to the instance and is in the In_use state.
DeleteDisk	Normal logic
DeleteImage	Normal logic
DeleteInstance	Normal logic
DeleteSecurityGroup	Normal logic
DeleteSnapshot	Normal logic
DescribeAutoSnapshotPolicy	Normal logic
DescribeDisks	Normal logic
DescribeImages	Normal logic
DescribeInstances	Normal logic
DescribeInstanceStatus	Normal logic
DescribeInstanceTypes	Normal logic
DescribeInstanceMonitorData	Normal logic

Operation	Behavior
DescribeRegions	Normal logic
DescribeSecurityGroupAttribute	Normal logic
DescribeSecurityGroups	Normal logic
DescribeSnapshotAttribute	Normal logic
DescribeSnapshots	Normal logic
DescribeZones	Normal logic
DetachDisk	Error
JoinSecurityGroup	Error
LeaveSecurityGroup	Error
ModifyAutoSnapshotPolicy	Normal logic
ModifyDiskAttribute	Normal logic
ModifyInstanceAttribute	Error
RebootInstance	Error
ReInitDisk	• Returns an error when the disk is in the In_use state. • Normal logic when the disk is in another state.
ReplaceSystemDisk	Normal logic
ResetDisk	Error
RevokeSecurityGroup	Normal logic
StartInstance	Error
StopInstance	Error

31.10. How to ensure idempotence

If a request timeout or an internal server error occurs when you call an ECS API operation, the client may attempt to resend the request. In this case, you can specify the ClientToken parameter in the request to prevent the client from repeatedly sending the request.

What is idempotence

Idempotence is a property of some operations or resources in mathematics and computer science. It means that an operation or resource leads to the same result, regardless of how many requests are sent. Idempotence plays an important role in the distributed system design.

Ensure idempotence

Typically, the client needs to retry a request only when error 500 (`InternalErrorInternalError`) or 503 (`ServiceUnavailable`) is returned or when no response is received. When you use Alibaba Cloud ECS API, the client generates a parameter value that consists of up to 64 ASCII characters, and you can assign the value to ClientToken to ensure the idempotence of the retried requests.

ClientToken details

The following section describes the details about ClientToken:

- The ClientToken value is a unique and case-sensitive string that is generated by a client and can contain up to 64 ASCII characters in length. Example: `ClientToken=123e4567-e89b-12d3-a456-426655440000` .
- If you specify a request with a ClientToken value that is in use but with different request parameters, ECS returns the `IdempotentParameterMismatch` error code.

  Note You must change the values of SignatureNonce, Timestamp, and Signature when you retry an API request. This is because ECS uses SignatureNonce to prevent replay attacks and uses Timestamp to record the timestamp of each request. Therefore, you must specify different SignatureNonce and Timestamp values in a retried request. Consequently, this changes the value of Signature.

- After you add the ClientToken parameter to a retried request:
  - If an HTTP status code 200 is returned, the retry generates the same result as the last request and your server status is not affected.

- If an HTTP status code 4xx is returned, the retry fails. If the status code is returned with the `try it later` error message, the server is busy. Try again later. You must troubleshoot problems based on the returned error message before you resend a request.

Sample idempotent requests

For example, assume that you call the RunInstance operation to create an ECS instance. If you use the same ClientToken value while keeping other request parameters unchanged, the server returns the same response and generates only one InstanceId value.

```
https://ecs.aliyuncs.com/?Action=RunInstances
&RegionId=cn-hangzhou
&InstanceType=ecs.cm4.6xlarge
&ImageId=win2008r2_64_ent_sp1_en-us_40G_alibase_20170915.vhd
&SecurityGroupId=sg-securitygroupid
&Amount=1
.......
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

If you do not use ClientToken, multiple ECS instances may be created when the client retries operations after errors occur.

API operations

The following section lists some API operations that include ClientToken for your reference. For information about whether an API operation includes ClientToken, see the topic that describes the API operation.

- RunInstances
- RenewInstance
- ModifyInstanceNetworkSpec
- ModifyInstanceChargeType
- ModifyInstanceSpec
- ModifyPrepayInstanceSpec
- CreateInstance
- CreateDisk
- ResizeDisk
- ModifyDiskChargeType
- ReplaceSystemDisk
- CreateSnapshot
- CreateImage
- CreateNetworkInterface
- CreateSecurityGroup
- ModifySecurityGroupEgressRule
- ModifySecurityGroupPolicy
- AuthorizeSecurityGroup
- RevokeSecurityGroup
- RevokeSecurityGroupEgress
- AuthorizeSecurityGroupEgress
- ModifySecurityGroupRule
- CreateDeploymentSet
- AssignPrivateIpAddresses

31.11. Call API operations over the internal network

You cannot call API operations on VPC-type ECS instances that do not have public IP addresses. This topic describes how to call API operations on VPC-type ECS instances over the Alibaba Cloud internal network.

Background information

ECS provides public endpoints. If your ECS instance does not have a public bandwidth or a public IP address, you cannot make API requests by using tools such as Alibaba Cloud CLI or SDKs. You can use one of the following methods to call API operations over the Alibaba Cloud internal network:

- SDK: Use the SDK for Java core library v4.5.3 or later to call API operations over the internal network in a VPC.
- CLI: Use CLI to call API operations over the internal network by specifying the endpoint of a specific region.

Take note of the following items:

- These methods are applicable only in regions where VPC-type ECS instances are deployed. The endpoint of a region can be used to manage resources only within that region. Cross-region operations are not supported.

- We recommend that you use custom images that have Alibaba Cloud CLI or SDKs deployed to create ECS instances. The ECS instances must load related dependencies with access to the Internet.

The following table describes the endpoints that support API calls over the internal network. Make sure that you use an endpoint listed in the table.

Alibaba Cloud region	Region ID	Endpoint
China (Hangzhou)	cn-hangzhou	ecs-vpc.cn-hangzhou.aliyuncs.com
China (Shanghai)	cn-shanghai	ecs-vpc.cn-shanghai.aliyuncs.com
China (Qingdao)	cn-qingdao	ecs-vpc.cn-qingdao.aliyuncs.com
China (Beijing)	cn-beijing	ecs-vpc.cn-beijing.aliyuncs.com
China (Zhangjiakou)	cn-zhangjiakou	ecs-vpc.cn-zhangjiakou.aliyuncs.com
China (Hohhot)	cn-huhehaote	ecs-vpc.cn-huhehaote.aliyuncs.com
China (Ulanqab)	cn-wulanchabu	ecs-vpc.cn-wulanchabu.aliyuncs.com
China (Shenzhen)	cn-shenzhen	ecs-vpc.cn-shenzhen.aliyuncs.com
China (Heyuan)	cn-heyuan	ecs-vpc.cn-heyuan.aliyuncs.com
China (Guangzhou)	cn-guangzhou	ecs-vpc.cn-guangzhou.aliyuncs.com
China (Chengdu)	cn-chengdu	ecs-vpc.cn-chengdu.aliyuncs.com
China (Hong Kong)	cn-hongkong	ecs-vpc.cn-hongkong.aliyuncs.com
Singapore	ap-southeast-1	ecs-vpc.ap-southeast-1.aliyuncs.com
Australia (Sydney)	ap-southeast-2	ecs-vpc.ap-southeast-2.aliyuncs.com
Malaysia (Kuala Lumpur)	ap-southeast-3	ecs-vpc.ap-southeast-3.aliyuncs.com
Indonesia (Jakarta)	ap-southeast-5	ecs-vpc.ap-southeast-5.aliyuncs.com
Japan (Tokyo)	ap-northeast-1	ecs-vpc.ap-northeast-1.aliyuncs.com
Germany (Frankfurt)	eu-central-1	ecs-vpc.eu-central-1.aliyuncs.com
UK (London)	eu-west-1	ecs-vpc.eu-west-1.aliyuncs.com
US (Silicon Valley)	us-west-1	ecs-vpc.us-west-1.aliyuncs.com
US (Virginia)	us-east-1	ecs-vpc.us-east-1.aliyuncs.com
India (Mumbai)	ap-south-1	ecs-vpc.ap-south-1.aliyuncs.com
UAE (Dubai)	me-east-1	ecs-vpc.me-east-1.aliyuncs.com

Method 1: (Recommended) Use SDKs to call API operations over the internal network

Simple configurations are required when you use SDKs to call API operations over the internal network. The following code provides an example on how to use SDK for Java to call an API operation over the internal network:

```
DefaultProfile profile = DefaultProfile.getProfile("<RegionId>", "<AccessKeyId>", "<AccessKeySecret>");
IAcsClient client = new DefaultAcsClient(profile);
// Make the configurations take effect globally. <product> refers to the service. For example, you can enter Ecs for ECS.
DefaultProfile.addEndpoint("<RegionId>", "<product>", "<Endpoint>");
// Make the configurations take effect only for the request. For example, when you call the DescribeRegions operation, you can m
ake the following configurations:
DescribeRegionsRequest regionsRequest = new DescribeRegionsRequest();
// If you set the productNetwork parameter, you do not need to set SysEndpoint.
regionsRequest.setSysEndpoint("<Endpoint>");
// Configure the network. Valid values of productNetwork: vpc and public.
// Set the parameter to vpc when you call the operation over the internal network. Set the parameter to public when you call the
operation over the Internet. Default value: public.
regionsRequest.productNetwork = "vpc";
DescribeRegionsResponse regionsResponse = client.getAcsResponse(regionsRequest);
```

Method 2: Use CLI to call API operations over the internal network

The DescribeRegions operation is used in this example. Sample command:

```
aliyun ecs DescribeRegions --endpoint ecs-vpc.cn-hangzhou.aliyuncs.com
```

31.12. Why are only 10 entries returned after an API operation is called by using an ECS SDK in Alibaba Cloud CLI?

To show all entries in responses, paged queries are often used for some API operations that may return a large number of entries. When you do not notice hidden entries, you assume that not all entries are returned.

Cause analysis

For example, after you call the DescribeImages operation to query available public images in the China (Hangzhou) region, the return value of TotalCount is 39, which indicates that a total of 39 entries are returned. By default, the 39 entries are displayed on 4 pages.

If you want to view all the entries on one page, set the PageSize request parameter to a value greater than 39. If you are using the SDK for Java to call the operation, you can set PageSize in the request to a value greater than 39 by using the setPageSize method to obtain all the entries of 39 images on one page.

The following table describes the PageSize and PageNumber parameters.

Parameter	Type	Required	Description
PageNumber	Integer	No	The number of the page to return. ECS API operations whose name prefix is `Describe` are used to query information. For more information, see List of operations by function. Pages start from page 1. Default value: 1.
PageSize	Integer	No	The number of entries to return on each page. Maximum value: 100. Default value: 10. **Note** The maximum value of PageSize is 100. If more than 100 entries are returned after an API operation is called, you can set PageNumber to a value starting from 1 (such as 1, 2, or 3) at a time and call the operation multiple times to obtain all the entries in the response. If you are using the SDK for Java, you can specify the number of pages to return by using setPageNumber().

Example of the default SDK for Java code

In this example, the DescribeImages operation is called to query images and the PageSize request parameter is set to *10*. If the value of PageSize is not set in the SDK for Java code, null is returned when getPageSize is used. By default, the API server sets PageSize to 10. Sample code:

```
DescribeImagesRequest describe = new DescribeImagesRequest();
        //describe.setPageSize();//The default value of PageSize is 10.
        describe.setRegionId("cn-hangzhou");
        describe.setImageOwnerAlias("system");
        System.out.println("Value of PageSize in the request:"+describe.getPageSize());
        DescribeImagesResponse response
                = client.getAcsResponse(describe);
        System.out.println("Number of images:"+response.getTotalCount());
        System.out.println("Number of images in the response="+response.getImages().size());
```

Example of the custom SDK for Java code

In this example, the DescribeImages operation is called to query images and 39 entries are returned. You can set PageSize to *50* by using setPageSize to obtain all image entries at a time. Sample code:

```
DescribeImagesRequest describe = new DescribeImagesRequest();
        describe.setPageSize(50);// Use setPageSize to set PageSize to 50 in the request.
        describe.setRegionId("cn-hangzhou");
        describe.setImageOwnerAlias("system");
        System.out.println("Value of PageSize in the request:"+describe.getPageSize());
        try {
            DescribeImagesResponse response
                = client.getAcsResponse(describe);
            System.out.println("Number of images:"+response.getTotalCount());
            System.out.println("Number of images in the response="+response.getImages().size());
```

31.13. API usage Specification

Please check the latest API Terms of Use.

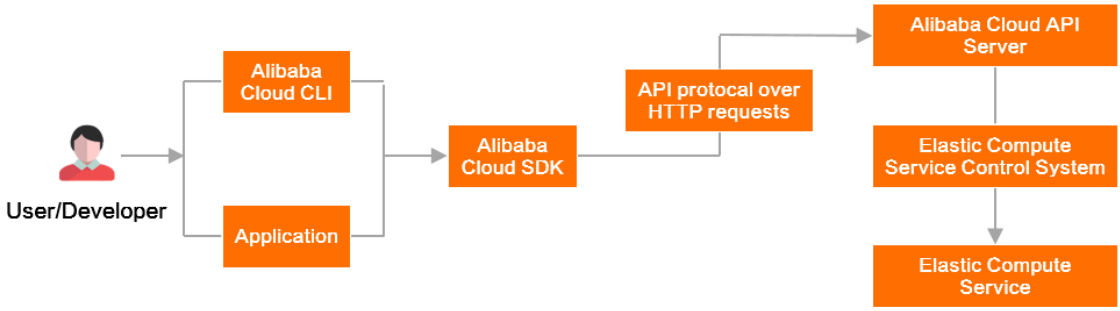
32.API FAQ

This topic provides answers to frequently asked questions about Elastic Compute Service (ECS) API operations.

- What is an ECS API operation?
- What do I do if the InvalidDataDiskCategory.NotSupported error code is returned when I create an ECS instance?
- How do I set sequential instance names or hostnames when I create multiple ECS instances?
- How can I create an ECS instance that is assigned a public IP address?
- What do I do if the public IP address of an ECS instance cannot be pinged after I create the instance by calling an ECS API operation?
- What do I do if the "The specified IP is already in use." error message is returned when I call an ECS API operation to assign a public IP address to an ECS instance?
- When I modify the public bandwidth configurations of an instance by calling an ECS API operation, Can I specify an effective period for the new bandwidth configurations ?
- What do I do if only specific security group rules are displayed when I call an API operation or use ECS SDKs to query the rules of a security group?
- Why are only 10 entries returned for a request made by using an ECS API operation, an ECS SDK, or an Alibaba Cloud CLI command?

What is an ECS API operation?

ECS API operations are open source remote procedure call (RPC) API operations that provide API services for Alibaba Cloud users. You can use ECS API operations to manage and use ECS instances. The following figure shows the path along which a request is forwarded to call an API operation. For more information about how to call an ECS API operation, see Quick start.



What do I do if the InvalidDataDiskCategory.NotSupported error code is returned when I create an ECS instance?

- Problem description: When you call the RunInstances operation to create an ECS instance, the following error is returned:

```
{
    "Code": "InvalidDataDiskCategory.NotSupported",
    "Message": "Specified disk category is not supported."
}
```

- Cause: The error occurred because disks of the specified category cannot be created in the specified zone.
- Solution: We recommend that you call the DescribeAvailableResource operation to query the resources available in the zone where you want to create the ECS instance and make sure that resources in the zone are sufficient. You can also change the value of ZoneId and try again.

```
aliyun ecs RunInstances --ImageId win2008_64_ent_r2_cn_40G_alibase_20150429.vhd --InstanceType ecs.g5.large --SecurityGroupId
<TheSecuriytyGroupId> --SystemDiskCategory cloud_efficiency --ZoneId cn-hangzhou-c
```

How do I set sequential instance names or hostnames when I create multiple ECS instances?

We recommend that you call the RunInstances operation to create multiple ECS instances. RunInstances contains the InstanceName and HostName parameters. You can set the instance name and the hostname that comply with the naming conventions.

Use the following methods to set sequential instance names or hostnames for multiple ECS instances:

- Add the sequential suffix specified by the UniqueSuffix parameter to the instance name specified by the InstanceName parameter or the hostname specified by the HostName parameter. A sequential suffix can be in the range from 001 to 999.A Examples: *LocalHost001* and *LocalHost002*, and *MyInstance001* and *MyInstance002*.
- Specify the instance names or hostnames for multiple ECS instances in the *name_prefix[begin_number,digits]name_suffix* format. For example, if you set the InstanceName parameter to *k8s-node-[1,4]-alibabacloud*, the name of the first ECS instance is *k8s-node-0001-alibabacloud*. A maximum of 999,999 ECS instances can share the same prefix and suffix.
  - *name_prefix*: the prefix of the instance name or hostname. A prefix is required when you specify sequential names. Otherwise, the names are regarded as common names.

- *[begin_number,digits]*: the starting value of the number in the instance name or hostname. Numbers in instance names or hostnames are incremental. These numbers identify different ECS instance names or hostnames of different instances. The *[begin_number,digits]* segment cannot contain spaces.
  - *begin_number*: the number from which the instance name starts. Valid values: 0 to 999999. Default value: *0*.
  - *digits*: the number of digits in the instance name. Valid values: 1 to 6. Default value: *6*.
  - If you specify `[]` or `[,]`, *begin_number* starts from *0* and *digits* is set to *6*.
  - If you specify `[99]` or `[99,]`, *begin_number* starts from *99* and *digits* is set to *6*.
  - If the number of the digits specified by *begin_number* is greater than the value of *digits*, the digit of *begin_number* takes precedence. For example, *digits* is set to *1* in *[1234,1]*, and the value of *begin_number* is set to *1234*. *digits* is set to *6*.
  - If the sum of the *begin_number* value and the number of ECS instances exceeds the maximum value of *999999*, all ECS instances whose names that contain numbers greater than the maximum value use *999999*.
- *name_suffix*: the suffix of an instance name or hostname.

Note If you do not add suffixes to the instance names or hostnames by specifying *name_suffix*, but use the *name_prefix[begin_number,digits]* format, the *UniqueSuffix* parameter is invalid. For example, when InstanceName is set to *instance-[99,3]*, and UniqueSuffix is set to *true*, the instance name is `instance099` instead of `instance099001`.

How can I create an ECS instance that is assigned a public IP address?

- Method 1: Call the RunInstances operation and set InternetMaxBandwidthOut to a value greater than 0 to create an ECS instance. The ECS instance is automatically assigned a public IP address.
- Method 2: Call the CreateInstance operation to create an ECS instance. Then, call the AllocatePublicIpAddress operation to assign a public IP address to the instance.

What do I do if the public IP address of an ECS instance cannot be pinged after I create the instance by calling an ECS API operation?

- Problem description: The ECS instance that you created by calling an ECS API operation cannot connect to the Internet, and the public IP address of the instance cannot be pinged.
- Cause: The security group to which the instance belongs does not have a rule to allow Internet access.
- Solution: Call the AuthorizeSecurityGroup operation to add an inbound rule to the security group to allow Internet access. For example, you can send the following request where IpProtocol is set to ICMP to call the AuthorizeSecurityGroup operation and add an inbound rule that allows the public IP address of this instance to be pinged from all IP addresses:

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroup
&SecurityGroupId=sg-bp15ed6xe1yxeycg7***
&SourceCidrIp=0.0.0.0/0
&IpProtocol=ICMP
&PortRange=-1/-1
&<Common request parameters>
```

What do I do if the "The specified IP is already in use." error message is returned when I call an ECS API operation to assign a public IP address to an ECS instance?

- Problem description: When you call the AllocatePublicIpAddress operation to assign a public IP address specified by IpAddress to an ECS instance, the following error is returned:

```
{
    "Code": "IpInUse",
    "Message": "The specified IP is already in use."
}
```

- Cause: The specified IP address is already in use.
- Solution: Check whether the IP address is already in use. If yes, try another IP address.

When I modify the public bandwidth configurations of an instance by calling an ECS API operation, Can I specify an effective period for the new bandwidth configurations ?

You can call the ModifyInstanceNetworkSpec operation to modify the public bandwidth configurations of an ECS instance. The new bandwidth configurations take effect on the instance immediately after the modification. If you want to temporarily modify the bandwidth configurations of your instance, set StartTime and EndTime to specify an effective period.

If you are using an elastic IP address (EIP), you can call the ModifyEipAddressAttribute operation to make the modification but you cannot specify an effective period.

What do I do if only specific security group rules are displayed when I call an API operation or use ECS SDKs to query the rules of a security group?

Security group rules can be distinguished by the network interface controller (NIC) type of the security group. Public NIC (*internet*), and private NIC (*intranet*) are supported. When you call the DescribeSecurityGroupAttribute operation to query the rules of a security group, the NIC parameter is not required. However, if this parameter is not specified, the default value of *internet* is used. Therefore, when you run the following CLI command to call the DescribeSecurityGroupAttribute operation, only the public security group rules but not all security group rules in the queried security group are displayed:

```
aliyun ecs DescribeSecurityGroupAttribute --SecurityGroupId <TheSecurityGroupId> --RegionId <TheRegionId>
```

If you want to query the internal security group rules in a security group, such as internal security group rules that allow access across internal networks or are configured for the VPN firewall of Finance Cloud, run the following command where NicType is set to *intranet*:

```
aliyun ecs DescribeSecurityGroupAttribute --SecurityGroupId <TheSecurityGroupId> --RegionId <TheRegionId> --NicType intranet
```

Why are only 10 entries returned for a request made by using an ECS API operation, an ECS SDK, or an Alibaba Cloud CLI command?

For more information about this issue, see Why are only 10 entries returned after an API operation is called by using an ECS SDK in Alibaba Cloud CLI?.