

Alibaba Cloud Elastic Compute Service

API Reference

Issue: 20190917

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 due to product version upgrades, adjustments, or other reasons. Alibaba Cloud reserves the right to modify the content of this document without notice and the updated versions of this document will be occasionally released through Alibaba Cloud-authorized channels. You shall 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 the document in the context that Alibaba Cloud products and services are provided on an "as is", "with all faults" and "as available" basis. 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 bear any liability for any errors or financial losses incurred by any organizations, companies, or individuals arising from their download, use, or trust in this document. Alibaba Cloud shall not, under any circumstances, bear responsibility for any indirect, consequential, exemplary, incidental, 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 content of the Alibaba Cloud website, including but not limited to works, products, images, archives, information, materials, website architecture, website graphic layout, and webpage design, 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 the Alibaba Cloud website, product programs, or content 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 contact Alibaba Cloud directly if you discover any errors in this document.

Generic conventions

Table -1: Style conventions

Style	Description	Example
	This warning information 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.
	This warning information 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 restore business.
	This indicates warning information, supplementary instructions, and other content that the user must understand.	 Notice: Take the necessary precautions to save exported data containing sensitive information.
	This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user.	 Note: You can use Ctrl + A to select all files.
>	Multi-level menu cascade.	Settings > Network > Set network type
Bold	It is used for buttons, menus, page names, and other UI elements.	Click OK.
<code>Courier</code> font	It is used for commands.	Run the <code>cd / d C :/ windows</code> command to enter the Windows system folder.
<i>Italics</i>	It is used for parameters and variables.	<code>bae log list --instanceid Instance_ID</code>
[] or [a b]	It indicates that it is an optional value, and only one item can be selected.	<code>ipconfig [-all -t]</code>

Style	Description	Example
<code>{}</code> or <code>{a b}</code>	It indicates that it is a required value, and only one item can be selected.	<code>switch {stand slave}</code>

Contents

Legal disclaimer.....	I
Generic conventions.....	I
1 Introduction.....	1
2 API overview.....	3
3 Quick start for ECS APIs.....	15
4 Getting started.....	19
4.1 How to make a request.....	19
4.2 Request structure.....	19
4.3 Common parameters.....	21
4.4 Digital signature.....	23
4.5 Response results.....	28
5 Authentication rules.....	34
6 Instances.....	40
6.1 RunInstances.....	40
6.2 CreateInstance.....	103
6.3 DescribeInstances.....	157
6.4 StartInstance.....	164
6.5 RebootInstance.....	168
6.6 StopInstance.....	170
6.7 DeleteInstances.....	174
6.8 DeleteInstance.....	179
6.9 AttachInstanceRamRole.....	182
6.10 DetachInstanceRamRole.....	185
6.11 DescribeInstanceStatus.....	189
6.12 RenewInstance.....	192
6.13 ReactivateInstances.....	197
6.14 RedeployInstance.....	199
6.15 DescribeInstanceVncUrl.....	204
6.16 DescribeUserData.....	208
6.17 DescribeInstanceAutoRenewAttribute.....	210
6.18 DescribeInstanceRamRole.....	215
6.19 DescribeSpotPriceHistory.....	218
6.20 DescribeInstanceTypeFamilies.....	225
6.21 DescribeInstanceTypes.....	228
6.22 ModifyInstanceVpcAttribute.....	232
6.23 ModifyInstanceAttribute.....	235
6.24 ModifyInstanceVncPasswd.....	240
6.25 ModifyInstanceAutoReleaseTime.....	242
6.26 ModifyInstanceAutoRenewAttribute.....	245

6.27 ModifyInstanceChargeType.....	249
6.28 ModifyInstanceSpec.....	257
6.29 ModifyPrepayInstanceSpec.....	267
7 Launch templates.....	277
7.1 CreateLaunchTemplate.....	277
7.2 CreateLaunchTemplateVersion.....	295
7.3 DeleteLaunchTemplate.....	312
7.4 DeleteLaunchTemplateVersion.....	315
7.5 DescribeLaunchTemplates.....	317
7.6 DescribeLaunchTemplateVersions.....	322
7.7 ModifyLaunchTemplateDefaultVersion.....	332
8 Auto provisioning group.....	336
8.1 CreateAutoProvisioningGroup.....	336
8.2 ModifyAutoProvisioningGroup.....	347
8.3 DeleteAutoProvisioningGroup.....	353
8.4 DescribeAutoProvisioningGroups.....	354
8.5 DescribeAutoProvisioningGroupInstances.....	368
8.6 DescribeAutoProvisioningGroupHistory.....	372
9 Disks.....	377
9.1 CreateDisk.....	377
9.2 DeleteDisk.....	387
9.3 DescribeDisks.....	389
9.4 AttachDisk.....	408
9.5 DetachDisk.....	411
9.6 ModifyDiskChargeType.....	413
9.7 ModifyDiskAttribute.....	419
9.8 ReplaceSystemDisk.....	423
9.9 ReInitDisk.....	432
9.10 ResetDisk.....	437
9.11 ResizeDisk.....	441
9.12 ModifyDiskSpec.....	448
10 Reserved Instances.....	452
10.1 PurchaseReservedInstancesOffering.....	452
10.2 DescribeReservedInstances.....	454
10.3 ModifyReservedInstances.....	457
11 Images.....	460
11.1 CreateImage.....	460
11.2 ImportImage.....	471
11.3 CopyImage.....	478
11.4 CancelCopyImage.....	483
11.5 ExportImage.....	486
11.6 DescribeImages.....	491
11.7 DeleteImage.....	503

11.8 DescribeImageSharePermission.....	505
11.9 ModifyImageAttribute.....	509
11.10 ModifyImageSharePermission.....	512
11.11 DescribeImageSupportInstanceTypes.....	515
12 Snapshots.....	519
12.1 CreateSnapshot.....	519
12.2 DeleteSnapshot.....	528
12.3 DescribeSnapshots.....	531
12.4 DescribeSnapshotsUsage.....	542
12.5 DescribeSnapshotLinks.....	544
12.6 ModifySnapshotAttribute.....	549
12.7 CreateAutoSnapshotPolicy.....	552
12.8 ApplyAutoSnapshotPolicy.....	557
12.9 CancelAutoSnapshotPolicy.....	560
12.10 DeleteAutoSnapshotPolicy.....	562
12.11 DescribeAutoSnapshotPolicyEX.....	564
12.12 ModifyAutoSnapshotPolicyEx.....	569
13 Security groups.....	574
13.1 CreateSecurityGroup.....	574
13.2 AuthorizeSecurityGroup.....	580
13.3 AuthorizeSecurityGroupEgress.....	592
13.4 RevokeSecurityGroup.....	604
13.5 RevokeSecurityGroupEgress.....	616
13.6 JoinSecurityGroup.....	626
13.7 LeaveSecurityGroup.....	629
13.8 DeleteSecurityGroup.....	631
13.9 DescribeSecurityGroupAttribute.....	633
13.10 DescribeSecurityGroups.....	640
13.11 DescribeSecurityGroupReferences.....	647
13.12 ModifySecurityGroupAttribute.....	650
13.13 ModifySecurityGroupEgressRule.....	652
13.14 ModifySecurityGroupPolicy.....	661
13.15 ModifySecurityGroupRule.....	663
14 Deployment sets.....	674
14.1 CreateDeploymentSet.....	674
14.2 ModifyInstanceDeployment.....	678
14.3 ModifyDeploymentSetAttribute.....	681
14.4 DeleteDeploymentSet.....	684
14.5 DescribeDeploymentSets.....	686
15 SSH key pairs.....	692
15.1 CreateKeyPair.....	692
15.2 ImportKeyPair.....	695
15.3 AttachKeyPair.....	698
15.4 DetachKeyPair.....	702

15.5 DeleteKeyPairs.....	705
15.6 DescribeKeyPairs.....	707
16 Networks.....	713
16.1 AllocatePublicIpAddress.....	713
16.2 ConvertNatPublicIpToEip.....	716
16.3 AttachClassicLinkVpc.....	719
16.4 DetachClassicLinkVpc.....	722
16.5 DescribeBandwidthLimitation.....	724
16.6 DescribeClassicLinkInstances.....	729
16.7 ModifyInstanceNetworkSpec.....	732
17 Elastic network interfaces.....	740
17.1 CreateNetworkInterface.....	740
17.2 AttachNetworkInterface.....	746
17.3 AssignPrivateIpAddresses.....	751
17.4 UnassignPrivateIpAddresses.....	757
17.5 DetachNetworkInterface.....	763
17.6 DeleteNetworkInterface.....	767
17.7 DescribeNetworkInterfaces.....	772
17.8 ModifyNetworkInterfaceAttribute.....	781
18 System event.....	788
18.1 DescribeInstancesFullStatus.....	788
18.2 DescribeInstanceHistoryEvents.....	799
18.3 DescribeDisksFullStatus.....	810
18.4 CancelSimulatedSystemEvents.....	817
18.5 CreateSimulatedSystemEvents.....	819
19 Monitoring.....	823
19.1 DescribeEniMonitorData.....	823
19.2 DescribeDiskMonitorData.....	829
19.3 DescribeInstanceMonitorData.....	833
19.4 GetInstanceScreenshot.....	839
19.5 GetInstanceConsoleOutput.....	841
20 Cloud assistants.....	846
20.1 CreateCommand.....	846
20.2 InstallCloudAssistant.....	851
20.3 InvokeCommand.....	853
20.4 StopInvocation.....	857
20.5 DeleteCommand.....	859
20.6 DescribeCloudAssistantStatus.....	861
20.7 DescribeCommands.....	863
20.8 DescribeInvocations.....	869
20.9 DescribeInvocationResults.....	878
21 HPC clusters.....	884
21.1 CreateHpcCluster.....	884

21.2 DeleteHpcCluster.....	887
21.3 DescribeHpcClusters.....	890
21.4 ModifyHpcClusterAttribute.....	894
22 Tags.....	898
22.1 TagResources.....	898
22.2 ListTagResources.....	902
22.3 UntagResources.....	907
23 Regions.....	912
23.1 DescribeRegions.....	912
23.2 DescribeZones.....	915
23.3 DescribeResourcesModification.....	922
23.4 DescribeAvailableResource.....	938
24 Others.....	949
24.1 CancelTask.....	949
24.2 DescribeTasks.....	951
24.3 DescribeTaskAttribute.....	956
24.4 DescribeAccountAttributes.....	960
24.5 DescribePrice.....	968
25 Appendix.....	982
25.1 Error code table.....	982
25.2 Instance states.....	982
25.3 Instance status chart.....	983
25.4 Basic cloud disk status table.....	983
25.5 Cloud disk status chart.....	984
25.6 ISO 8601 Time Format.....	984
25.7 Disk category.....	984
25.8 API behavior for accounts with overdue payment.....	985
25.9 API behavior when an instance is locked for security reasons.....	988
25.10 How to ensure idempotence.....	990
25.11 Call API actions from within an intranet environment.....	991
25.12 Why only ten entries are returned for query request by using APIs or SDK.....	995
25.13 API usage Specification.....	997
26 API FAQ.....	998

1 Introduction

This topic provides the API reference of Alibaba Cloud Elastic Compute Service (ECS). If you are familiar with Web service and one or more programming languages, we recommend that you use APIs to manage your ECS resources or develop applications. For more information, see [API overview](#).

Limits

We set limits on the number and specification for the ECS instance, disk, security group, snapshot, and network bandwidth that you can create. For more information, see [Limits](#). Whenever the API description, optional parameter values, and available specifications conflict with the resource or specification limits described in the [Limits](#), the *Limits* topic always takes the precedence.

Methods

We allow HTTP or HTTPS requests, and so are the methods GET or POST. You can make a request by using the following approaches:

- (Recommended) Programming language-specific ECS [SDK](#)
- [Alibaba Cloud CLI](#)
- Alibaba Cloud [API Explorer](#)
- [API URL request](#)

In particular, you can skip the authentication process by using the SDK, CLI, and API Explorer. It is easier for you to get started by using the language-specific SDK instead of making a request over HTTP or HTTPS.



Note:

When you call API in the Alibaba Cloud CLI and SDK, remove the period (.) from the request parameters. For example, use `SystemDisk Category` instead of `SystemDisk . Category`.

However, you must complete the authentication process for every request if you make an API URL request over the HTTP or HTTPS protocol. For more information, see [Digital signature](#) and [Create an AccessKey](#).

Glossary

Item	Abbreviation	Meaning
<i>Region</i>	<i>Region</i>	A specific data center established by Alibaba Cloud in which you can run your business. To decrease network latency, we have linked the regions all over the world . However, the region cannot be changed once an ECS resource is create in it.
<i>Availability Zone</i>	<i>Zone</i>	Zone for short. An area with independent power grids and networks in a specified region. Each region has one or more zones. The network latency for ECS resources within a specific zone is reduced.
<i>Instance</i>	<i>Instance</i>	A virtual computing environment that includes CPU, memory, operating system, bandwidth, disks, and other basic computing components. An ECS instance is an independent virtual machine, and is the core element of ECS. For more information, see Instance type families .
<i>Image</i>	<i>Image</i>	A running environment template for an instance. It includes an operating system and preinstalled software . You can use an image either to create an instance or change the system disk of an instance.
<i>Disk</i>	<i>Disk</i>	The storage device of instances.
<i>Security group</i>	<i>Security group</i>	An instance-related security group. An instance must belong to at least one security group. The security policies of a security group apply to all instances in the group.
<i>Snapshot</i>	<i>Snapshot</i>	A restore point created for a disk. It contains the disk data at a specified time and can be used to restore disk data or create custom images.
<i>Tag</i>	<i>Tag</i>	Consists of a key-value pair. You can assign tags to ECS resources for fast listing and filtering.
<i>IP address</i>	<i>IP address</i>	The Internet or intranet IP address of an instance.

2 API overview

The following tables list API operations available for use in ECS.

Instances

Operation	Description
RunInstances	Creates one or more Pay-As-You-Go or subscription ECS instances.
CreateInstance	Creates an ECS instance.
DescribeInstances	Queries the details of one or more ECS instances.
StartInstance	Starts an ECS instance.
RebootInstance	Restarts an ECS instance.
StopInstance	Stops an ECS instance.
DeleteInstance	Releases a Pay-As-You-Go instance or a subscription ECS instance that expires.
AttachInstanceRamRole	Attaches a RAM role to one or more ECS instances. You can only attach one RAM role to an ECS instance at any time. If the instance already has a RAM role, an error code is returned because another RAM role cannot be attached to the same instance.
DetachInstanceRamRole	Detaches a RAM role from one or more ECS instances.
DescribeInstanceState	Obtains the states of multiple ECS instances.
RenewInstance	Renews a subscription ECS instance.
ReactivateInstances	Restarts a Pay-As-You-Go ECS instance that is suspended because of overdue payments or has expired.
RedeployInstance	Redeploys an ECS instance when the instance receives an event notification.
DescribeInstanceVncUrl	Queries the Web management terminal URL of an ECS instance.
DescribeUserData	Queries the user data of an ECS instance.
DescribeInstanceAutoRenewalStatus	Queries the auto renewal status of one or more subscription ECS instances.
DescribeInstanceRamRole	Queries RAM roles attached to one or more ECS instances.

Operation	Description
DescribeSpotPriceHistory	Queries the price history of the last 30 days for a preemptible instance.
DescribeInstanceTypeFamilies	Queries the instance type families provided by ECS.
DescribeInstanceTypes	Queries the instance type list provided by ECS.
ModifyInstanceVpcAttribute	Modifies the VPC attributes of an ECS instance.
ModifyInstanceAttribute	Modifies the information of an ECS instance, such as the password, name, description, hostname, and user data. For a burstable performance instance (t5), you can also change its running mode.
ModifyInstanceVncPasswd	Modifies the Web management terminal password of an ECS instance.
ModifyInstanceAutoReleaseTime	Sets or cancels the automatic release time for a Pay-As-You-Go ECS instance. Use caution when you set the automatic release time, because the instance is automatically released upon expiration.
ModifyInstanceAutoRenewalStatus	Set one or more subscription ECS instances to the auto renewal status. To reduce the maintenance workload when an instance expires, you can set auto renewal for subscription ECS instances.
ModifyInstanceChargeType	Modifies the billing method for one or more ECS instances. You can change the billing method between Pay-As-You-Go and subscription, or change all Pay-As-You-Go data disks attached to an instance to subscription disks.
ModifyInstanceSpec	Modifies the instance type or public bandwidth of a Pay-As-You-Go ECS instance.
ModifyPrepayInstanceSpec	Modifies the type of your subscription ECS instance. The new instance type takes effect for the entire lifecycle of the instance.

Launch templates

Operation	Description
CreateLaunchTemplate	Creates an ECS instance launch template (launch template for short). An instance launch template removes the need to configure a large number of parameters every time you create an instance.

Operation	Description
CreateLaunchTemplateVersion	Creates a new version for a specified ECS instance launch template.
DeleteLaunchTemplate	Deletes an ECS instance launch template.
DeleteLaunchTemplateVersion	Deletes an ECS instance launch template version. This operation does not delete the default version of an ECS instance launch template. To delete the default version, you must call the DeleteLaunchTemplate operation.
DescribeLaunchTemplates	Queries one or more ECS instance launch templates.
DescribeLaunchTemplateVersions	Queries one or more ECS instance launch template versions.
ModifyLaunchTemplateDefaultVersion	Modifies the default version of an ECS instance launch template. If you do not specify a template version number when creating an ECS instance (RunInstances), the default version is used.

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.
DescribeAutoProvisioningGroups	Queries auto provisioning groups.
DescribeAutoProvisioningGroupInstances	Queries ECS instances in an auto provisioning group.
DescribeAutoProvisioningGroupSchedulingTasks	Queries the scheduling tasks of an auto provisioning group.

Disks

Operation	Description
CreateDisk	Creates a Pay-As-You-Go or subscription data disk. You can create a basic disk, an ultra disk, an SSD disk, or an ESSD disk.
DeleteDisk	Releases a Pay-As-You-Go data disk. You can release a basic disk, an ultra disk, or an SSD disk.
DescribeDisks	Queries the disks that you have created.

Operation	Description
AttachDisk	Attaches a data disk to an ECS instance.
DetachDisk	Detaches a Pay-As-You-Go disk from an ECS instance . You can detach a basic disk, an ultra disk, or an SSD disk.
ModifyDiskChargeType	Modifies the billing method for up to 16 disks that are attached to an ECS instance.
ModifyDiskAttribute	Modifies the attributes of a disk.
ReplaceSystemDisk	Replaces the system disk or the operating system of an ECS instance.
ReInitDisk	Resets a disk to its initial state.
ResetDisk	Rolls back a disk to a specified disk state by using one of its historic disk snapshots.
ResizeDisk	Resizes a cloud disk. You can resize both system disks and data disks.
ModifyDiskSpec	Upgrades the performance level of an ESSD disk.

Reserved instances

Operation	Description
PurchaseReservedInstancesOfferings	Purchases reserved instances to pay for the CPU and memory usage fees of Pay-As-You-Go ECS instances.
DescribeReservedInstances	Queries the reserved instances that you have purchased .
ModifyReservedInstances	Modifies reserved instances.

Images

Operation	Description
ExportImage	Exports a custom image to an OSS bucket in the same region as the custom image.
CreateImage	Creates a custom image. You can use the created image to create ECS instances (RunInstances) and replace system disks (ReplaceSystemDisk).
ImportImage	Imports your locally saved image files to Alibaba Cloud ECS. Such images appears in the corresponding regions as custom images.

Operation	Description
CopyImage	Copies a custom image from one region to another. You can use the copied image to create ECS instances (RunInstances) and replace system disks (ReplaceSystemDisk) in another region.
CancelCopyImage	Cancels an ongoing CopyImage operation.
DescribeImages	Queries available image resources.
DeleteImage	Deletes a specified custom image.
DescribeImageSharePermissions	Queries the accounts to which a custom image is shared. The response can be displayed over several pages. Ten entries are displayed on each page by default.
ModifyImageAttribute	Modifies the name and description of a custom image.
ModifyImageSharePermissions	Manages which accounts a custom image is shared to. After you share a custom image to other Alibaba Cloud accounts, these accounts can use the shared image to create ECS instances (RunInstances) and replace system disks (ReplaceSystemDisk).
DescribeImageSupportedInstanceTypes	Queries the instance types supported by the specified image.

Snapshots

Operation	Description
CreateSnapshot	Creates a snapshot for a specified disk.
CreateAutoSnapshotPolicy	Creates an automatic snapshot policy. After you create an automatic snapshot policy, you can call the ApplyAutoSnapshotPolicy operation to apply it to any disks. You can call the ModifyAutoSnapshotPolicyEx operation to modify an existing automatic snapshot policy as required.
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 takes effect on the disk and replace the original policy.
DeleteSnapshot	Deletes a snapshot. Snapshots that are currently being created can also be deleted by calling this operation.
CancelAutoSnapshotPolicy	Cancels the automatic snapshot policies of one or more disks.

Operation	Description
DeleteAutoSnapshotPolicy	Deletes an automatic snapshot policy. After you delete an automatic snapshot policy, the policy is no longer applied to the disks that it previously took effect on.
DescribeAutoSnapshotPolicies	Queries the automatic snapshot policies that you have created.
DescribeSnapshots	Queries all the snapshots of an ECS instance or a disk. Request parameters such as InstanceId, DiskId, and SnapshotIds act as filtering conditions and are in a logical AND relationship.
DescribeSnapshotLinks	Queries the snapshot links of one or more disks. A snapshot chain is a chain of all the snapshots of a disk and a disk corresponds to a chain of snapshots. The snapshot chain ID is the same as the disk ID.
ModifyAutoSnapshotPolicy	Modifies an automatic snapshot policy. After you modify an automatic snapshot policy, the new policy takes effect immediately on the disks that have the policy applied.
DescribeSnapshotsUsage	Queries the number of snapshots stored in a region and the total size of the snapshots. If you want to view the snapshot usage information on each disk in the current region, we recommend that you call the DescribeSnapshotLinks operation to query the snapshot chain information.
DescribeSnapshotPackage	Queries the storage plans that you have purchased within an Alibaba Cloud region. These storage plans can be used to store snapshots.

Security groups

Operation	Description
ModifySecurityGroupEgressRules	Modifies the outbound rules of a security group. You can call the AuthorizeSecurityGroup operation to add a security group rule.
CreateSecurityGroup	Creates a security group. Only instances within the security group are granted access permissions by default. If you want to allow requests from the Internet or requests from instances in other security groups, you can call the AuthorizeSecurityGroup operation to grant access permissions to these instances or groups.

Operation	Description
AuthorizeSecurityGroup	Adds an inbound rule for a security group. This operation allows or blocks the inbound traffic from other devices to ECS instances in the security group.
AuthorizeSecurityGroupEgress	Adds an outbound rule for a security group. This operation allows or blocks the outbound traffic from the ECS instances in the security group to other devices.
RevokeSecurityGroup	Deletes an inbound rule from a security group.
RevokeSecurityGroupEgress	Deletes an outbound rule from a security group.
JoinSecurityGroup	Adds an ECS instance to a specified security group.
LeaveSecurityGroup	Removes an ECS instance from a specified security group.
DeleteSecurityGroup	Deletes a security group. Before deleting a security group, make sure that no ECS instance exists in the security group and that the security group is not referenced by other security groups. Otherwise, the DeleteSecurityGroup request fails.
DescribeSecurityGroupAttribute	Queries the details of a security group.
DescribeSecurityGroups	Queries the basic information of your security groups, such as security group IDs and descriptions. Security groups are displayed in descending order of their IDs.
DescribeSecurityGroupReferences	Queries whether a specified security group has been authorized by other security groups.
ModifySecurityGroupAttribute	Modifies the attributes of a security group, including its name and description.
ModifySecurityGroupPolicy	Modifies the access control policy of a security group.
ModifySecurityGroupRule	Modifies the inbound rules of a security group. You can call the AuthorizeSecurityGroup operation to add a security group rule.

Deployment sets

Operation	Description
CreateDeploymentSet	Creates a deployment set in the specified region.
ModifyInstanceDeployment	Migrates an ECS instance to a DDH in the same region.
ModifyDeploymentSetAttribute	Modifies the name and description of a deployment set.
DeleteDeploymentSet	Deletes a deployment set.

Operation	Description
DescribeDeploymentSets	Queries attributes of one or more deployment sets.

SSH key pairs

Operation	Description
CreateKeyPair	Creates an SSH key pair. The system stores the public key and returns the unencrypted private key. The private key is encoded by using PEM and is in the PKCS #8 format. You must store the private key on your own and guarantee its confidentiality.
ImportKeyPair	Imports the public key of an RSA-encrypted key pair that was created by other key pair generators. After the public key is imported, you must store the private key on your own and its guarantee confidentiality.
AttachKeyPair	Attaches an SSH key pair to one or more Linux instances.
DetachKeyPair	Detaches an SSH key pair from one or more Linux instances.
DeleteKeyPairs	Deletes one or more SSH key pairs. The entry of a deleted SSH key pair is removed from the database. However, the instances to which the SSH key pair is attached can still use the SSH key pair.
DescribeKeyPairs	Queries one or more SSH key pairs.

Network configurations

Operation	Description
AllocatePublicIpAddress	Assigns a public IP address to an ECS instance.
ConvertNatPublicIpToEip	Converts the public IP address of a VPC-type ECS instance to an EIP.
AttachClassicLinkVpc	Establishes a ClassicLink between a classic network -type instance and a VPC to allow the instance to communicate with resources in the VPC over the internal network. For more information, see ClassicLink overview in VPC User Guide.

Operation	Description
DetachClassicLinkVpc	Removes the ClassicLink between a classic network-type instance and a VPC. For more information, see ClassicLink overview in VPC User Guide. After the ClassicLink is removed, the classic network-type instance cannot communicate with the VPC.
DescribeBandwidthLimitation	Queries available bandwidth resources.
DescribeClassicLinkInstances	Queries one or more classic network-type instances that have established ClassicLink with VPCs.
ModifyInstanceNetworkSpec	Modifies the bandwidth configurations of an ECS instance. When the network specifications of an ECS instance cannot meet your needs, you can modify its bandwidth configurations to improve network performance.

ENIs

Operation	Description
CreateNetworkInterface	Creates an ENI.
AttachNetworkInterface	Attaches an ENI to a VPC-type instance.
AssignPrivateIpAddresses	Assigns one or more secondary private IP addresses to an ENI. Specifically, you can specify private IP addresses within the CIDR block of the VSwitch to which an ENI belongs, or the number of private IP addresses for ECS to assign them automatically.
UnassignPrivateIpAddresses	Deletes one or more secondary private IP addresses from an ENI.
DetachNetworkInterface	Detaches an ENI from an ECS instance.
DeleteNetworkInterface	Deletes an ENI.
DescribeNetworkInterfaces	Queries available ENIs.
ModifyNetworkInterfaceAttribute	Modifies the attributes of an ENI. You can modify the name, description, and security group of the ENI.

System events

Operation	Description
DescribeInstancesFullStatus	Queries the full status information of one or more ECS instances. The full status information is made up of the instance status and the instance event status. The instance status is the lifecycle status of the instance. The instance event status is the health status of the maintenance event. For more information, see ECS instance lifecycle and System events.
DescribeInstanceHistoryEvents	Queries the system events of the specified ECS instance. You can query system events within the last week. You can specify the InstanceEventCycleStatus parameter to query system events that are in the Scheduled or Executing state.
DescribeDisksFullStatus	Queries the full status information of one or more disks.
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 is in the Canceled state.
CreateSimulatedSystemEvents	Schedules simulated system events for one or more ECS instances. The simulated system events do not occur in the actual system and the simulation does not affect ECS instances.

O&M and monitoring

Operation	Description
DescribeEniMonitorData	Queries traffic information of a secondary ENI over a specific period.
DescribeDiskMonitorData	Queries the usage information of a specified disk over a specific period. You can query the read IOPS, write IOPS, read bandwidth (Byte/s), write bandwidth (Byte/s), read latency (ms), and write latency (ms) of the disk. A portion of the information may be missing. This is because the system cannot obtain the relevant information, such as when the disk is not in the In Use state.

Operation	Description
DescribeInstanceMonitoringData	Queries all the monitoring data of an ECS instance. You can query the CPU usage, inbound data traffic, outbound data traffic, network traffic, and average bandwidth of the ECS instance. A portion of the information may be missing. This is because the system cannot obtain the relevant information, such as when the instance is in the Stopped state.
GetInstanceScreenshot	Obtains the screenshot information of an ECS instance.
GetInstanceConsoleOutput	Obtains the command line output of an ECS instance. The returned output is encoded in Base64.

Cloud assistant

Operation	Description
CreateCommand	Creates a cloud assistant command.
InstallCloudAssistant	Installs the cloud assistant client on one or more ECS instances.
InvokeCommand	Triggers a cloud assistant command on one or more ECS instances.
StopInvocation	Stops the process of a running cloud assistant command on one or more ECS instances.
DeleteCommand	Deletes a cloud assistant command.
DescribeCloudAssistantStatus	Checks whether the cloud assistant client is installed on one or more instances.
DescribeCommands	Queries the cloud assistant commands that you have created. If you only specify the Action and RegionId parameters, all available commands are displayed.
DescribeInvocations	Queries the invocation information and status of cloud assistant commands.
DescribeInvocationResults	Queries the invocation result of a cloud assistant command, or the actual output on a specified ECS instance.

Tags

Operation	Description
TagResources	Creates and attaches tags to the specified ECS resources.

Operation	Description
ListTagResources	Queries tags that are attached to one or more ECS resources.
UntagResources	Detaches and deletes tags from the specified ECS resources.

Regions

Operation	Description
DescribeRegions	Queries the Alibaba Cloud regions available to you.
DescribeZones	Queries zones available in a specified region.
DescribeResourcesModification	Queries resources available in a certain zone upon upgrading or downgrading an ECS instance type or system disk.
DescribeAvailableResource	Queries resources available in a certain zone. For example, you can view resources available in a certain zone before creating an ECS instance (RunInstances) or modify the instance type (ModifyInstanceSpec).

Other operations

Operation	Description
CancelTask	Cancels an ongoing task. You can cancel the following asynchronous tasks: importing images (ImportImage) and exporting images (ExportImage).
DescribeTasks	Queries the progress of one or more asynchronous tasks.
DescribeTaskAttribute	Queries the details of a specified asynchronous task . You can query the following asynchronous tasks: importing images (ImportImage) and exporting images (ExportImage).
DescribeAccountAttributes	Queries the maximum number of ECS resources that you can create in a region. Specifically, you can query the maximum number of security groups, ENIs, Pay-As-You-Go instance vCPUs, preemptible instance vCPUs, and Dedicated Hosts (DDHs), local network type, and whether your account has been authenticated with real-name credentials.

3 Quick start for ECS APIs

This topic describes how to call ECS APIs by using different developer tools, such as the Alibaba Cloud CLI, OpenAPI Explorer, and the Alibaba Cloud Java SDK. The topic takes CreateSnapshot as the example API to call.

Use the Alibaba Cloud CLI

Prerequisites

You have [installed](#) and [configured](#) the Alibaba Cloud CLI.

Procedure

This example shows how to create a snapshot by calling the API ([#unique_162](#)) through Alibaba Cloud CLI. Before calling the API, please read the API documentation to understand its usage and learn about the required request parameters. If errors are reported when you call the API, you can check the corresponding API documentation for troubleshooting.

1. Get the instance ID.

- If you have connected to the ECS instance, you can use [metadata](#) to get the instance ID. For example, Linux instance can run the following commands:

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

- On your local computer, you can call [DescribeInstances](#) to get the instance ID:

```
aliyun ecs DescribeInstances --output cols=InstanceId,InstanceName
```

2. Use [DescribeInstances](#) to filter for the target disk ID:

```
aliyun ecs DescribeInstances --RegionId cn-hangzhou --InstanceId i-bp1afnc98r8k69XXXXXX --output cols=DiskId
```

3. Use [#unique_162](#) to create a snapshot based on the disk ID:

```
aliyun ecs CreateSnapshot --DiskId d-bp19pjyf12hebpXXXXXX
```

If the following information is returned, the snapshot creation task has been successfully initiated:

```
{"RequestId":"16B856F6-EFFB-4397-8A8A-CB73FAXXXX XX","SnapshotId":"s-bp1afnc98r8kjhXXXXXX"}
```

4. Use [DescribeSnapshots](#) to query the snapshot creation status. If "SnapshotId"="s-bp1afnc98r8kjhXXXXXX" and "Status":"accomplished" are shown at the same time, it indicates that the snapshot has been successfully created.

```
aliyun ecs DescribeSnapshots --RegionId cn-hangzhou --InstanceId i-bp1afnc98r8k69XXXXXX --output cols=SnapshotId,Status
```

Use OpenAPI Explorer to call an API

This example shows how to create a snapshot ([#unique_162](#)) through [Alibaba Cloud OpenAPI Explorer](#). For more information about OpenAPI Explorer, see [What is OpenAPI Explorer](#). Before calling [#unique_162](#), please read the API documentation to understand its usage and learn about the required request parameters.

1. Use [DescribeInstances](#) to get the instance ID and the disk ID.
2. Use [CreateSnapshot](#) to create a snapshot based on the disk ID.

3. Use [DescribeSnapshots](#) to query the snapshot creation status. If " `SnapshotId` " `" s - bp1afnc98r 8kjhXXXXXX "` and " `Status` ":" `accomplish ed` " are shown at the same time, it indicates that the snapshot has been successfully created.

Use the Java SDK

This example shows how to create a snapshot ([#unique_162](#)) through [Java SDK](#). For how to configure ECS SDK, see [Install the new Java SDK](#).



Note:

For the `< AccessKey >` (your `AccessKeyId`), `< AccessSecret >` (your `AccessKeySecret`), `< RegionId >` (the ID of the region to which the instance belongs), and `< DiskId >` (disk ID), you need to enter them according to your actual scenario. For more information, see [Create an accesskey](#) and [Regions and zones](#).

```
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 >";

    /**
     * Region
     */
    private String regionId = "< RegionId >";

    /**
     * DiskId
     */
    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 Getting started

4.1 How to make a request

This section is applicable for users who make a GET request over HTTP or HTTPS protocol by sending a URL.

If you prefer using [SDK](#), Alibaba Cloud [CLI](#), or [API Explorer](#), skip this section.

The GET request URL, which can be directly used in a browser, has a formulated [request structure](#). The URL consists of several parameters, such as the [common request parameters](#), your [signature](#), and some API-specific parameters. We provide URL request example for every API. However, these URL examples are not encoded to make them easy to read. Thus, you must encode the URL before making a request. After the authentication process is complete, we [return the results](#) to you. The response parameters are displayed if it is a success response, and the error message is displayed if it is an error response. You can fix the error according to the common error codes and API-specific error codes.



Note:

We recommend that you use SDK to manage your ECS resources or develop applications. It is easier for you to get started by using the language-specific SDK instead of making a request over HTTP or HTTPS. For more information, see [Developer Resources](#).

4.2 Request structure

This topic describes the request structure in GET requests and provides the endpoints of ECS. Alibaba Cloud ECS APIs allow you to initiate GET requests by sending a URL over the HTTP or HTTPS protocol. The request parameters must be included in the URL.

Structure example

The following example is an unencoded URL request of [CreateSnapshot](#).

```
https://ecs.aliyuncs.com/?Action=CreateSnapshot&DiskId=d-28m5zbua0
```

< Common request parameters >

- `https` indicates the communication protocol.
- `ecs.aliyuncs.com` is an ECS service endpoint.
- `Action = CreateSnapshot` indicates the target API, and `DiskId = d-28m5zbua0` is one of the [CreateSnapshot](#) parameters.
- < Common request parameters > are the common parameters of the system.

Communication protocol

Requests over HTTP or HTTPS are supported. We recommend that you send requests over HTTPS for a higher level of security.

If such sensitive information as an SSH key pair or a password exists in your request, we recommend that you choose HTTPS.

Service endpoints

The following table describes the API service access endpoints of ECS. To reduce network latency, we recommend that you configure endpoints based on the source from which you call the service.

Region (Location)	Endpoint
Default	ecs.aliyuncs.com
China (Zhangjiakou)	ecs.cn-zhangjiakou.aliyuncs.com
China (Hohhot)	ecs.cn-huhehaote.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

The endpoints in the following table are accelerated through the virtual network and Express Connect. This reduces network latency that results from communication across different countries or regions.

Region (Location)	Endpoint
Default (US Silicon Valley)	ecs.us-west-1.aliyuncs.com
Default (US Virginia)	ecs.us-east-1.aliyuncs.com
Default (China Hong Kong)	ecs.cn-hongkong.aliyuncs.com
Default (Singapore)	ecs.ap-southeast-1.aliyuncs.com

**Note:**

The endpoints provided by Alibaba Cloud ECS can be used to send API calls over the Internet through HTTP or HTTPS. However, if your ECS instance is not assigned an Internet bandwidth package or a public IP address, the instance cannot initiate an API action request by using the Alibaba Cloud CLI or corresponding SDK. To resolve this issue, you can use PrivateZone to associate the VPC with the region to which your ECS instance belongs. For information about how to call API actions through an intranet for ECS instances in a VPC that cannot access the Internet, see [#unique_173](#).

Request Parameters

You must specify the target operation (for example, `Action=StartInstance`) by using the `Action` parameter. Additionally, you must set other API parameters and [Common request parameters](#).

Character encoding

Request parameters and response parameters are encoded by using the `UTF - 8` character set.

4.3 Common parameters

Both request and response have common parameters, they appear in every round of API action..

Common request parameters

The following table describes the common parameters that comprise of a URL for a GET request over HTTP or HTTPS protocol.

Name	Type	Required	Description
Action	String	Yes	The target API. For more information about the optional values, see API overview .

Name	Type	Required	Description
AccessKeyId	String	Yes	Equivalent to a logon password. However, an AccessKey is used to call APIs, while logon password is used to log on to the ECS console . For more information, see Create an AccessKey .
Signature	String	Yes	Your signature. For more information, see Signature .
SignatureMethod	String	Yes	Signature method. Value: HMAC-SHA1.
SignatureVersion	String	Yes	Signature algorithm version. Value: 1.0.
SignatureNonce	String	Yes	Unique random number, which is used to prevent network replay attacks. Different random numbers must be used for different requests.
Timestamp	String	Yes	Request time stamp. The time format follows the ISO8601 standard, and the UTC time is used. The format is yyyy-MM-ddTHH:mm:ssZ. For example, 2018-01-01T12:00:00Z indicates 20:00:00, Jan 01, 2018, Beijing time (UTC+8).
Version	String	Yes	The API version to use. Value: 2014-05-26.
Format	String	No	Type of the response parameters. Optional values: json xml. Default value: xml.

Request example

```
https://ecs.aliyuncs.com/?Action=XXXXXX
&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

Name	Type	Description
RequestId	String	Request ID. We return a unique RequestId for every API request, whether the request is successful or not.

4.4 Digital signature

We perform the sender authentication for each request. Therefore, a signature information must be included in the request, irrespective of the use of HTTP or HTTPS protocol. By using the AccessKeyID and AccessKeySecret, we perform symmetric encryption to authenticate the sender request.

The AccessKey is equivalent to a logon password. However, an AccessKey is used to call APIs, while the logon password is used to log on to the [ECS console](#). Where an AccessKeyID is the visitor identity, an AccessKeySecret is the secret key to encrypt the signature string and to verify the signature string sent to our server. You must keep your AccessKey confidential to prevent possible data breach event.



Note:

We provide SDKs and third-party SDKs for multiple programming languages to help you skip the authentication process. For more information, see [SDK](#).

Step 1. Compose a standardized request URL

1. Sort the request parameters in a lexicographical order. The request parameters include the API-specific parameters and [common parameters](#) except for the `Signature` parameter.



Note:

For example, if you make a request by using the GET method, these parameters are in the section of the URL followed by a question mark `?` and connected by ampersands `&`.

2. Encode the request parameters by using the UTF-8 character set and according to the [RFC3986](#) rules.

- Do not encode the A~Z and a~z characters, numbers (0~9), hyphens -, underscores _, periods ., and tildes ~.
- Encode other characters in the % XY format, with XY representing the hexadecimal ASCII value of the characters. For example, the half-width double quotes (") are encoded as % 22 .
- Encode the extended UTF-8 characters in % XY % ZA ... format.
- Encode the whitespaces () to % 20 instead of the plus signs (+).

Alternatively, you can use libraries that support the `application/x-www-form-urlencoded` MIME-type URL encoding,

for example the `java.net.URLEncoder` of Java language. If so, use the `percentEncode` Java method, in the encoded strings, replace the plus signs (+) with % 20 , the asterisks (*) with % 2A , and % 7E to the tildes (~). See the following example:

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

3. Connect the encoded parameters and their values with the equal signs (=).

4. Concatenate the encoded parameters with ampersands (&).

Now, you get a canonicalized query string, and its structure must be the same as described in [request structure](#).

Step 2. Construct a signature string

1. Create a variable `StringToSign` by using the canonicalized query string. You can use the aforementioned [percentEncode](#) to handle the standardization request string that was constructed by the previous steps, with the following rules:

```
StringToSign =
HTTPMethod + "&" + // HTTPMethod : HTTP method used for
making request, for example GET .
percentEncode ("/") + "&" + // percentEncode ("/"): Encode
backslash (/) to % 2F .
```

```
percentEncode ( CanonicalizedQueryString ) // Encode the
canonicalized query string created in the Step 1
.
```

2. Create a variable `Signature` by calculating the HMAC-SHA1 value of the

`StringToSign` according to the [RFC2104](#) rules. Here we use the Java Base64 encoding method.

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



Note:

RFC2104 when calculating signatures `AccessKeySecret` followed by the ampersand (&), and the hexadecimal ASCII value of an ampersand is 38.

3. Encode the value of `Signature` according to the [RFC3986](#) rules to the canonicalized query string URL.

Sample 1. Parameter Concatenation Method

Take calling [DescribeRegions](#) as an example. You have the `AccessKeyID=testid` and `AccessKeySecret=testsecret` created in the console.

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 & SignatureN
once = 3ee8c1b8 - 83d3 - 44af - a94f - 4e0ad82fd6 cf & Version =
2014 - 05 - 26 & SignatureVersion = 1 . 0
```

2. Create a variable `StringToSign` to be calculated by using the canonicalized query string.

```
GET &% 2F & AccessKeyID % 3Dtestid % 26Action % 3DDescribe
Regions % 26Format % 3DXML % 26SignatureMethod % 3DHMAC - SHA1 %
26SignatureNonce % 3D3ee8c1b8 - 83d3 - 44af - a94f - 4e0ad82fd6
cf % 26SignatureVersion % 3D1 . 0 % 26Timestamp % 3D2016 - 02 -
23T12 % 253A46 % 253A24Z % 26Version % 3D2014 - 05 - 26
```

3. Calculate the HMAC-SHA1 value. Because you have the

`AccessKeySecret=testsecret`, the Key used in the RFC2104 rules is `testsecret &`,

and the HMAC-SHA1 value is `0LeaidS1Jv xuMvnyH0wu J + uX5qY =`. Here we use the Java Base64 encoding method.

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

4. Encode the value of Signature according to the [RFC3986](#) rules and add `Signature = 0LeaidS1Jv xuMvnyH0wu J % 2BuX5qY % 3D` to the URL in [Step 1](#).

```
http :// ecs . aliyuncs . com /? SignatureVersion = 1 . 0 &
Action = DescribeRegions & Format = XML & SignatureNonce =
3ee8c1b8 - 83d3 - 44af - a94f - 4e0ad82fd6 cf & Version = 2014
- 05 - 26 & AccessKeyId = testid & Signature = 0LeaidS1Jv
xuMvnyH0wu J % 2BuX5qY % 3D & SignatureMethod = HMAC - SHA1 &
Timestamp = 2016 - 02 - 23T12 % 253A46 % 253A24Z
```

Now you can use a Web browser, curl, wget or other tools to send HTTP request for calling `DescribeRegions` and view the Alibaba Cloud region list.

Sample 2. Programming Language Method

Assume that you are calling the [DescribeRegions](#) to describe the Alibaba Cloud region list. You have the `AccessKeyId=testid` and `AccessKeySecret=testsecret` created in the console, and all request parameters are stored in a Java `Map < String , String >` object.

1. Predefined encoding methods.

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

2. Predefine the format of the parameter `Timestamp`. The parameter `Timestamp` must conform to the [ISO8601](#), and use the offset from Coordinated Universal Time (UTC) for the date time.

```
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. Construct a request string.

```
final String HTTP_METHOD = " GET ";
```

```

Map parameters = new HashMap ();
// Add 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 " );
// Sort the parameters
String [] sortedKeys = parameters . keySet ( ) . toArray ( new String [ ] { } );
Arrays . sort ( sortedKeys );
final String SEPARATOR = "&";
// Create the variable stringToSign
StringBulder stringToSign = new StringBulder ( );
stringToSign . append ( HTTP_METHOD ) . append ( SEPARATOR );
stringToSign . append ( percentEncode ( "/" ) ) . append ( SEPARATOR );
StringBulder canonicalizedQueryString = new StringBulder ( );
for ( String key : sortedKeys ) {
// Encode the key and its value
canonicalizedQueryString . append ( "&" )
    . append ( percentEncode ( key ) ) . append ( "=" )
    . append ( percentEncode ( parameters . get ( key ) ) );
}
// Encode the variable canonicalizedQueryString
stringToSign . append ( percentEncode ( canonicalizedQueryString . toString ( ) . substring ( 1 ) ) );

```

4. Sign and encode the signature. Because you have the AccessKeySecret=testsecret, the Key for computing HMAC is testsecret & and the value of signature after calculation is 0LeaidS1Jv xuMvnyH0wu J % 2BuX5qY % 3D .

```

// A sample code for calculating 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 ) );

```

After adding the Signature parameter, the request URL encoded according to [RFC3986](#) rules is ready to use.

```

http://ecs.aliyuncs.com/?SignatureVersion=1.0&Action=DescribeRegions&Format=XML&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf&Version=2014-05-26&AccessKeyId=testid&Signature=0LeaidS1Jv

```

```
xuMvnyHOwu J % 2BuX5qY % 3D & SignatureM ethod = HMAC - SHA1 &
Timestamp = 2016 - 02 - 23T12 % 253A46 % 253A24Z
```

5. Use a Web browser, curl, wget or other tools to send HTTP Request.

```
< DescribeRegionsResponse >
  < Regions >
    < Region >
      < LocalName > Qingdao </ LocalName >
      < RegionId > cn - qingdao </ RegionId >
    </ Region >
    < Region >
      < LocalName > Hangzhou </ LocalName >
      < RegionId > cn - hangzhou </ RegionId >
    </ Region >
  </ Regions >
  < RequestId > 833C6B2C - E309 - 45D4 - A5C3 - 03A7A7A48A CF </
RequestId >
</ DescribeRegionsResponse >
```

By parsing this XML schema output, you can obtain the region and region ID list of Alibaba Cloud. If you set the `Format = JSON`, the response results are in JSON format. For more information, see [response results](#).

4.5 Response results

We return the results in either XML or JSON format, but XML is the default choice. You can switch to XML schema by specifying the request parameter `Format`. For more information, see [common parameters](#). Response examples in our API documents have line breaks and indentation to make them easy to read. The actual response results are not formatted.

Success response example

Every successful response has a request ID in the RequestId element and other API-specific response parameters. The HTTP status code for a success response is 2XX.

- XML format

```
<? xml version =" 1 . 0 " encoding =" UTF - 8 "> <!-- Result
root node -->
< ActionResponse > <!-- Response request tag -->
  < RequestId > 4C467B38 - 3910 - 447D - 87BC - AC049166F2 16 </
RequestId > <!-- Response result data -->
</ ActionResponse >
```

- JSON format

```
{
  " RequestId ": " 4C467B38 - 3910 - 447D - 87BC - AC049166F2 16
  " /* Response result data */
```



```
}
```

Error response example

Every error response consists of a request ID in the `RequestId` element and access endpoint in the `HostId` element, the error code, and the error message. The HTTP status code for an error response is 4xx or 5xx.

You can fix the exception according to the API-specific error codes, [common error codes](#), or [API Error Center](#) and try the request again. Alternatively, you can [open a ticket](#) and provide additional inputs such as the `HostId` and `RequestId` to get technical support from ECS.

• XML format

```
<? xml    version =" 1 . 0 "    encoding =" UTF - 8 " ?><!-- Result
root    node -->
< Error >
  < RequestId > 540CFF28 - 407A - 40B5 - B6A5 - 74Bxxxxxxx  xx </
RequestId > <!-- Request    ID -->
  < HostId > ecs . aliyuncs . com </ HostId > <!-- Endpoint -->
  < Code > MissingPar  ameter . CommandId </ Code > <!-- Error
code -->
  < Message > The    input    parameter “ CommandId ” that    is
required    for    processing    this    request    is    not    supplied
.</ Message > <!-- Error    message -->
</ Error >
```

• JSON format

```
{
  " RequestId ": " 540CFF28 - 407A - 40B5 - B6A5 - 74Bxxxxxxx  xx
", /* Request    ID */
  " HostId ": " ecs . aliyuncs . com ", /* Endpoint */
  " Code ": " MissingPar  ameter . CommandId ", /* Error    code
*/
  " Message ": " The    input    parameter “ CommandId ” that
is    required    for    processing    this    request    is    not
supplied ." /* Error    message */
}
```

Common error codes

Error code	HTTP status code	Error code
Idempotent ParameterMismatch	400	The request is retried with updated parameters.
IllegalTimestamp	400	The input parameter <code>Timestamp</code> that is required for processing this request is not supplied.

Error code	HTTP status code	Error code
Incomplete Signature	400	The request signature does not conform to Alibaba Cloud standards.
InsufficientBalance	400	Your account does not have enough balance.
InvalidAccessKeyId.NotFound	400	The specified AccessKey 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.
InvalidParameter	400	The specified parameter <code>SignatureMethod</code> is not valid.
InvalidParameter	400	The specified parameter <code>SignatureVersion</code> is not valid.
InvalidParameter	400	The specified parameter is not valid
InvalidParameter	400	The specified parameter <code>Action</code> or <code>Version</code> is not valid.
InvalidParameter.IsNull	400	The required parameter must be not null.
MissingParameter	400	The input parameter <code>Action</code> that is required for processing this request is not supplied
MissingParameter	400	The input parameter <code>AccessKeyId</code> that is required for processing this request is not supplied
MissingParameter	400	The input parameter <code>Signature</code> that is required for processing the request is not supplied.
MissingParameter	400	The input parameter <code>TimeStamp</code> that is required for processing this request is not supplied
MissingParameter	400	The input parameter <code>Version</code> that is required for processing this request is not supplied

Error code	HTTP status code	Error code
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.AccessKeyIdDisabled	403	The AccessKey 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 Alibaba Cloud 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.
InvalidIdempotenceParameterMismatch	403	The specified parameters are different from before.
InvalidParameter.OwnerAccount	403	OwnerAccount is Invalid.

Error code	HTTP status code	Error code
InvalidParameter. ResourceOwnerAccount	403	ResourceOwnerAccount is Invalid.
LastTokenProcessing	403	The last token request is processing.
MissingParameter	403	The input parameter OwnerId,OwnerAccount that is required 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.
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.

Error code	HTTP status code	Error code
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 describes how to use Alibaba Cloud Resource Names (ARN) in ECS to authenticate users or user groups, grant RAM user accounts access to resources, and implement access authorization across cloud services.

Background information

**Note:**

If you can access resources without authorization, skip this topic.

You can use your Alibaba Cloud account or RAM user account to perform operations on ECS resources through the ECS API by default. Operation permissions are required when:

- A RAM user account that you created has no permissions to perform operations on the ECS resources under your Alibaba Cloud account.
- You want to access ECS resources from other Alibaba Cloud services, or access other Alibaba Cloud services from ECS.
- You want to perform operations on ECS resources that require operation permissions to be granted by the resource owners.

When an account requests access to ECS resources under your Alibaba Cloud account by calling ECS API operations, Alibaba Cloud ECS instructs RAM to perform a permission check to ensure that the required permissions have been granted to the account that sends the request. Depending on the requested resources and API operation syntaxes, ECS determines which resources require a permission check. For more information about authorization policies and permission control, see [What is RAM?](#) and [API overview](#) in the RAM documentation.

Use ARN values in policies

The following section describes how to use an ARN value in a custom policy in the RAM console. You can also call the [CreatePolicy](#) operation to do so.

1. Log on to the [RAM console](#).
2. In the left-side navigation pane, choose Permissions > Policies.
3. On the Policies page, click Create Policy.
4. On the Create Custom Policy page, set Policy Name and Note.

5. Select Script for Configuration Mode.



Note:

You can also select Visualized for Configuration Mode to complete the policy settings without referring to following ARN values section.

- Set the parameters in the Policy Document section based on the JSON template. Set the **Resource** parameter to one of the ARN values in the ARN values table. For the settings of other parameters, see [Policy elements](#) in the RAM documentation.

```
{
  "Statement": [
    {
      "Effect": "Allow",
      "Action": "",
      "Resource": ""
    }
  ],
  "Version": "1"
}
```

- Click OK.

ARN values

The following table lists the ARN values that correspond to some ECS API operations. For information about the ARN format, see [Terms](#) in the RAM documentation.

Action	ARN value
AddTags	acs:ecs:\$regionid:\$accountid:\$resourceType/\$resourceId
AllocatePublicIpAddress	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ApplyAutoSnapshotPolicy	acs:ecs:*\$accountid:snapshot/*
AttachClassicLinkVpc	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
AttachDisk	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:instance/\$diskId
AttachKeyPair	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:keypair/\$keypairName
AuthorizeSecurityGroup	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
AuthorizeSecurityGroupEgress	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
CancelAutoSnapshotPolicy	acs:ecs:*\$accountid:snapshot/*

Action	ARN value
CancelCopyImage	acs:ecs:\$regionid:\$accountid:image/\$imageNo
CopyImage	· acs:ecs:\$fromRegionid:\$accountid:image/\$imageNo · acs:ecs:\$toRegionid:\$accountid:image/*
ConvertNatPublicIpToEip	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
CreateAutoSnapshotPolicy	acs:ecs:*\$accountid:snapshot/*
CreateDisk	· acs:ecs:\$regionid:\$accountid:disk/* · acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotId
CreateImage	· acs:ecs:\$regionid:\$accountid:image/* · acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotId · acs:ecs:\$regionid:\$accountid:instance/\$instanceId
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
CreateKeyPair	acs:ecs:\$regionid:\$accountid:keypair/*
CreateSecurityGroup	acs:ecs:\$regionid:\$accountid:securitygroup/*
CreateSnapshot	· acs:ecs:\$regionid:\$accountid:snapshot/* · acs:ecs:\$regionid:\$accountid:disk/\$diskId · acs:ecs:\$regionid:\$accountid:volume/\$volumeId
DeleteAutoSnapshotPolicy	acs:ecs:*\$accountid:snapshot/*
DeleteDisk	acs:ecs:\$regionid:\$accountid:disk/\$diskId
DeleteImage	acs:ecs:\$regionid:\$accountid:image/\$imageNo
DeleteInstance	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
DeleteKeyPairs	acs:ecs:\$regionid:\$accountid:keypair/\$keyPairName
DeleteSecurityGroup	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
DeleteSnapshot	acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotId

Action	ARN value
DescribeClassicLinkInstances	acs:ecs:\$regionid:\$accountid:instance/*
DescribeDiskMonitorData	acs:ecs:\$regionid:\$accountid:disk/\$diskId
DescribeDisks	· acs:ecs:\$regionid:\$accountid:disk/\$diskId · acs:ecs:\$regionid:\$accountid:disk/*
DescribeImages	· acs:ecs:\$regionid:\$accountid:image/\$imageName · acs:ecs:\$regionid:\$accountid:image/*
DescribeInstanceMonitorData	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
DescribeInstances	· acs:ecs:\$regionid:\$accountid:instance/\$instanceId · acs:ecs:\$regionid:\$accountid:instance/*
DescribeInstanceStatus	acs:ecs:\$regionid:\$accountid:instance/*
DescribeInstanceVncPassword	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
DescribeInstanceVncUrl	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
DescribeKeyPairs	· acs:ecs:\$regionid:\$accountid:keypair/\$keyPairName · acs:ecs:\$regionid:\$accountid:keypair/*
DescribePrice	acs:ecs:*. \$accountid:*
DescribeRenewalPrice	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
DescribeSecurityGroupAttribute	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
DescribeSecurityGroups	· acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo · acs:ecs:\$regionid:\$accountid:securitygroup/*
DescribeSnapshotAttribute	acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotId
DescribeSnapshotLinks	· acs:ecs:\$regionid:\$accountid:disk/\$diskId · acs:ecs:\$regionid:\$accountid:disk/*
DescribeSnapshotMonitorData	acs:ecs:*. \$accountid:snapshot/*
DescribeSnapshots	· acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotId · acs:ecs:\$regionid:\$accountid:snapshot/*

Action	ARN value
DescribeTags	acs:ecs:\$regionid:\$accountid:\$resourceType/\$resourceId
DetachClassicLinkVpc	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
DetachDisk	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:disk/\$diskId
DetachKeyPair	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:keypair/\$keypairName
ExportImage	acs:ecs:\$regionid:\$accountid:image/\$imageNo
ImportImage	acs:ecs:\$regionid:\$accountid:image/*
ImportKeyPair	acs:ecs:\$regionid:\$accountid:keypair/*
JoinSecurityGroup	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
LeaveSecurityGroup	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
ModifyAutoSnapshotPolicy	acs:ecs:*. \$accountid:snapshot/*
ModifyDiskAttribute	acs:ecs:\$regionid:\$accountid:disk/\$diskId
ModifyImageAttribute	acs:ecs:\$regionid:\$accountid:image/\$imageNo
ModifyInstanceAttribute	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ModifyInstanceAutoReleaseTime	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ModifyInstanceChargeType	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ModifyInstanceNetworkSpec	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ModifyInstanceVncPasswd	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ModifyInstanceVpcAttribute	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:vswitch/\$vSwitchId
ModifySecurityGroupAttribute	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo

Action	ARN value
ModifySecurityGroupEgressRule	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
ModifySecurityGroupRule	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
ModifyPrepayInstanceSpec	acs:ecs:\$regionid:\$accountid:
ModifySnapshotAttribute	acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotId
RebootInstance	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ReInitDisk	acs:ecs:\$regionid:\$accountid:disk/\$diskId
ReleasePublicIpAddress	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
RemoveTags	acs:ecs:\$regionid:\$accountid:\$resourceType/\$resourceId
RenewInstance	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ReplaceSystemDisk	· acs:ecs:\$regionid:\$accountid:instance/\$instanceId · acs:ecs:\$regionid:\$accountid:image/\$imageNo
ResetDisk	acs:ecs:\$regionid:\$accountid:disk/\$diskId
ResizeDisk	acs:ecs:\$regionid:\$accountid:disk/\$diskId
RevokeSecurityGroup	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
RevokeSecurityGroupEgress	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
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
StartInstance	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
StopInstance	acs:ecs:\$regionid:\$accountid:instance/\$instanceId

6 Instances

6.1 RunInstances

You can call this operation to create one or more pay-as-you-go or subscription Elastic Compute Service (ECS) instances.

Description

Before you create an instance, you can call the [DescribeAvailableResource](#) operation to view the available resources in the specified region or zone.

Before you create an instance, we recommend that you learn more about the ECS billing methods. When you create an ECS instance, fees may apply for additional resources used by the instance. For more information, see [Billing overview](#).

When you call this operation, you must note the following:

- You can create a maximum of 100 instances at a time.
- You can use the `AutoReleaseTime` parameter to set the automatic release time of the instances.
- After an instance is created, you can go back to the instance list and call the [DescribeInstances](#) operation to check the status of the new instance.
- Before you create an instance, make sure that you have created a security group. For more information, see [CreateSecurityGroup](#).
- An instance automatically starts after it is created. It is ready to use when it is in the `Running` state.
- Before creating a VPC-connected instance, you must [create a VPC](#) in the same region.
- The [CreateInstance](#) operation does not automatically allocate a public IP address for the created instance. However, the `RunInstances` operation automatically allocates public IP addresses for the created instances if the value of `InternetMaxBandwidthOut` is greater than 0.
- After you call this operation, an error is returned if the parameters are invalid or no resource is available. For more information, see the Error codes section of this topic.

Best practices

`RunInstances` is able to create multiple instances. To better organize and manage your instances, we recommend that you set tags for the instances (`Tag . N . Key` and `Tag . N . Value`), and append hostnames (`HostName`) and instance names (`InstanceName`) with ordered suffixes (`UniqueSuffix`).

An instance launch template automatically specifies parameters that are needed to create an instance. You can call the [CreateLaunchTemplate](#) operation to create an instance launch template. Then, when you can call the `RunInstances` operation, you can specify `LaunchTemplateId` and `LaunchTemplateVersion` to use the launch template.

In the [ECS console](#), you can view the best practices for calling the `RunInstances` operation when you create an ECS instance. On the Preview page, click View Open API in the Configurations Selected section. On the left side of the dialog box, the API Workflow pane displays the operations and request parameters that are associated with the `RunInstances` operation. On the right side, SDK examples in Java and Python are provided.

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
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the latest region list.

Parameter	Type	Required	Example	Description
Action	String	No	RunInstances	The operation that you want to perform. Set the value to RunInstances. For HTTP and HTTPS requests, the <code>Action</code> parameter is required. Set this parameter to RunInstances.
ZoneId	String	No	cn-hangzhou-g	The zone ID of the instance. You can call the DescribeZones operation to query the latest zone list. If you do not specify a zone ID, the system randomly selects a zone.
ImageId	String	No	win2008r2_64_ent_sp1_en-us_40G_alibase_20170915.vhd	The ID of the image to create the instance. You can call the DescribeImages operation to view the available image resources. If you do not specify <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> to set the launch template, you must specify the <code>ImageId</code> parameter.

Parameter	Type	Required	Example	Description
SecurityGroupId	String	No	sg-bp15ed6xe1yxeycg7o***	The ID of the security group to which the instances belong. Instances in the same security group can communicate with each other. One security group can contain a maximum of 1,000 instances.  Note: The SecurityGroupId parameter determines the network type of its instances. For example, a security group of the VPC type can only contain VPC-connected instances and you must also specify the VSwitchId parameter to create these instances. If you do not specify <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> to set the launch template, you must specify the <code>SecurityGroupId</code> parameter.
VSwitchId	String	No	vsw-bp1s5fnvk4gn2tws03***	The ID of the VSwitch. It must be specified when you create VPC-connected instances.

Parameter	Type	Required	Example	Description
InstanceType	String	No	ecs.g5.large	The type of the instance. For more information, see Instance families or call the DescribeInstanceTypes operation to query the list of the latest instance types. If you do not specify <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> to set the launch template, you must specify the <code>InstanceType</code> parameter.
InternetMaxBandwidthIn	Integer	No	200	The maximum inbound bandwidth for Internet traffic. Unit: Mbit/s. Valid values: 1 to 200 Default value: 200
InternetMaxBandwidthOut	Integer	No	5	The maximum outbound bandwidth for Internet traffic. Unit: Mbit/s. Valid values: 0 to 100 Default value: 0

Parameter	Type	Required	Example	Description
InstanceName	String	No	k8s-node-[1,4]-alibabacloud	The name of the instance. The name must be 2 to 128 characters in length. It must start with a letter, but cannot start with <code>http://</code> or <code>https://</code>. It can contain letters, digits, colons (:), underscores (_), periods (.), and hyphens (-). The default value is set to the <code>InstanceId</code> of the instance.  Note: When you create multiple ECS instances, you can use <code>UniqueSuffix</code> to specify different names for the instances. You can also use the <code>name_prefix [begin_number, bits] name_suffix</code> format to name the instances in a numeric order. For example, you can set <code>InstanceName</code> to <code>k8s-node-[1,4]-alibabacloud</code> and the name of the first instance to <code>k8s-node-0001-alibabacloud</code>. For more information, see API FAQ. When you do not add suffixes <code>name_suffix</code> to the instance names or the hostnames, and instead use the <code>name_prefix [begin_number, bits]</code> format, the <code>UniqueSuffix</code> parameter is ignored. For example, when you set <code>InstanceName</code> to

Parameter	Type	Required	Example	Description
HostName	String	No	k8s-node-[1,4]-ecshost	The hostname of the instance. - It cannot start or end with a period (.) or a hyphen (-). It cannot contain consecutive periods (.) or hyphens (-). - For Windows, the hostname must be 2 to 15 characters in length. The hostname cannot contain periods (.) or only contain digits. It can contain letters, digits, and hyphens (-). - For other operating systems such as Linux, the hostname must be 2 to 64 characters in length. It can be segments separated with periods (.). Each segment can contain letters, digits, and hyphens (-).  Note: When you create multiple ECS instances, you can use <code>UniqueSuffix</code> to specify different names for the instances. You can also use the <code>name_prefix</code> [<code>begin_number</code>, <code>bits</code>] <code>name_suffix</code> format to name the instances in a numeric order. For example, you can set <code>HostName</code> to <code>k8s - node - [1 , 4] - ecshost</code> and the name of the first instance to <code>k8s - node - 0001 - ecshost</code>. For more information, see API FAQ. When you do not add suffixes <code>name_suffix</code> to the

Parameter	Type	Required	Example	Description
UniqueSuffix	Boolean	No	true	Specifies whether to add sequential suffixes to <code>HostName</code> and <code>InstanceName</code> . The sequential suffix ranges from 001 to 999. For example, the names can be <code>LocalHost001</code> , <code>LocalHost002</code> and <code>MyInstance001</code> , <code>MyInstance002</code> . Default value: false
Description	String	No	FinanceDept	The description of the instance. It must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> .
PasswordInherit	Boolean	No	false	Specifies whether to use the password that is predefined in the image. If the <code>PasswordInherit</code> parameter is set to true, the <code>Password</code> parameter must not be specified. You must ensure that the selected image has a password configured.

Parameter	Type	Required	Example	Description
Password	String	No	EcsV587!	The password for the instance . It must be 8 to 30 characters in length. It must include at least three of the following characters types: uppercase letters, lowercase letters, digits, and special characters. Special characters include: <pre>() ` ~ ! @ # \$ % ^ & * - _ + = \ { } [] : ; ' < > , . ? /</pre> Passwords for Windows instances cannot start with a forward slash (/).  Note: If the Password parameter is specified, we recommend that you send requests over the HTTPS protocol to ensure the security of your password.
KeyPairName	String	No	Instancetest	The name of the key pair. - For Windows instances, ignore this parameter. Default value: null The Password parameter is still used if the KeyPairName parameter is specified. - For Linux instances, password authentication is disabled by default.

Parameter	Type	Required	Example	Description
SystemDisk . Size	String	No	40	The size of the system disk. Unit: GiB. Valid values: 20 to 500 The parameter value must be a minimum of 20 and greater than or equal to the size of the image. Default value: 40 or the size of the image, depending on whichever is greater
SystemDisk . Category	String	No	cloud_ssd	The category of the system disk. The default value for retired instance types without I/O optimizations is cloud. The default value for other types of instances is cloud_efficiency. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - ephemeral_ssd: local SSD - cloud_essd: enhanced SSD (ESSD)
SystemDisk . DiskName	String	No	cloud_ssdSystem	The name of the system disk. 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 (-). Default value: null

Parameter	Type	Required	Example	Description
SystemDisk . Description	String	No	FinanceDept	The description of the system disk. It must be 2 to 256 characters in length and cannot start with http:// or https://.
DataDisk . N . Size	Integer	No	2000	The size of Nth data disk. Valid values of N: 1 to 16. Unit: GiB. Valid values: • cloud: 5 to 2,000 • cloud_efficiency: 20 to 32,768 • cloud_ssd: 20 to 32,768 • cloud_essd: 20 to 32,768 • ephemeral_ssd: 5 to 800 The value of this parameter must be equal to or greater than the snapshot size specified by the <code>SnapshotId</code> parameter.

Parameter	Type	Required	Example	Description
DataDisk . N . SnapshotId	String	No	s-bp17441ohwka0yuhx***	The ID of the snapshot used to create the Nth data disk. Valid values of N: 1 to 16 If the DataDisk . N . SnapshotId parameter is specified, the DataDisk . N . Size parameter is ignored, and the size of the created disk is the size of the specified snapshot. Snapshots created on or before July 15, 2013 are not applicable. Otherwise, an error will be returned and your request will be rejected.
DataDisk . N . Category	String	No	cloud_ssd	The category of the Nth data disk. Valid values: - cloud: basic disk. This is the default value. - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - ephemeral_ssd: local SSD - cloud_essd: enhanced SSD (ESSD)
DataDisk . N . Encrypted	String	No	false	Specifies whether the Nth data disk is encrypted. Default value : false
DataDisk . N . KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d3fb408***	The customer master key ID that is provided by Key Management Service (KMS) for the Nth data disk.

Parameter	Type	Required	Example	Description
DataDisk . N . DiskName	String	No	cloud_ssdData	The name of the Nth data disk . 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 (-). Default value: null
DataDisk . N . Description	String	No	FinanceDept	The description of the Nth data disk. It must be 2 to 256 characters in length and cannot start with http:// or https://.
DataDisk . N . Device	String	No	/dev/vda	The mount point of the Nth data disk.  Note: This parameter is deprecated and will be later removed. we recommend that you use other parameters to ensure maximum compatibility.
DataDisk . N . DeleteWith Instance	Boolean	No	true	Specifies whether the Nth data disk is released along with the instance. Default value: true

Parameter	Type	Required	Example	Description
<code>IoOptimized</code>	String	No	optimized	Specifies whether the instance is an I/O optimized instance. The default value for retired instance types is none. The default value for other instances is optimized. Valid values: · none: The instance is not I/O optimized. · optimized: The instance is I/O optimized.
<code>NetworkInterface.N.PrimaryIpAddress</code>	String	No	172.16.236.***	The primary IP address of the secondary ENI. Valid values of N: 1  Note: You can only attach one secondary ENI when you create an ECS instance. You can call CreateNetworkInterface and AttachNetworkInterface to attach additional secondary ENIs. The default value is an IP address that is randomly selected from the VSwitch to which the ENI belongs.
<code>NetworkInterface.N.VSwitchId</code>	String	No	vsw-vswitchid2	The ID of the VSwitch to which the secondary ENI belongs. Valid values of N: 1 The default value is the VSwitch to which the ECS instance belongs.

Parameter	Type	Required	Example	Description
NetworkInterface.N.SecurityGroupId	String	No	sg-securitygroupid2	The ID of the security group to which the secondary ENI belongs. Valid values of N: 1 The default value is the ID of the security group to which the instance belongs.
NetworkInterface.N.NetworkInterfaceName	String	No	FinanceJoshua	The name of the secondary ENI. Valid values of N: 1
NetworkInterface.N.Description	String	No	FinanceDept	The description of the secondary ENI. Valid values of N: 1 The description must be 2 to 256 characters in length and cannot start with http:// or https://.
RamRoleName	String	No	FinanceDept	The RAM role name of the instance. You can call the ListRoles operation provided by RAM to query the RAM roles that you have created.
UserData	String	No	ZWNobyBoZWxsbyBIY3Mh	The user data of the instance. It must be encoded in Base64. The maximum size for the raw data is 16 KB.

Parameter	Type	Required	Example	Description
MinAmount	Integer	No	2	The minimum number of the specified instances to purchase . Valid values: 1 to 100 · If the number of available ECS instances is less than the MinAmount value, the operation fails. · If the number of available ECS instances is greater than or equal to the MinAmount value, the number of instances that are created equals the total available instances.
Amount	Integer	No	3	The number of instances you want to create. Valid values: 1 to 100 Default value: 1
SpotPriceLimit	Float	No	0.97	The maximum hourly price for the preemptible instance. This parameter supports a maximum of three decimal places and takes effect when the <code>SpotStrategy</code> parameter is set to <code>SpotWithPriceLimit</code> .

Parameter	Type	Required	Example	Description
SpotStrategy	String	No	NoSpot	The bidding mode of the pay-as-you-go instance. This parameter is valid when <code>InstanceChargeType</code> is set to <code>PostPaid</code>. Valid values: • NoSpot: a standard pay-as-you-go instance. This is the default value. • SpotWithPriceLimit: a preemptible instance with an upper price limit. • SpotAsPriceGo: a preemptible instance that is billed based on the actual market price.
SpotInterruptionBehavior	String	No	Terminate	The interruption mode of the preemptible instance. Only the Terminate mode is supported. The instance is automatically released. This is the default value.
CreditSpecification	String	No	Standard	Specifies the performance mode of the t5 burstable instance. Valid values: • Standard: the Standard mode. For more information, see the Standard mode section of Burstable instances. • Unlimited: the Unlimited mode. For more information, see the Unlimited mode section of Burstable instances. Default value: null

Parameter	Type	Required	Example	Description
SecurityEnhancementsStrategy	String	No	Active	Specifies whether to enable security enhancement. Valid values: - Active: enables security enhancement. It is only applicable to public images. - Deactive: disables security enhancement for all image types.
DeploymentSetId	String	No	ds-bp1brhwhoqinyjd6t***	The ID of the deployment set.
DedicatedHostId	String	No	dh-dedicatedhost1	The ID of the dedicated host for the ECS instance. You can call the DescribeDedicatedHosts operation to view the dedicated host list. No preemptible instance can be created on a dedicated host. Therefore, if you specify <code>DedicatedHostId</code> , the values of <code>SpotStrategy</code> and <code>SpotPriceLimit</code> is ignored.
Tag.N.Key	String	No	FinanceDept	The tag key of the instances, disks, and primary ENIs. Valid values of N: 1 to 20 It cannot be an empty string. It can be a maximum of 64 characters in length and cannot start with aliyun or acs:. It cannot contain http:// or https://.

Parameter	Type	Required	Example	Description
Tag . N . Value	String	No	FinanceDept. Joshua	The tag value of the instances , disks, and primary ENIs. Valid values of N: 1 to 20 The tag value can be an empty string. It can be a maximum of 128 characters in length and cannot start with aliyun or acs :. It cannot contain http:// or https://.
HpcCluster Id	String	No	hpc-clusterid	The ID of the E-HPC cluster to which the instance belongs.
ResourceGr oupId	String	No	rg-resourcegr oupid1	The ID of the resource group to which the instance belongs.
LaunchTemp lateId	String	No	lt-bp1apo0bbb kuy0rj3***	The ID of the launch template. For more information, call the DescribeLaunchTemplates operation. You must specify either <code>LaunchTemp lateId</code> or <code>LaunchTemp lateName</code> to set a launch template.
LaunchTemp lateName	String	No	JoshuaWinP ostPaid	The name of the launch template. You must specify either <code>LaunchTemp lateId</code> or <code>LaunchTemp lateName</code> to set a launch template.

Parameter	Type	Required	Example	Description
LaunchTemplateVersion	Long	No	3	The version of the instance launch template. If you specify <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code>, but not the version of the launch template, the default template version is used.
DeletionProtection	Boolean	No	false	Specifies whether you can use the ECS console or call the DeleteInstance operation to release the instances. Valid values: · true: enables release protection. · false: disables release protection. This is the default value.  Note: This parameter is only applicable to pay-as-you-go instances. It can only protect against manual releases and is not supported for system releases.

Parameter	Type	Required	Example	Description
AutoReleaseTime	String	No	2018-01-01T12:05:00Z	The time when the instance is automatically released. The time follows the ISO 8601 standard in UTC+0. The format is yyyy-MM-ddTHH:mm:ssZ. • If the value of the seconds field (<code>ss</code>) is not <code>00</code> , the time will automatically be set to the start of the current minute (<code>mm</code>). • It must be at least 30 minutes after the current time. • The automatic release time must be less than 3 years from the current time.
InternetChargeType	String	No	PayByTraffic	The billing method of the network bandwidth. Valid values: • PayByTraffic: The billing method is based on actual traffic. This is the default value.

Parameter	Type	Required	Example	Description
Period	Integer	No	1	The subscription period of the instance. Unit: Months. The values that are valid for this parameter depend on the value specified in the PeriodUnit parameter. This parameter is only valid and required when the InstanceChargeType parameter is set to PrePaid . If the DedicatedHostId parameter is specified, the specified period cannot exceed the subscription period of the dedicated host. Valid values: - Week :1, 2, 3, and 4. - Month :1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, 36, 48, and 60.
AutoRenew	Boolean	No	true	Specifies whether to enable automatic renewal. This parameter is valid when InstanceChargeType is set to PrePaid . Valid values: - true: enables automatic renewal for the instance. - false: disables automatic renewal for the instance. This is the default value.
PeriodUnit	String	No	Month	The unit of the billing cycle for the instance. Valid values: - Week. - Month. This is the default value.

Parameter	Type	Required	Example	Description
AutoRenewPeriod	Integer	No	1	The automatic renewal period of the instance. The values that are valid for this parameter depend on the value specified in the PeriodUnit parameter. Valid values: - Week : 1, 2, and 3. - Month : 1, 2, 3, 6, 12, 24, 36, 48, and 60. Default value: 1
InstanceChargeType	String	No	PrePaid	The billing method of the instance. Valid values: - PrePaid: The billing method is subscription. - PostPaid: The billing method is pay-as-you-go. This is the default value. If it is set to PrePaid, you must confirm that your payment account has sufficient credit. Otherwise, the InvalidPaymentMethod error code is returned.
Ipv6AddressesCount	Integer	No	1	The number of randomly generated IPv6 addresses that are allocated to the ENI.  Note: You cannot specify both Ipv6Addresses.N and Ipv6AddressesCount at the same time.

Parameter	Type	Required	Example	Description
PrivateIpAddress	String	No	172.16.236.14X	The private IP address of the instance. This private IP address must be selected from the range defined by the CIDR block of the VSwitch.  Note: When you specify PrivateIpAddress, the Amount parameter must be set to 1.
Ipv6Addresses.N	RepeatList	No	Ipv6Addresses.1=2001:db8:1234:1a00::***	Allocates one or more IPv6 addresses to the ENI. Currently, the value of N must be 1. Example: Ipv6Addresses.1 = 2001 : db8 : 1234 : 1a00 ::***  Note: You cannot specify both Ipv6Addresses.N and Ipv6AddressesCount at the same time.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to send a dry-run request. · true: Only a dry-run request is sent and no instance is created. The system checks whether the required parameters are set, and validates the request format, service permissions, and available ECS instances. If the validation fails, the corresponding error code is returned. If the validation succeeds, the <code>DryRunOperation</code> error code is returned. · false: A request is sent. If the validation succeeds, the instance is created. This is the default value.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use your own methods to generate this value, but you must ensure that it is unique among different requests. ClientToken can only contain ASCII characters, and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Parameter	Type	Required	Example	Description
SecurityGroupIds.N	RepeatList	No	sg-bp15ed6xe1yxeycg7o***	The list of security groups to which the instance belongs. The valid values for N are based on the maximum number of security groups that the specified instance supports. For more information, see Security group limits.  Note: You cannot specify both SecurityGroupId and SecurityGroupIds.N at the same time.
SystemDisk.PerformanceLevel	String	No	PL1	The performance level of the system disk. Valid values: - PL1: a single ESSD delivers up to 50,000 random read/write IOPS. This is the default value. - PL2: a single ESSD delivers up to 100,000 random read/write IOPS. - PL3: a single ESSD delivers up to 1,000,000 random read/write IOPS. For more information about ESSD performance levels, see ESSD cloud disk.

Parameter	Type	Required	Example	Description
<code>DataDisk.N.PerformanceLevel</code>	String	No	PL2	The performance level of the Nth ESSD data disk. The value of N must be the same as that in <code>DataDisk.N.Category = cloud_essd</code>. Valid values: • PL1: a single ESSD delivers up to 50,000 random read/write IOPS. This is the default value. • PL2: a single ESSD delivers up to 100,000 random read/write IOPS. • PL3: a single ESSD delivers up to 1,000,000 random read/write IOPS. For more information about ESSD performance levels, see ESSD cloud disk.

Parameter	Type	Required	Example	Description
Affinity	String	No	default	Specifies whether an instance on a dedicated host is associated with the dedicated host. This parameter is applicable to instances with the No Charges After Instance Is Stopped feature enabled. Valid values: • default: The instance is not associated with the dedicated host. If the associated dedicated host has insufficient resources after the stopped instance is restarted, the instance is automatically allocated to an alternative dedicated host. • host: The instance is associated with a specific dedicated host. The stopped instance still resides on the associated dedicated host after it is restarted. If the available resources of the original dedicated host are insufficient, the instance will fail to restart. Default value: default

Parameter	Type	Required	Example	Description
Tenancy	String	No	default	Specifies whether to create an instance on a dedicated host. Valid values: • default: creates an instance that is not on a dedicated host. • host: creates an instance that is on a dedicated host. If you do not specify the <code>DedicatedHostId</code> parameter, then ECS automatically selects a dedicated host for the instance. Default value: default

Response parameters

Parameter	Type	Example	Description
InstanceIdSets		["i-instanceid1", "i-instanceid2", "i-instanceid3"]	The list of instance IDs (<code>InstanceId</code>).
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RunInstances
&RegionId=cn-hangzhou
&InstanceType=ecs.cm4.6xlarge
&SecurityGroupId=sg-securitygroupid
&Amount=3
&<Common request parameters>
```

Sample success responses

XML format

```
<RunInstancesResponse>
```



```

    < RequestId > 04F0F334 - 1335 - 436C - A1D7 - 6C044FE733 68 </
RequestId >
    < InstanceId Sets >
        < InstanceId Set >
            < InstanceId > i - instanceid 1 </ InstanceId >
            < InstanceId > i - instanceid 2 </ InstanceId >
            < InstanceId > i - instanceid 3 </ InstanceId >
        </ InstanceId Set >
    </ InstanceId Sets >
</ RunInstancesResponse >

```

JSON format

```

{
  "RequestId ":" 04F0F334 - 1335 - 436C - A1D7 - 6C044FE733 68 ",
  "InstanceId Sets ":{
    "InstanceId Set ":[
      " i - instanceid 1 ",
      " i - instanceid 2 ",
      " i - instanceid 3 "
    ]
  }
}

```

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.
404	InvalidSecurityGroupId	The specified SecurityGroupId is invalid or does not exist.	The error message returned because the specified security group ID does not exist.
400	InvalidInstanceType. ValueNotSupported	The specified InstanceType beyond the permitted range.	The error message returned because the specified instance type is invalid.
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 valid.

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 is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid.	The error message returned because the specified InternetChargeType does not exist.
400	InvalidParameter	The specified parameter "InternetMaxBandwidthOut" is not valid.	The error message returned because the specified InternetMaxBandwidthOut is invalid.
400	InvalidHostName.Malformed	The specified parameter "HostName" is not valid.	The error message returned because the specified HostName is invalid.
403	InvalidParams.InstanceNameExceed	The uniqueSuffix takes three naming places , please shorten your InstanceName.	The error message returned because the specified InstanceName exceeds the maximum length. The UniqueSuffix parameter value occupies three character spaces.
403	InvalidParams.HostnameExceed	The uniqueSuffix takes three naming places , please shorten your Hostname.	The error message returned because the specified HostName exceeds the maximum length. The UniqueSuffix parameter value occupies three character spaces.
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidPasswordParamMismatch	The input password should be null when PasswdInherit is true.	The error message returned because if PasswdInherit is set to true, the Password parameter must not be specified.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified SystemDisk.Category is invalid.
400	InvalidDiskName.Malformed	The specified parameter "SystemDisk.DiskName or DataDisk.n.DiskName" is not valid.	The error message returned because the system disk or data disk name is invalid. The name must be 2 to 128 characters in length. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and 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.DiskDescription or DataDisk.N.Description is invalid.
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 size of the data disk exceeds the upper limit or the size the snapshot exceeds the upper limit of the specified disk category.

HTTP status code	Error code	Error message	Description
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified DataDisk.N.Category is invalid.
404	InvalidDataDiskSnapshotId.NotFound	The specified parameter DataDisk.n.SnapshotId is not valid.	The error message returned because the specified DataDisk.N.SnapshotId is invalid.
400	InvalidDataDevice.Malformed	The specified parameter "DataDisk.n.Device" is not valid.	The error message returned because the specified DataDisk.N.Device is invalid.
400	InvalidNodeControllerId.Malformed	The specified parameter "NodeControllerId" is not valid.	The error message returned because the specified NodeControllerId is invalid.
400	InvalidInnerIpAddress.Malformed	The specified parameter "InnerIpAddress" is not valid.	The error message returned because the specified InnerIpAddress 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 InnerIpAddress is unavailable or 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 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.

HTTP status code	Error code	Error message	Description
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.
400	QuotaExceed. AfterpayInstance	Living afterpay instances quota exceeded.	The error message returned because the number of active pay-as-you-go instances has reached the upper limit.
403	ImageNotSubscribed	The specified image has not be subscribed.	The error message returned because you have not subscribed to the specified image in the marketplace.
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	InstanceDiskCategoryLimitExceed	The total size of specified disk category in an instance exceeds.	The error message returned because the total size of the specified disks exceeds the maximum capacity that is allowed for the disk category.
403	InvalidDevice. InUse	The specified device has been occupied.	The error message returned because the specified device has been mounted to a disk and is not available.

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 marketplace image is unavailable.
404	InvalidClusterId.NotFound	The ClusterId provided does not exist in our records.	The error message returned because the specified ClusterId does not exist.
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.
400	InvalidInstanceName.Malformed	The specified parameter "InstanceName" is not valid.	The error message returned because the format of the specified instance name is invalid. The name must be 2 to 128 characters in length. It can contain letters, digits , colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	InvalidDiskDescription.Malformed	The specified parameter "SyatemDisk.DiskDescription or DataDisk.n.Description" is not valid.	The error message returned because the specified SystemDisk.DiskDescription or DataDisk.N.Description is invalid.

HTTP status code	Error code	Error message	Description
403	QuotaExceed.PortableCloudDisk	The quota of portable cloud disk exceeds.	The error message returned because the number of portable disks has reached the upper limit.
500	InternalServerError	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, open a ticket.
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	SecurityGroupInstanceLimitExceed	Exceeding the allowed amount of instances of a security group.	The error message returned because the number of instances in the security group has reached the upper limit.
403	NodeControllerUnavailable	The Node Controller is temporarily unavailable.	The error message returned because the node controller is currently 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.

HTTP status code	Error code	Error message	Description
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.
404	InvalidVSwitchId. NotFound	Specified virtual switch does not exist.	The error message returned because the specified VSwitch does not exist.
400	InvalidParameter. Mismatch	Specified security group and virtual switch are not in the same VPC.	The error message returned because the specified security group is not in the same VPC as the VSwitch.
400	InvalidNetworkType. Mismatch	Specified parameter "InternetMaxBandwidthIn" or "InternetMaxBandwidthOut" conflict with instance network type.	The error message returned because the specified InternetMaxBandwidthIn or InternetMaxBandwidthOut value conflicts with the instance network 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 network billing method.
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 in the same CIDR block as the VSwitch.

HTTP status code	Error code	Error message	Description
400	InvalidPrivateIpAddress.Malformed	Specified private IP address is malformed.	The error message returned because the specified private IP address is invalid.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address has been used. Change the IP address and try again.
400	QuotaExceeded.PrivateIpAddress	Don't have enough private IPs in this switch	The error message returned because all the private IP addresses under the VSwitch are being used. Try another VSwitch.
400	QuotaExceeded	Living instances quota exceeded in this VPC.	The error message returned because the number of active instances has reached the upper limit.
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 the specified region or zone does not support VPC.

HTTP status code	Error code	Error message	Description
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	InvalidDiskCategoryMismatch	The specified disk categories' combination is not supported.	The error message returned because the combination of the specified disk types is not supported.
403	Forbidden	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	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 portable and cannot be released along with the instance.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist under this account. Check whether the image ID is valid.
403	InstanceDiskNumLimitExceed	The number of specified disk in an instance exceeds.	The error message returned because the number of disks in the instance has reached the upper limit.
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.

HTTP status code	Error code	Error message	Description
404	IoOptimized. NotSupported	The specified instance type is not support IoOptimized instance.	The error message returned because the specified instance type does not support I/O optimization.
403	InvalidDiskSize. TooSmall	Specified disk size is less than the size of snapshot	The error message returned because the specified disk size is less than the snapshot size.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified instance type does not exist.
400	MissingParameter	The specified parameter "Period" is not null.	The error message returned because the RegionId parameter is not specified.
400	InvalidPeriod	The specified period is not valid.	The error message returned because the specified period is invalid.
403	InvalidDiskCategory.Mismatch	The specified disk categories combination is not supported.	The error message returned because the combination of the specified disk types 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.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified data disk type is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified system disk type is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidDiskCategory. NotSupported	The specified disk category is not support the specified instance type .	The error message returned because the specified instance type does not support the specified disk category.
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 size of the data disk exceeds the upper limit or the size the snapshot exceeds the upper limit of the specified disk category.
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 the specified image has not been purchased or the number of images has reached the upper limit.
404	DependencyViolation. IoOptimized	The specified instancetype must be IoOptimized instance.	The error message returned because the specified instance type must be I/O-optimized . Check whether the instance type is valid.
404	PaymentMethodNotFound	No payment method has been registered on the account.	The error message returned because you have not registered the payment method for your account.
400	InvalidInstanceType. ValueNotSupported	InternetMaxBandwidthOut should be set.	The error message returned because the InternetMaxBandwidthOut parameter is not specified.

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType. ValueNotSupported	instancetype is not valid.	The error message returned because the specified InstanceType parameter is invalid.
400	InvalidClientToken. ValueNotSupported	clienttoken is not valid.	The error message returned because the specified ClientToken is invalid.
400	InvalidIoOptimize. ValueNotSupported	The specified IoOptimize is not valid.	The error message returned because the specified I/O-optimized instance is invalid.
400	InvalidHostName. Malformed	The specified parameter HostName is not valid.	The error message returned because the specified HostName is invalid.
404	HOSTNAME_ILLEGAL	hostname is not valid.	The error message returned because the specified hostname is invalid.
400	InvalidInternetMaxBandwidthOut. Malformed	The specified parameter internetMaxBandwidthOut is not valid.	The error message returned because the specified InternetMaxBandwidthOut is invalid.
400	InvalidInternetMaxBandwidthIn. Malformed	The specified parameter internetMaxBandwidthIn is not valid.	The error message returned because the specified InternetMaxBandwidthIn is invalid.
400	InvalidSnapshotId. NotFound	The specified parameter SnapshotId is not exist.	The error message returned because the specified snapshot does not exist. Check whether the snapshot ID is valid.
400	InvalidTagKey. Malformed	The specified Tag.N.Key is not valid.	The error message returned because the specified Tag.N.Key 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.
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 correspond to each other.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned when the number of specified tags has reached the upper limit.
400	InvalidMinAmount. Malformed	The specified parameter MinAmount is not valid.	The error message returned because the specified MinAmount is invalid. Check whether the value of this parameter is valid.
400	InvalidMaxAmount. Malformed	The specified parameter MaxAmount is not valid.	The error message returned because the specified MaxAmount is invalid.
400	InvalidAutoReleaseTime. Malformed	The specified parameter AutoReleaseTime is not valid.	The error message returned because the specified AutoReleaseTime is invalid. The time follows the ISO 8601 standard in UTC+0. The format is yyyy-MM-ddTHH:mm:ssZ.

HTTP status code	Error code	Error message	Description
400	InvalidPrivateIpAddress.Malformed	The specified parameter PrivateIpAddress is not valid.	The error message returned because the specified PrivateIpAddress is invalid.
400	InvalidInnerIpAddress.Malformed	The specified parameter InnerIpAddress is not valid.	The error message returned because the specified InnerIpAddress is invalid.
404	InvalidSystemDiskSize.LessThanImageSize	The specified parameter SystemDisk.Size is less than the image size.	The error message returned because the specified SystemDisk.Size is less 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 less than the minimum capacity requirement.
404	InvalidSystemDiskSize.MoreThanMaxSize	The specified parameter SystemDisk.Size is more than the max size	The error message returned because the specified SystemDisk.Size parameter is invalid.
403	OperationDenied	The specified RegionId does not support the creation of the network type ECS instance.	The error message returned because the ECS instance of the specified network type cannot be created in the specified region. Check whether this network type is available in the specified region.
400	OperationDenied.NoVlan	The specified parameter "VlanId" is not valid or vlan has not enough IP address.	The error message returned when the specified VLAN ID is invalid or the number of IP addresses in this VLAN has reached the upper limit.

HTTP status code	Error code	Error message	Description
403	OperationDenied. ImageNotValid	The specified Image is disabled or is deleted.	The error message returned because the specified image does not exist.
403	OperationDenied. SnapshotNotValid	The specified snapshot is not allowed to create disk.	The error message returned because the snapshot is invalid and you cannot create disks with the specified snapshot.
403	OperationDenied. SnapshotNotAllowed	The specified snapshot is not allowed to create disk.	The error message returned because the specified snapshot is not allowed to create disks.
403	OperationDenied. ZoneNotAllowed	The creation of Instance to the specified Zone is not allowed.	The error message returned because no instance can be created in the specified zone.
403	OperationDenied. ZoneSystemCategoryNotMatch	The specified Zone or cluster does not offer the specified disk category or the specified 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. ResourceControl	The specified region is in resource control, please try later.	The error message returned because the specified region is in resource control. Try again later.
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 specified operation is valid.

HTTP status code	Error code	Error message	Description
403	OperationDenied. SnapshotParamsNotValid	The capacity of snapshot exceeds the size limit of the specified disk category or the specified category is not authorized.	The error message returned because the snapshot size exceeds the size limit of the specified disk category or you are not authorized to use the specified disk type.
404	OperationDenied. CreatingConflict	Another Instance has been creating	The error message returned because no new instances can be created.
403	OperationDenied. DiskTypeNotSupport	The type of the disk does not support the operation	The error message returned because the specified operation is invalid.
400	OperationDenied. QuotaExceed	The quota of tags on resource is beyond permitted range.	The error message returned because the number of resource tags has reached the upper limit.
400	Account. Arrearage	Your account has been in arrears.	The error message returned because your account has insufficient balance. Top up your account and try again.
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 user data.
400	InvalidUserData. SizeExceeded	The specified parameter "UserData" exceeds the size .	The error message returned because the UserData size exceeds the maximum.

HTTP status code	Error code	Error message	Description
400	InvalidUserData. NotSupported	The specified parameter "UserData" only support the vpc and IoOptimized Instance.	The error message returned because the specified UserData is only supported for VPC-connected and I/O-optimized instances.
400	InvalidUserData. NotSupported	The specified parameter "UserData" only support the vpc and IoOptimized Instance.	The error message returned because the specified UserData is only supported for VPC-connected and I/O-optimized instances.
400	InvalidUserData. .Base64FormatInvalid	The specified UserData is not valid	The error message returned because the specified UserData is invalid.
404	InvalidZoneId. NotFound	The specified zoneId does not exist.	The error message returned because the specified zone ID does not exist.
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 resource in the specified zone is no longer available for sale. Please try other regions and zones.	The error message returned because no resources are available in the specified zone.
403	InvalidClusterId. NotFound	The specified clusterId does not exist.	The error message returned because the specified ClusterId does not exist.

HTTP status code	Error code	Error message	Description
403	InvalidResourceType. NotSupported	This resource type is not supported. Please try other resource types.	The error message returned because the specified resource type is not supported.
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 no resources are available in the specified zone.
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.
400	InstanceDiskNumber. LimitExceed	The total number of specified disk in an instance exceeds.	The error message returned because the number of disks in the instance has reached the upper limit.
400	InvalidDiskCategory. ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified DiskCategory is invalid.
400	InvalidSpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
400	InvalidSpotPriceLimit	The specified SpotPriceLimit is not valid.	The error message returned because the specified SpotPriceLimit is invalid.
400	InvalidSpotDuration	The specified SpotDuration is not valid.	The error message returned because the specified SpotDuration is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidSpotAuthorized	The specified Spot param is unauthorized.	The error message returned because you do not have the permission to create the preemptible instance.
400	InvalidSpotPrepaid	The specified Spot type is not support PrePay Instance.	The error message returned because the specified preemptible instance does not support the subscription billing method.
400	InvalidSpotAliUid	The specified UID is not authorized to use SPOT instance.	The error message returned because the specified UID does not have the permission to use preemptible instances.
400	InvalidParameter.Bandwidth	%s	The error message returned because the bandwidth parameter is not supported.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned because the specified data disk category is not supported.
400	InvalidSystemDiskCategory.ValueNotSupported	%s	The error message returned because the specified system disk category is not supported.
400	InvalidParameter.Conflict	%s	The error message returned because one specified parameter conflicts with another specified parameter.
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified InternetChargeType is not supported.

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueNotSupported	%s	The error message returned because the specified instance type is invalid.
403	InstanceType.Offline	%s	The error message returned because the specified instance type is unavailable.
400	RegionUnauthorized	%s	The error message returned because the specified region is not supported.
400	Zone.NotOnSale	%s	The error message returned because the specified zone is disabled.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned because the specified system disk size is invalid.
400	InvalidDataDiskSize.ValueNotSupported	%s	The error message returned because the specified data disk size is invalid.
404	InvalidKeyPairName.NotFound	The specified parameter "KeyPairName" does not exist in our records.	The error message returned because the specified KeyPairName does not exist.
403	DependencyViolation.WindowsInstance	The instance creating is window, cannot use ssh key pair to login.	The error message returned because SSH key pairs are not supported for Windows instances.
400	InvalidInstanceType.ValueNotSupported	The specified parameter "KeyPairName" only support IoOptimized Instance.	The error message returned because only I/O-optimized instances support SSH key pairs.

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 resource group does not exist.
403	InvalidNetworkType.MismatchRamRole	A RAM role t be used for classic instance.	The error message returned because classic network-connected instances do not support RAM roles.
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 parameter "RAMRoleName" does not exist.	The error message returned because the specified RAMRoleName does not exist.
404	InvalidLaunchTemplate.NotFound	%s	The error message returned because the specified template name is not found.
404	InvalidLaunchTemplateVersion.NotFound	%s	The error message returned because the specified template version is not found.
400	InvalidInstanceType.ElasticNetworkInterfaceNotSupported	The specified instance type does not support Elastic Network Interface, you can not attach Elastic Network Interface to generation I instances.	The error message returned because ENIs are not supported in the specified instance type.
400	InvalidParameter.EncryptedIllegal	%s	The error message returned when the parameter does not support encrypted disks.

HTTP status code	Error code	Error message	Description
400	InvalidParameter. EncryptedNotSupported	%s	The error message returned because the parameter is not supported for encrypted disks.
400	InvalidParameter. Encrypted. KmsNotEnabled	The encrypted disk need enable KMS	The error message returned because KMS has not been activated. KMS must be activated to encrypt disks.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an unknown error occurs.
403	Forbidden. RiskControl	This operation is forbidden by Aliyun RiskControl system.	The error message returned because the operation is prohibited by the risk control system of Alibaba Cloud.
403	InvalidInstance. UnPaidOrder	The specified Instance has unpaid order.	The error message returned because you have outstanding bills for the specified instance. Complete the payment and try again.
403	RealNameAuthenticationError	Your account has not passed the real-name authentication yet.	The error message returned because you failed to complete real-name authentication.
403	InvalidInstanceType. NotSupported	The specified InstanceType is not Supported.	The error message returned because the specified InstanceType is not supported.
403	InvalidPayMethod	The specified pay method is not valid.	The error message returned because the specified payment method is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidAccountStatus. NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account has insufficient balance to pay for the service. Top up your account and try again.
400	InvalidSpotPriceLimit. LowerThanPublicPrice	The specified parameter "spotPriceLimit" can't be lower than the current public price.	The error message returned because the specified spotPriceLimit is lower than the current market price.
400	InvalidRelationResource. NotFound	The relation resource has been deleted.	The error message returned because the related resource is deleted.
400	IncorrectRecycleBinStatus	The operation is not permitted due to resource status.	The error message returned because the operation is not supported while the resource is in the current state.
400	InvalidHpcClusterId. Unnecessary	The specified HpcClusterId is unnecessary	The error message returned because the specified HpcClusterId is not required.
400	InvalidVSwitchId. Necessary	The VSwitchId is necessary	The error message returned because VSwitchId is not specified.
400	InvalidHpcClusterId. Necessary	The HpcClusterId is necessary	The error message returned because HpcClusterId is not specified.
400	InvalidHpcClusterId. NotFound	The specified HpcClusterId is not found	The error message returned because the specified HPC cluster does not exist.

HTTP status code	Error code	Error message	Description
400	InvalidHpcClusterId.Creating	The specified HpcCluster Id is creating	The error message returned because the specified HPC cluster is being created.
404	InvalidVSwitchId.NotExist	%s	The error message returned because the specified VSwitch does not exist.
403	ImageNotSupportInstanceType	The specified image does not support the specified InstanceType.	The error message returned because the specified instance type is not supported in the specified image.
400	InvalidSecurityGroup.NotInDefaultVpc	%s	The error message returned because the specified security group is not associated with the default VPC.
400	VpcNotFound	Vpc is not found according to the specified VSwitch or the vpc does not belong to you.	The error message returned because the specified VPC does not exist.
400	InvalidSystemDiskSize.ImageNotSupportResize	The specified image does not support resize.	The error message returned because the specified image does not support resizing.
403	OperationDenied.InvalidNetworkType	%s	The error message returned because the specified network type is not supported.
400	InvalidSpotInterruptionBehavior	%s	The error message returned because the specified SpotInterruptionBehavior is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidSpotInterruptionBehaviorClassicNetworkNotSupport	The specified SpotInterruptionBehavior does not support Classic network Instance.	The error message returned because the SpotInterruptionBehavior parameter is only applicable to VPC-connected preemptible instances, but not classic network-connected instances.
403	InvalidSpotInterruptionBehaviorLocalDiskNotSupport	The specified SpotInterruptionBehavior does not support local disk instance.	The error message returned because preemptible instances do not support local disks.
400	InvalidDeploymentOnHost	%s	The error message returned because dedicated hosts are not supported in the specified deployment set.
400	InvalidInstanceChargeTypeNotSupport	The Dedicated host not support the specified Instance charge type.	The error message returned because the billing method is not supported for dedicated hosts.
400	InvalidNetworkTypeNotSupported	The classic networkType not support create ECS on dedicatedHost	The error message returned because the classic network is not supported for dedicated hosts.
400	InvalidDedicatedHostIdNotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified dedicated host ID does not exist.
400	InvalidDedicatedHostStatusNotSupport	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 dedicated host is in the current state.
400	ChargeTypeViolation. PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed	The error message returned because you cannot change the billing method for instances that are on a dedicated host.
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 this instance type.
400	DedicatedHostType. Unmatched	The specified DedicatedHostType t match the instance type.	The error message returned because dedicated hosts do not support preemptible instances.
400	MissingParameter	The input parameter ImageId that is mandatory for processing this request is not supplied.	The error message returned because ImageId is not specified.
400	MissingParameter	The input parameter InstanceType that is mandatory for processing this request is not supplied.	The error message returned because InstanceType is not specified.

HTTP status code	Error code	Error message	Description
400	ChargeType Violation. PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed.	The error message returned because you cannot change the billing method for instances that are on a dedicated host.
400	InvalidParam. NetworkInterface	%s	The error message returned because the specified parameter is invalid.
403	OperationDenied. ImageNotValid	%s	The error message returned because the specified image does not support this operation.
403	QuotaExceed. PostPaidDisk	Living postPaid disks quota exceeded.	The error message returned because the number of pay-as-you-go disks has reached the upper limit.
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 access ECS.
403	InvalidParameter. NotMatch	%s	The error message returned because one specified parameter conflicts with another specified parameter.
403	InvalidVSwitch. DefaultVSwitchNotSupport	The specified zone in vpc can't support create default vSwitch.	The error message returned because the default VSwitch is not supported for VPCs of the specified zone.
400	InvalidParameter. CreditSpecification	The specified CreditSpecification is not supported in this region.	The error message returned because the specified CreditSpecification is not supported in this region.

HTTP status code	Error code	Error message	Description
404	InvalidMarketImage.NotFound	The specified marketplace image does not exist, please change the imageId and try again.	The error message returned because the specified image is not available in the image marketplace.
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	InvalidInstanceType.NotSupported	The specified instanceType is not supported by the deployment set.	The error message returned because the specified instance type is not supported in the specified deployment set.
400	InvalidVpcZone.NotSupported	The specified operation is not allowed in the zone to which your VPC belongs, please try in other zones.	The error message returned because the operation is not supported in the specified zone.
400	IncorrectDefaultVpcStatus	The status of the default VPC is invalid.	The error message returned because the status of the default VPC is invalid.
404	DeploymentSet.NotFound	The specified deployment set does not exist.	The error message returned because the specified deployment set does not exist.
400	InvalidAutoRenewPeriod.ValueNotSupported	The specified autoRenewPeriod is invalid.	The error message returned because the specified AutoRenewPeriod is invalid.
403	OperationDenied.LocalDiskUnsupported	The configuration change is not allowed when the specified instance has local disks mounted.	The error message returned because configuration changes are not supported for instances with local disks attached.

HTTP status code	Error code	Error message	Description
403	OperationDenied.InconsistentNetwork	The specified security group and vswitch are not in the same vpc.	The error message returned because the security group and the VSwitch must share 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 other zones of this VPC.
403	DefaultVswitch.Existed	The default vswitch for VPC already exists.	The error message returned because the default VSwitch has been created for the VPC.
400	InvalidMarketImageChargeType.NotSupport	The specified chargeType of marketImage is unsupported.	The error message returned because the billing method for marketplace images is invalid.
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 of insufficient inventory for the requested resource . Try again with other resource types or other regions and zones.
403	IncorrectInstanceState	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.

HTTP status code	Error code	Error message	Description
403	CategoryViolation	The specified instance does not support this operation because of its disk category.	The error message returned because the configurations of instances with local disks attached cannot be upgraded or downgraded.
400	InvalidPeriodType. ValueNotSupported	The specified parameter PeriodType is invalid.	The error message returned because the specified PeriodType is invalid.
403	ResourcesNotInSameZone	The specified instance and dedicated host are not in the same zone.	The error message returned because the instance and the dedicated host must be in the same region.
403	InvalidDisk. SystemDiskSize	The specified SystemDiskSize beyond the permitted range.	The error message returned because the maximum size of the specified system disk is reached.
400	InvalidClientToken. ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken is invalid.
400	OperationDenied	The current user does not support this operation.	The error message returned because the current user is not authorized to perform this operation.
400	IncorrectImageStatus	The specified marketplace image is not available.	The error message returned because the specified marketplace image is not available.

HTTP status code	Error code	Error message	Description
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account has insufficient balance. Top up your account and try again.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type is not supported.
400	InvalidParam.Tenancy	The specified Tenancy is invalid.	The error message returned because the specified Tenancy parameter is invalid.
403	MaxEniIpv6IpsCountExceeded	%s	The error message returned because the number of IPv6 addresses that the ENI can support has reached the upper limit.
403	InvalidIp.IpRepeated	%s	The error message returned because the specified IP addresses are not unique.
403	InvalidIp.IpAssigned	%s	The error message returned because the specified IP address has been 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 is reached.

HTTP status code	Error code	Error message	Description
403	InvalidOperation. Ipv6CountExceeded	%s	The error message returned because the maximum number of IPv6 addresses is reached.
403	InvalidOperation. Ipv6NotSupport	%s	The error message returned because the specified instance type does not support IPv6 addresses.
403	InvalidVSwitch. Ipv6NotTurnOn	%s	The error message returned because IPv6 not enabled for the specified VSwitch.
403	InvalidParam. Amount	%s	The error message returned because the specified Amount is invalid.
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 feature is not supported in the specified region.
400	IncorrectVpcStatus	The current status of vpc does not support this operation.	The error message returned because the operation is not supported while the VPC is in the current state.
403	QuotaExceeded. DeploymentSetInstanceQuotaFull	instance quota in one deployment set exceeded.	The error message returned because the number of instances in the current deployment set has reached the upper limit.

HTTP status code	Error code	Error message	Description
403	InvalidRegion. NotSupport	The specified region does not support byok.	The error message returned because BYOK encryption is not supported in this region.
403	UserNotInTheWhiteList	The user is not in byok white list.	The error message returned because you are not authorized to use BYOK encryption.
400	InvalidParameter. EncryptedIllegal	The specified parameter Encrypted must be true when kmsKeyId is not empty.	The error message returned because the DataDisk.N.Encrypted parameter is not specified after you set the KmsKeyId parameter.
400	IoOptimized. NotSupported	The specified instance must be IoOptimized instance when kmsKeyId is not empty.	The error message returned because the specified instance type must be I/O-optimized are not used after you specified KmsKeyId.
404	InvalidParameter. KMSKeyId. NotFound	The specified KMSKeyId does not exist.	The error message returned because the specified KMSKeyId 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.
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 payment method has security risks. You can troubleshoot the issue by following the provided instructions.

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 is not unique.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
404	InvalidDiskIds.NotPortable	The specified DiskId is not portable.	The error message returned because the specified disk is not portable.

For more information about error codes, see [Error codes](#).

6.2 CreateInstance

You can call this operation to create a pay-as-you-go or subscription Elastic Compute Service (ECS) instance.

Description



Note:

Before you create an instance, you can call the [DescribeAvailableResource](#) operation to view the available instance resources in the specified region or zone. If you want to create multiple instances that automatically enter the running state, we recommend that you call the [RunInstances](#) operation.

Before you create an instance, we recommend that you learn more about the ECS billing methods. When you create an ECS instance, fees may apply for additional resources used by the instance. For more information, see [Billing overview](#). If the billing method is set to subscription (`PrePaid`), available coupons under your account will be used by default.

When you create an instance, pay attention to the following types of request parameters:

For instance types:

- You can specify the `IoOptimize d` parameter to indicate whether to create an I/O-optimized instance.
- If you want to create an instance with local SSDs (`ephemeral_ ssd`), you cannot change the instance type after the disk is created.

For images:

When you create an instance, you must select an image to create the system disk of the new instance. After the instance is created based on the image, the system disk becomes a clone of the image.

- If the instance memory is 512 MiB, the only Windows image that you can use is the Windows Server 1903 image.
- If the instance memory is 4 GiB or more, you cannot use 32-bit OS images.

For network configurations:

- You can only obtain a VPC-connected instance by specifying the network type as VPC when you create the instance. One VPC-connected instance can only be attached to one VSwitch.
- If you specify `VSwitchId` , `SecurityGr oupId` and `VSwitchId` must belong to the same VPC.
- `VSwitchId` and `PrivateIpA ddress` are both specified, `PrivateIpA ddress` must be in the same CIDR block as the VSwitch.
- `PrivateIpA ddress` is dependent on `VSwitchId` , and you cannot only specify the `PrivateIpA ddress` parameter.
- If you call this operation to create an instance, the public IP address is not automatically allocated to the instance. You can call the [AllocatePublicIpAddress](#) operation to allocate a public IP address to the instance.
- When you create an instance, the `InternetCh argeType` and `InternetMa xBandwidth Out` parameter values can affect the bandwidth fees. `InternetMa xBandwidth In` is not related to billing. The inbound data traffic for the instance is free.
- `InternetCh argeType = PayByTraff ic` indicates that the instance is charged based on the actual traffic and `InternetMa xBandwidth Out` is the upper limit of the bandwidth. The pay-as-you-go billing method is used.

For security groups:

- You can call the [CreateSecurityGroup](#) operation to create a security group before you create the instance.
- You can also specify a security group when you create an instance or call the [ModifyInstanceAttribute](#) operation to change the security group of the instance.
- Instances in the same security group can communicate with each other in a private network. Instances in different security groups cannot communicate with each other by default. However, you can authorize the communication by calling specific operations. For more information, see [AuthorizeSecurityGroup](#) and [AuthorizeSecurityGroupEgress](#).
- One security group can contain a maximum of 1,000 instances.

For storage:

- The maximum capacity of data disks varies based on disk categories:
 - The maximum capacity of a single basic disk (`cloud`) is 2,000 GiB.
 - The maximum capacity of a single ultra disk (`cloud_efficiency`) is 32 TiB (32,768 GiB).
 - The maximum capacity of a single standard SSD (`cloud_ssd`) is 32 TiB (32,768 GiB).
 - The maximum capacity of a single enhanced SSD (`cloud_essd`) is 32 TiB (32,768 GiB).
 - The maximum capacity of a single local SSD (`ephemeral_ssd`) is 800 GiB.
- When you create an instance, ECS automatically selects the system disk size based on the specified image. The system disk capacity must be at least 20 GiB and equal to or greater than the size of the image. The system disk can be a basic disk (`cloud`), an ultra disk (`cloud_efficiency`), a standard SSD (`cloud_ssd`), or a local SSD (`ephemeral_ssd`).
- When the system disk is a basic disk (`cloud`), an ultra disk (`cloud_efficiency`), or a standard SSD (`cloud_ssd`), the data disk cannot be a local SSD (`ephemeral_ssd`).
- When you select an I/O-optimized instance, the system disk can be an ultra disk (`cloud_efficiency`) or standard SSD (`cloud_ssd`).

- An instance can have a maximum of 16 data disks. The system creates the mount points for data disks by using automatically generated names, from `/dev/xvdb` to `/dev/xvdz`. If a local SSD (`ephemeral_ ssd`) is used as the data disk, the system disk must also be a local SSD. The total capacity of local SSDs for an instance cannot exceed 1 TiB (1,024 GiB, excluding the system disk).
- To use local SSDs (`ephemeral_ ssd`), you must select local SSDs when you create an instance. Local SSDs cannot be added after the instance is created. For more information, see [Instance families](#).

For user data:

If the instance type supports [user data](#), you can pass in the `UserData` parameter. The `UserData` parameter must be encoded in Base64. We recommend that you do not pass in confidential information, such as passwords or keys, because the `UserData` parameter is passed in plaintext. If you need to pass in confidential information, we recommend that you first encrypt and encode the `UserData` parameter in Base64. You can then decode and decrypt the `UserData` parameter in the instance.

For others:

When you call the operations in the Alibaba Cloud Command Line Interface (CLI) and SDK, you must delete the periods (.) from some of the input parameters that contain periods (.). These parameters include: `SystemDisk . Category` , `SystemDisk . Size` , `SystemDisk . Descriptio n` , `DataDisk . N . Size` , `DataDisk . N . Category` , `DataDisk . N . SnapshotId` , `DataDisk . N . DiskName` , `DataDisk . N . Descriptio n` , `DataDisk . N . DeleteWith Instance` , and `DataDisk . N . Performanc eLevel` .

For example, in [Alibaba Cloud CLI](#) and [SDK](#), use `SystemDisk Category` as the input parameter instead of `SystemDisk . Category` .

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
ImageId	String	Yes	win2008r2_64_ent_sp1_en-us_40G_alibase_20170915.vhd	The ID of the image file. For marketplace images, you can view the <code>ImageId</code> of a specific image on its Product Details page at Alibaba Cloud Marketplace.
InstanceType	String	Yes	ecs.g5.large	The type of the instance. For more information, see Instance families or call the DescribeInstanceTypes operation to query the list of the latest instance types.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the latest region list.
Action	String	No	CreateInstance	The operation that you want to perform. For HTTP and HTTPS requests, the <code>Action</code> parameter is required. Set this parameter to <code>CreateInstance</code> .
SecurityGroupId	String	No	sg-bp15ed6xe1yxeycg7***	The ID of the security group to which the instance belongs. Instances in the same security group can communicate with each other.

Parameter	Type	Required	Example	Description
InstanceName	String	No	yk201812061032	The name of the instance. 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 digits, colons (:), hyphens (-), and underscores (_). If this parameter is not specified, the name is set to the instance ID by default.
AutoRenew	Boolean	No	true	Specifies whether to enable automatic renewals. This parameter is valid when <code>InstanceChargeType</code> is set to <code>PrePaid</code> . Valid values: • true: enables automatic renewal for the instance. • false: disables automatic renewal for the instance. This is the default value.
InternetChargeType	String	No	PayByTraffic	The billing method of the network bandwidth. Valid values: • PayByTraffic: The billing method is based on actual traffic. This is the default value.

Parameter	Type	Required	Example	Description
AutoRenewPeriod	Integer	No	2	The automatic renewal period of the instance. This parameter is required when AutoRenew is set to true. Valid values: If the PeriodUnit parameter is set to Month: 1, 2, 3, 6, and 12.
InternetMaxBandwidthIn	Integer	No	200	The maximum inbound bandwidth for Internet traffic. Unit: Mbit/s. Valid values: 1 to 200 Default value: 200
InternetMaxBandwidthOut	Integer	No	5	The maximum outbound bandwidth for Internet traffic. Unit: Mbit/s. Valid values: 0 to 100 Default value: 0

Parameter	Type	Required	Example	Description
HostName	String	No	LocalHost	The hostname of the ECS instance. • It cannot start or end with a period (.) or a hyphen (-). It cannot contain consecutive periods (.) or hyphens (-). • For Windows, the hostname must be 2 to 15 characters in length. The hostname cannot contain periods (.) or only contain digits. It can contain letters, digits, and hyphens (-). • For other operating systems such as Linux, the hostname must be 2 to 64 characters in length. It can be segments separated with periods (.). Each segment can contain letters, digits, and hyphens (-).

Parameter	Type	Required	Example	Description
Password	String	No	EcsV587!	The password for the instance . 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: <pre>() ` ~ ! @ # \$ % ^ & * _ - + = { } [] : ; ' < > , . ? /</pre> Passwords for Windows instances cannot start with a forward slash (/).  Note: If the Password parameter is specified, we recommend that you send requests over the HTTPS protocol to ensure the security of your password.
PasswordInherit	Boolean	No	false	Specifies whether to use the password predefined in the image. If the PasswordInherit parameter is set to true, the Password parameter must not be specified. You must ensure that the selected image has a password configured.
DeploymentSetId	String	No	ds-bp1brhwhoqinyjd6t***	The ID of the deployment set.

Parameter	Type	Required	Example	Description
ZoneId	String	No	cn-hangzhou-g	The ID of the zone to which the instance belongs. For more information about the available zones, see DescribeZones . Default value: null. If you do not specify a zone, the system randomly selects a zone.
ClusterId	String	No	c-clusterid1	The ID of the cluster to which the instance belongs.  Note: This parameter is deprecated and will be later removed. we recommend that you use other parameters to ensure maximum 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 your own methods to generate this value, but you must ensure that it is unique among different requests. ClientToken can only contain ASCII characters, and cannot exceed 64 characters in length. For more information, see How to ensure idempotence .
VlanId	String	No	10	The VLAN ID of the instance.
InnerIpAddress	String	No	10.0.0.0	The private network IP address of the instance.

Parameter	Type	Required	Example	Description
SystemDisk . Size	Integer	No	40	The size of the system disk. Unit: GiB. Valid values: 20 to 500 The parameter must be at least 20 and equal to or more than the size of the image. Default value: 40 or the size of the image, depending on whichever is greater
SystemDisk . Category	String	No	cloud_ssd	The type of the system disk. The default value for retired instance types without I/O optimizations is cloud. The default value for other types of instances is cloud_efficiency. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - ephemeral_ssd: local SSD - cloud_essd: enhanced SSD (ESSD)
SystemDisk . DiskName	String	No	SystemDisk	The name of the system disk of created instances. 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 digits, colons (:), hyphens (-), and underscores (_). Default value: null

Parameter	Type	Required	Example	Description
SystemDisk . Description	String	No	SystemDisk Finance	The description of the system disk. It must be 2 to 256 characters in length and cannot start with http:// or https://. Default value: null
DataDisk . N . Size	Integer	No	2000	The size of the Nth data disk. Valid values of N: 1 to 16. Unit: GiB. Valid values: • cloud: 5 to 2,000 • cloud_efficiency: 20 to 32,768 • cloud_ssd: 20 to 32,768 • cloud_essd: 20 to 32,768 • ephemeral_ssd: 5 to 800 The value of this parameter must be greater than or equal to the size of the snapshot specified by the <code>SnapshotId</code> parameter.

Parameter	Type	Required	Example	Description
DataDisk . N . SnapshotId	String	No	s-bp17441ohwka0yuhx***	The ID of the snapshot used to create the Nth data disk. Valid values of N: 1 to 16 If the DataDisk . N . SnapshotId parameter is specified, the DataDisk . N . Size parameter will be ignored, and the size of the created disk will be the size of the specified snapshot. Snapshots created on or before July 15, 2013 are not applicable. Otherwise, an error will be returned and your request will be rejected.
DataDisk . N . Category	String	No	cloud_ssd	The category of Nth data disk. Valid values: - cloud: basic disk. This is the default value. - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - ephemeral_ssd: local SSD - cloud_essd: enhanced SSD (ESSD)
DataDisk . N . DiskName	String	No	DataDisk	The name of Nth data disk. 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 digits, colons (:), hyphens (-), and underscores (_). Default value: null

Parameter	Type	Required	Example	Description
DataDisk . N . Description	String	No	DataDiskFinance	The description of the Nth data disk. It must be 2 to 256 characters in length and cannot start with http:// or https://. Default value: null
DataDisk . N . Device	String	No	/dev/xvda	The mount point of the Nth data disk.
DataDisk . N . DeleteWithInstance	Boolean	No	true	Specifies whether the Nth data disk is released when the instance is released. Default value: true
DataDisk . N . Encrypted	Boolean	No	false	Specifies whether the Nth data disk is encrypted. Default value : false
Description	String	No	InstanceFinance	The description of the instance . It must be 2 to 256 characters in length and cannot start with http:// or https://. Default value : null
VSwitchId	String	No	vsw-bp1s5fnvk4gn2tw3***	The ID of the VSwitch. It must be specified when you create VPC-connected instances.
PrivateIpAddress	String	No	172.16.236.14X	The private IP address of the instance. This private IP address must be selected from the range defined by the CIDR block of the VSwitch.

Parameter	Type	Required	Example	Description
IoOptimized	String	No	optimized	Specifies whether the instance is an I/O-optimized instance. The default value for retired instance types is none. The default value for other instances is optimized. Valid values: • none: The instance is not an I/O-optimized type. • optimized: The instance is an I/O-optimized type.
UseAdditionalService	Boolean	No	true	Specifies whether to use additional system tools provided by Alibaba Cloud (Windows: NTP and KMS. Linux: NTP and YUM).
InstanceChargeType	String	No	PrePaid	The billing method of the instance. Valid values: • PrePaid: The billing method is subscription. If it is set to PrePaid, you must ensure that your payment account has sufficient balance or credit. Otherwise, the <code>InvalidPaymentMethod</code> error code is returned. • PostPaid: The billing method is pay-as-you-go. This is the default value.

Parameter	Type	Required	Example	Description
Period	Integer	No	1	The subscription period of the instance. Unit: Month. This parameter is valid and only required when the value of the <code>InstanceChargeType</code> parameter is <code>PrePaid</code>. If the <code>DedicatedHostId</code> parameter is specified, the specified period cannot exceed the subscription period of the dedicated host. Valid values: If the <code>PeriodUnit</code> 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 billing cycle for the instance. Valid values: Week and Month. Default value: Month
Tag.N.Key	String	No	FinanceDept	The tag key of the instances, disks, and primary ENIs. Valid values of N: 1 to 20 It cannot be an empty string. It can be up to 64 characters in length and cannot start with aliyun or acs:.. It cannot contain http:// or https://.

Parameter	Type	Required	Example	Description
Tag . N . Value	String	No	FinanceDeptJoshua	The tag value of the instances, disks, and primary ENIs. 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 aliyun or acs:. It cannot contain http:// or https://.
UserData	String	No	ZWNobyBoZWxsbyBly3Mh	The user data of the instance. It must be encoded in Base64. The maximum size for the raw data is 16 KB.
SpotStrategy	String	No	NoSpot	The bidding mode of the pay-as-you-go instance. This parameter is valid when InstanceChargeType is set to PostPaid . Valid values: - NoSpot: a standard pay-as-you-go instance. This is the default value. - SpotWithPriceLimit: a preemptible instance with an upper price limit. - SpotAsPriceGo: a preemptible instance that is billed based on the actual market price.

Parameter	Type	Required	Example	Description
KeyPairName	String	No	Instancetest	The name of the SSH key pair. - For Windows instances, this parameter is ignored. Default value: null The <code>Password</code> parameter is still used if the <code>KeyPairName</code> parameter is specified. - For Linux instances, password authentication is disabled by default. To improve instance security, we recommend that you use the SSH key pair for connection.
SpotPriceLimit	Float	No	0.98	The maximum hourly price for the instance. This parameter supports a maximum of three decimal places and takes effect when the <code>SpotStrategy</code> parameter is set to <code>SpotWithPriceLimit</code>.
SpotInterruptionBehavior	String	No	Terminate	The interruption mode of the preemptible instance. Only the Terminate mode is supported, in which the instance is released. Default value: Terminate
RamRoleName	String	No	FinanceDept	The name of the RAM role for the instance. You can call the ListRoles operation provided by RAM to query the RAM roles that you have created.

Parameter	Type	Required	Example	Description
SecurityEnhancementsStrategy	String	No	Active	Specifies whether to enable security enhancement. Valid values: - Active: enables security enhancement. It is only applicable to the system image. - Deactive: disables security enhancement for all image types.
ResourceGroupId	String	No	rg-resourcegroupid	The ID of the resource group to which the instance belongs.
HpcClusterId	String	No	hpc-hpcclusterid	The ID of the HPC cluster to which the instance belongs.
DryRun	Boolean	No	false	Specifies whether to send a dry-run request. - true: Only a dry-run request is sent and no instance is created. The system checks whether the required parameters are set, and validates the request format, service permissions, and available ECS instances. If the validation fails, the corresponding error code is returned. If the validation succeeds, the DryRunOperation error code is returned. - false: A request is sent. If the validation succeeds, the instance is created. This is the default value.

Parameter	Type	Required	Example	Description
DedicatedHostId	String	No	dh-dedicatedhost1	The ID of the dedicated host for the ECS instance. You can call the DescribeDedicatedHosts operation to view the dedicated host list. No preemptible instances can be created on a dedicated host. Therefore, if you specify <code>DedicatedHostId</code>, the <code>SpotStrategy</code> and <code>SpotPriceLimit</code> parameters will be ignored.
CreditSpecification	String	No	Standard	The performance mode of the t5 burstable instance. Valid values: - Standard: the standard mode. For more information, see the standard mode section of Burstable instances. - Unlimited: the unlimited mode. For more information, see the unlimited mode section of Burstable instances. Default value: null

Parameter	Type	Required	Example	Description
DeletionProtection	Boolean	No	false	Specifies whether you can use the ECS console or call the DeleteInstance operation to release the instance. Valid values: · true: enables release protection. · false: disables release protection. This is the default value.  Note: This parameter is only applicable to pay-as-you-go instances. It can only protect against manual releases and is not supported for system releases.
SystemDisk. PerformanceLevel	String	No	PL1	The performance level of the ESSD system disk. Valid values: · PL1: a single ESSD delivers up to 50,000 random read/write IOPS. This is the default value. · PL2: a single ESSD delivers up to 100,000 random read/write IOPS. · PL3: a single ESSD delivers up to 1,000,000 random read/write IOPS. For more information about ESSD performance levels, see ESSD cloud disk.

Parameter	Type	Required	Example	Description
<code>DataDisk.N.PerformanceLevel</code>	String	No	PL2	The performance level of the Nth ESSD data disk. The value of N must be the same as that in <code>DataDisk.N.Category</code> = <code>cloud_essd</code>. Valid values: • PL1: a single ESSD delivers up to 50,000 random read/write IOPS. This is the default value. • PL2: a single ESSD delivers up to 100,000 random read/write IOPS. • PL3: a single ESSD delivers up to 1,000,000 random read/write IOPS. For more information about ESSD performance levels, see ESSD cloud disk.

Parameter	Type	Required	Example	Description
Affinity	String	No	default	Specifies whether an instance on a dedicated host is associated with the dedicated host. This parameter is applicable to instances with the No Charges After Instance Is Stopped feature enabled. Valid values: • default: The instance is not associated with the dedicated host. If the associated dedicated host has insufficient resources after the stopped instance is restarted, the instance is automatically allocated to an alternative dedicated host. • host: The instance is associated with the dedicated host. The stopped instance still resides on the associated dedicated host after it is restarted. If the available resources of the original dedicated host are insufficient, the instance will fail to restart. Default value: default

Parameter	Type	Required	Example	Description
Tenancy	String	No	default	Specifies whether to create an instance on a dedicated host. Valid values: • default: creates an instance that is not on a dedicated host. • host: creates an instance that is on a dedicated host. If you do not specify the <code>DedicatedHostId</code> parameter, then ECS automatically selects a dedicated host for the instance. Default value: default

Response parameters

Parameter	Type	Example	Description
InstanceId	String	i-instanceid1	The ID of the instance. It is the unique identifier of the instance.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request. The request ID is returned, regardless of whether the operation is successful.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateInstance
&RegionId=cn-hangzhou
&ImageId=_32_23c472_201208221_72155_aliguest.vhd
&SecurityGroupId=sg-bp15ed6xe1yxeycg7***
&HostName=Bctest01
&InstanceType=ecs.t1.small
&<Common request parameters>
```

Sample success responses

XML format

```
< CreateInstanceResponse >
  < RequestId > 04F0F334 - 1335 - 436C - A1D7 - 6C044FE733 68 </
  RequestId >
  < InstanceId > i - instance1 </ InstanceId >
</ CreateInstanceResponse >
```

JSON format

```
{
  " InstanceId ":" i - instance1 ",
  " RequestId ":" 04F0F334 - 1335 - 436C - A1D7 - 6C044FE733 68 "
}
```

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 does not exist.
400	InvalidParameter	The specified parameter "InternetMaxBandwidthOut" is not valid.	The error message returned because the specified InternetMaxBandwidthOut is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified system disk category is invalid.
404	IoOptimized.NotSupported	The specified instance type is not support IoOptimized instance	The error message returned because the specified instance type does not support I/O optimization.

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 size of the data disk exceeds the upper limit or the size the snapshot exceeds the upper limit of the specified disk category.
403	InvalidDiskCategory. NotSupported	The specified disk category is not support the specified instance type .	The error message returned because the specified instance type does not support 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 instance type is not supported.
404	InvalidSecurityGroupId. NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist under this account. Check whether the security group ID is valid.
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	InvalidHostName. Malformed	The specified parameter "HostName" is not valid.	The error message returned because the format of the specified HostName is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the format of the Password parameter is invalid.
400	InvalidPasswordParam.Mismatch	The input password should be null when passwdInherit is true.	The error message returned because if PasswdInherit is set to true, the Password parameter must not be specified.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified SystemDisk.Category is invalid.
400	InvalidDiskName.Malformed	The specified parameter "SystemDisk.DiskName or DataDisk.n.DiskName" is not valid.	The error message returned because the 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.DiskDescription or DataDisk.N.Description is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified DataDisk.N.Category is invalid.
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.

HTTP status code	Error code	Error message	Description
400	InvalidDataDevice.Malformed	The specified parameter "DataDisk.n.Device" is not valid.	The error message returned because the DataDisk.N.Device parameter is invalid.
400	InvalidNodeControllerId.Malformed	The specified parameter "NodeControllerId" is not valid.	The error message returned because the specified NodeControllerId is invalid.
400	InvalidInnerIpAddress.Malformed	The specified parameter "InnerIpAddress" is not valid.	The error message returned because the specified InnerIpAddress 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 InnerIpAddress 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 VLAN ID is invalid or the number of IP addresses in the VLAN has reached the upper limit.
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 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 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 the number of pay-as-you-go instances that are allowed to be created has reached the upper limit.
403	ImageNotSubscribed	The specified image has not be subscribed.	The error message returned because you have not subscribed to the specified image in the marketplace.
400	InvalidMarketImageChargeType. NotSupport	The specified chargeType of marketImage is unsupported.	The error message returned because the billing method for marketplace images 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	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 no disk can be created for the specified snapshot.

HTTP status code	Error code	Error message	Description
403	InstanceDiskCategoryLimitExceed	The total size of specified disk category in an instance exceeds.	The error message returned because the total size of the specified disks exceeds the maximum capacity that is allowed for the disk category.
403	InvalidDevice.InUse	The specified device has been occupied.	The error message returned because the specified device has been mounted to a disk and is not available.
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 including exact the same product code has been removed.	The error message returned because the specified marketplace image is not available.
404	InvalidClusterId.NotFound	The ClusterId provided does not exist in our records.	The error message returned because the specified ClusterId does not exist.
403	OperationDenied	The creation of Instance to the specified Zone is not allowed.	The error message returned because no instance can 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.

HTTP status code	Error code	Error message	Description
403	OperationDenied	The specified Zone or cluster does not offer the specified disk category or the specified 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 of insufficient inventory for the requested resource. Try again with other resource types or other regions and zones.
400	InvalidInstanceName.Malformed	The specified parameter "InstanceName" is not valid.	The error message returned because the format of the specified instance name is invalid. The name must be 2 to 128 characters in length. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and 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.DiskDescription or DataDisk.N.Description is invalid.
403	QuotaExceeded.PortableCloudDisk	The quota of portable cloud disk exceeds.	The error message returned because the number of portable disks has reached the upper limit.

HTTP status code	Error code	Error message	Description
500	InternalServerError	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 specified resources in the specified region are disabled.
400	InvalidParameter.Conflict	The specified region and cluster do not match.	The error message returned because the specified region does not correspond to the specified cluster.
403	SecurityGroupInstanceLimitExceed	The maximum number of instances in a security group is exceeded.	The error message returned because the number of instances in the security group has reached the upper limit.
403	NodeControllerUnavailable	The Node Controller is temporarily unavailable.	The error message returned because the node controller is currently 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.

HTTP status code	Error code	Error message	Description
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.
404	InvalidVSwitchId. NotFound	Specified virtual switch does not exist.	The error message returned because the specified VSwitch does not exist.
400	InvalidParameter. Mismatch	Specified security group and virtual switch are not in the same VPC.	The error message returned because the specified security group is not in the same VPC as the VSwitch.
400	InvalidNetworkType. Mismatch	Specified parameter "InternetMaxBandwidthIn" or "InternetMaxBandwidthOut" conflict with instance network type.	The error message returned because the specified InternetMaxBandwidthIn or InternetMaxBandwidthOut value conflicts with the instance network 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 network billing method.
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 in the same CIDR block as the VSwitch.

HTTP status code	Error code	Error message	Description
400	InvalidPrivateIpAddress.Malformed	Specified private IP address is malformed.	The error message returned because the specified private IP address is invalid.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address has been used. Change the IP address and try again.
400	QuotaExceeded.PrivateIpAddress	Don't have enough private IPs in this switch	The error message returned because all the private IP addresses under the VSwitch are being used. Try another VSwitch.
400	QuotaExceeded	Living instances quota exceeded in this VPC.	The error message returned because the number of active instances has reached the upper limit.
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 the specified region or zone does not support VPC.

HTTP status code	Error code	Error message	Description
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	InvalidDiskCategoryMismatch	The specified disk categories' combination is not supported.	The error message returned because the combination of the specified disk types is not supported.
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 portable and cannot be released along with the instance.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist under this account. Check whether the image ID is valid.
403	InstanceDiskNumLimitExceed	The number of specified disk in an instance exceeds.	The error message returned because the number of disks in the instance has reached the upper limit.
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 instance type is not supported for the specified image.

HTTP status code	Error code	Error message	Description
400	InvalidIoOptimizedValue.ValueNotSupported	IoOptimized value not supported.	The error message returned because the specified IoOptimized value is invalid.
404	OperationDenied	Another Instance has been creating	The error message returned because no new instances can be created while another instance is being created.
403	InvalidDiskSize.TooSmall	Specified disk size is less than the size of snapshot	The error message returned because the specified disk size is less than the snapshot size.
403	OperationDenied	The type of the disk does not support the operation	The error message returned because the specified disk type does not support the specified operation.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified InstanceChargeType is invalid.
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 is invalid.
403	InvalidDiskCategory.Mismatch	The specified disk categories combination is not supported.	The error message returned because the combination of the specified disk types is not supported.

HTTP status code	Error code	Error message	Description
403	IoOptimized. NotSupported	Vpc is not support IoOptimized instance.	The error message returned because the VPC does not support I/O-optimized instances.
400	InvalidDataDiskCategory. ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified data disk category 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 size of the data disk exceeds the upper limit or the size the snapshot exceeds the upper limit of the specified disk category.
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 image from the marketplace or the total number of images you can own has reached the upper limit.
404	DependencyViolation. IoOptimized	The specified instance type must be IoOptimized instance.	The error message returned because the specified instance type must be I/O-optimized . Check whether the instance type is valid.

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 registered the payment method for your account.
404	HOSTNAME_ILLEGAL	hostname is not valid.	The error message returned because the specified hostname 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 less 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 less than the minimum capacity requirement.
404	InvalidSystemDiskSize.MoreThanMaxSize	The specified SystemDisk.Size parameter exceeds the maximum size.	The error message returned because the size of the specified system disk exceeds the maximum capacity that is allowed.
404	InvalidDataDiskSnapshotId.NotFound	The specified parameter DataDisk.n.SnapshotId is not valid.	The error message returned because the specified snapshot ID of the data disk is invalid.
403	InvalidVSwitchId.NotFound	The VSwitchId provided does not exist in our records.	The error message returned because the specified VSwitchId does not exist.
400	InvalidParameter	The specified vm bandwidth is not valid.	The error message returned because the specified virtual machine bandwidth is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter SystemDisk.Category is not valid.	The error message returned because the specified SystemDisk.Category is invalid.
403	InvalidParameter.ResourceOwnerAccount	ResourceOwnerAccount is Invalid.	The error message returned because the specified ResourceOwnerAccount is invalid.
404	InvalidSystemDiskSize	The specified parameter SystemDisk.Size is invalid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	InvalidParameter.Bandwidth	The specified parameter Bandwidth is not valid.	The error message returned because the specified Bandwidth value is invalid.
400	InvalidIPAddress.AlreadyUsed	The specified IPAddress is already used by other resource.	The error message returned because other resources are currently using the specified IP address.
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 user data.
400	InvalidUserData.SizeExceeded	The specified parameter "UserData" exceeds the size .	The error message returned because the UserData size exceeds the maximum.
400	InvalidUserData.NotSupported	The specified parameter "UserData" only support the vpc and IoOptimized Instance.	The error message returned because the specified UserData is only supported for VPC-connected and I/O-optimized instances.

HTTP status code	Error code	Error message	Description
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.
403	InvalidClusterId.NotFound	The specified clusterId does not exist.	The error message returned because the specified ClusterId does not exist.
403	InvalidResourceType.NotSupported	This resource type is not supported; please try other resource types.	The error message returned because the instances of the specified resource type are not available.
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.
400	InstanceDiskNumber.LimitExceed	The total number of specified disk in an instance exceeds.	The error message returned because the number of disks in the instance has reached the upper limit.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned because your account has outstanding payments.

HTTP status code	Error code	Error message	Description
400	InvalidDiskCategory. ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified DiskCategory is invalid.
400	InvalidAutoRenewPeriod. ValueNotSupported	The specified autoRenewPeriod is not valid.	The error message returned because the specified AutoRenewPeriod is invalid.
400	QuotaExceeded. AfterpayInstance	The maximum number of Pay-As-You-Go instances is exceeded.	The error message returned because the number of pay-as-you-go instances has reached the upper limit.
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 you did not specify ZoneId after you set the SpotStrategy parameter.
400	InvalidSpotPriceLimit	The specified SpotPriceLimit is not valid.	The error message returned because the specified SpotPriceLimit is invalid.
400	InvalidSpotDuration	The specified SpotDuration is not valid.	The error message returned because the specified SpotDuration is invalid.
400	InvalidSpotAuthorized	The specified Spot param is unauthorized.	The error message returned because you do not have the permission to create the preemptible instance.

HTTP status code	Error code	Error message	Description
400	InvalidSpotPrepaid	The specified Spot type is not support PrePay Instance.	The error message returned because the specified preemptible instance does not support the subscription billing method.
400	InvalidSpotAliUid	The specified UID is not authorized to use SPOT instance.	The error message returned because the specified UID does not have the permission to use preemptible instances.
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 image does not exist.
403	InvalidUserData.Base64FormatInvalid	The specified UserData is not valid	The error message returned because the specified UserData 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	InvalidParameter.Bandwidth	%s	The error message returned because the bandwidth parameter is not supported.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned because the specified data disk category is not supported.

HTTP status code	Error code	Error message	Description
400	InvalidSystemDiskCategory.ValueNotSupported	%s	The error message returned because the specified system disk category is not supported.
400	InvalidParameter.Conflict	%s	The error message returned because one specified parameter conflicts with another specified parameter.
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified InternetChargeType is not supported.
400	InvalidInstanceType.ValueNotSupported	%s	The error message returned because the specified instance type is invalid.
403	InstanceType.Offline	%s	The error message returned because the specified instance type is unavailable.
400	RegionUnauthorized	%s	The error message returned because the specified region is not supported.
500	InternalError	%s	The error message returned because an unknown internal error occurs.
400	Zone.NotOnSale	%s	The error message returned because the specified zone is disabled.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned because the specified system disk size is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidDataDiskSize. ValueNotSupported	%s	The error message returned because the specified data disk size is invalid.
404	InvalidKeyPairName. NotFound	The specified parameter "KeyPairName" does not exist in our records.	The error message returned because the specified KeyPairName does not exist.
403	DependencyViolation. WindowsInstance	The instance creating is window, cannot use ssh key pair to login.	The error message returned because SSH key pairs are not supported for Windows instances.
400	InvalidInstanceType. ValueNotSupported	The specified parameter "KeyPairName" only support IoOptimized Instance.	The error message returned because only I/O-optimized instances support SSH key pairs.
403	RealNameAuthenticationError	Your account has not passed the real-name authentication yet.	The error message returned because you failed to complete real-name authentication.
403	InvalidNetworkType. MismatchRamRole	Ram role cannot be applied to instances of Classic network type.	The error message returned because an instance RAM role can only be used for VPC-connected instances, but not for classic network-connected instances.
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 RAM role name does not exist.

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 unauthorized.
403	InvalidAccountStatus. NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account has insufficient balance to pay for the service. Top up your account and try again.
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.
404	InvalidResourceGroup. NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the resource group does not exist.
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.
400	InvalidParameter. EncryptedIllegal	%s	The error message returned because the parameter is not supported for encrypted disks.
400	InvalidParameter. EncryptedNotSupported	%s	The error message returned because the parameter is not supported for encrypted disks.

HTTP status code	Error code	Error message	Description
400	EncryptedOption.Conflict	%s	The error message returned because the parameter is not supported for encrypted disks.
400	InvalidParameter.Encrypted.KmsNotEnabled	The encrypted disk need enable KMS	The error message returned because Key Management Service (KMS) has not been activated. KMS must be activated to encrypt disks.
400	InvalidSpotPriceLimit.LowerThanPublicPrice	The specified parameter "spotPriceLimit" can't be lower than current public price.	The error message returned because the specified SpotPriceLimit is lower than the current price.
400	InvalidHpcClusterId.Unnecessary	The specified HpcClusterId is unnecessary.	The error message returned because the specified HpcClusterId is invalid.
400	InvalidVSwitchId.Necessary	The VSwitchId is necessary.	The error message returned because VSwitchId is not specified.
400	InvalidHpcClusterId.Necessary	The HpcClusterId is necessary.	The error message returned because HpcClusterId is not specified.
400	InvalidHpcClusterId.NotFound	The specified HpcClusterId is not found.	The error message returned because the specified HPC cluster ID does not exist.
400	InvalidHpcClusterId.Creating	The specified HpcClusterId is creating.	The error message returned because the specified HPC cluster is being created.

HTTP status code	Error code	Error message	Description
400	QuotaExceeded.PrivateIpAddress	Don't have enough private IPs in this switch.	The error message returned because the specified VSwitch has no available private IP addresses to create the instance.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit is invalid.
400	IncorrectImageStatus	Encrypted snapshots do not support this operation.	The error message returned because the operation is not supported on encrypted snapshots.
400	InvalidTagValue.Malformed	The specified Tag.N.Value is not valid.	The error message returned because the specified Tag.N.Value is invalid.
400	InvalidSecurityGroup.NotInDefaultVpc	%s	The error message returned because the specified security group is not associated with the default VPC.
400	VpcNotFound	Vpc is not found according to the specified VSwitch or the vpc does not belong to you.	The error message returned because the specified VPC does not exist.
403	InvalidParameter.NotMatch	%s	The error message returned because one specified parameter conflicts with another specified parameter.
403	OperationDenied.InvalidNetworkType	%s	The error message returned because the specified network type is not supported.

HTTP status code	Error code	Error message	Description
400	InvalidSpotInterruptionBehavior	%s	The error message returned because the specified SpotInterruptionBehavior is invalid.
403	InvalidSpotInterruptionBehavior.ClassicNetworkNotSupport	The specified SpotInterruptionBehavior does not support Classic network Instance.	The error message returned because the SpotInterruptionBehavior parameter is only applicable to VPC-connected preemptible instances, but not classic network-connected instances.
403	InvalidSpotInterruptionBehavior.LocalDiskNotSupport	The specified SpotInterruptionBehavior does not support local disk instance.	The error message returned because preemptible instances does not support local disks.
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 not supported.
400	InvalidDeploymentOnHost	%s	The error message returned because dedicated hosts are not supported in the specified deployment set.
400	InvalidInstanceChargeType.NotSupport	The Dedicated host not support the specified Instance charge type.	The error message returned because the billing method is not supported for dedicated hosts.
400	InvalidNetworkType.NotSupported	The classic networkType not support create ECS on dedicatedHost	The error message returned because the classic network is not supported for dedicated hosts.

HTTP status code	Error code	Error message	Description
400	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified dedicated host ID 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.
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 dedicated host is in the current state.
400	ChargeTypeViolation.PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed	The error message returned because you cannot change the billing method for instances that are on a dedicated host.
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 this instance type.
400	DedicatedHostType.Unmatched	The specified DedicatedHostType doesn't match the instance type.	The error message returned because dedicated hosts do not support preemptible instances.

HTTP status code	Error code	Error message	Description
400	ChargeType Violation. PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed.	The error message returned because you cannot change the billing method for instances that are on a dedicated host.
403	OperationDenied. ImageNotValid	%s	The error message returned because the specified image does not support this operation.
403	QuotaExceed. PostPaidDisk	Living postPaid disks quota exceeded.	The error message returned because the number of pay-as-you-go disks has reached the upper limit.
403	QuotaExceed. DeploymentSetInstanceQuotaFull	instance quota in one deployment set exceeded.	The error message returned because the number of instances in the current deployment set has reached the upper limit.
403	InvalidDiskCategory. NotSupported	The specified disk category is not supported.	The error message returned because the specified disk category is not supported.
403	InvalidVSwitch. DefaultVSwitchNotSupported	The specified zone in vpc can't support create default vSwitch.	The error message returned because the default VSwitch is not supported for VPCs of the specified zone.
400	InvalidParameter. CreditSpecification	The specified CreditSpecification is not supported in this region.	The error message returned because the specified CreditSpecification is not supported in this region.

HTTP status code	Error code	Error message	Description
400	IncorrectImageStatus	The specified Image is not available.	The error message returned because the status of the specified source image is invalid.
403	OperationDenied.ImageNotValid	the specified image is not published in the region.	The error message returned because the specified image is not available in the current region.
403	OperationDenied.ImageNotValid	the specified image is not found in marketplace.	The error message returned because the specified image is not available in the image marketplace.
404	InvalidMarketImage.NotFound	The specified marketplace image does not exist, please change the imageId and try again.	The error message returned because the specified image is not available in the image marketplace.
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 in the specified deployment set.
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 is not supported for VPCs of the specified zone.
400	IncorrectDefaultVpcStatus	The status of the default VPC is invalid.	The error message returned because the status of the default VPC is invalid.
404	DeploymentSet.NotFound	The specified deployment set does not exist.	The error message returned because the specified deployment set does not exist.

HTTP status code	Error code	Error message	Description
403	OperationDenied.LocalDiskUnsupported	The configuration change is not allowed when the specified instance has local disks mounted.	The error message returned because configuration changes are not supported for instances with local disks attached.
403	OperationDenied.InconsistentNetwork	The specified security group and vswitch are not in the same vpc.	The error message returned because the security group and the VSwitch must share 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 vswitches 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 other zones of this VPC.
403	DefaultVswitch.Existed	The default vswitch for VPC already exists.	The error message returned because the default VSwitch has been created for the VPC.
403	IncorrectInstanceState	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	CategoryViolation	The specified instance does not support this operation because of its disk category.	The error message returned because the configurations of instances with local disks attached cannot be upgraded or downgraded.
403	ResourcesNotInSameZone	The specified instance and dedicated host are not in the same zone.	The error message returned because the instance and the dedicated host must be in the same region.

HTTP status code	Error code	Error message	Description
403	InvalidRegion. NotSupport	The specified region does not support byok.	The error message returned because BYOK encryption is not supported in this region.
403	UserNotInTheWhiteList	The user is not in byok white list.	The error message returned because you are not authorized to use BYOK encryption.
400	InvalidParameter. EncryptedIllegal	The specified parameter Encrypted must be true when kmsKeyId is not empty.	The error message returned because the DataDisk.N.Encrypted parameter is not specified after you set the KmsKeyId parameter.
400	IoOptimized. NotSupported	The specified instance must be IoOptimized instance when kmsKeyId is not empty.	The error message returned because I/O-optimized instances are not used after you set KmsKeyId.
404	InvalidParameter. KMSKeyId. NotFound	The specified KMSKeyId does not exist.	The error message returned because the specified KMSKeyId 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.
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 payment method has security risks. You can troubleshoot the issue by following the provided instructions.

HTTP status code	Error code	Error message	Description
403	InvalidDisk. SystemDiskSize	The specified SystemDisk Size beyond the permitted range.	The error message returned because the maximum size of the specified system disk is reached.
400	InvalidClientToken. ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken is invalid.
400	OperationDenied	The current user does not support this operation.	The error message returned because the current user is not authorized to perform this operation.
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account has insufficient balance. Top up your account and try again.
400	Duplicate. TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key is not unique.
400	InvalidParam. Tenancy	The specified Tenancy is invalid.	The error message returned because the specified Tenancy parameter is invalid.
404	InvalidSecurityGroupId. NotFound	%s	The error message returned because the specified security group ID does not exist.
403	InvalidVSwitchId. IpInvalid	%s	The error message returned because the specified private IP address is invalid.

HTTP status code	Error code	Error message	Description
404	InvalidDiskIds. NotPortable	The specified DiskId is not portable.	The error message returned because the specified disk is not portable.

For more information about error codes, see [Error codes](#).

6.3 DescribeInstances

Describes the details of one or more instances.

Description

The request parameters are filters used for describing a specific list of results. The filters use the (`AND`) logic, which matches a set of resources by specific criteria, such as IDs, billing methods, or tags. A parameter with null value does not play the role of a filter. However, if the `InstanceId s` parameter is a null JSON array

`InstanceId s = []`, it is regarded as a valid filter and the responded value is null.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The name of this interface. Value: <code>DescribeInstances</code> .
RegionId	String	No	Regional ID. For more information, call DescribeRegions to obtain the latest region list.
VpcId	String	No	VPC ID.
VSwitchId	String	No	VSwitch ID.
ZoneId	String	No	The default value is blank, which indicates a query of disks in all zones.
InstanceIds	String	No	Instance ID. The value can contain an array of up to 100 instance IDs. The IDs are displayed in the format of ["i-xxxxxxxx", "i-yyyyyyyy", ... "i-zzzzzzzz"] and are separated by commas (,).

Name	Type	Required	Description
InstanceType	String	No	Instance type.
CreditSpecification	String	No	The running mode of an unlimited credit enabled t5 instance. Optional values: • Standard: The standard running mode. For more information, see t5 standard instances. • Unlimited: The unlimited running mode. For more information, see t5 unlimited instances. Default value: null.
InstanceTypeFamily	String	No	Instance type family.
InstanceNetworkType	String	No	Network type of the instance. Optional values: • classic: Classic network. • vpc: Private network.
PrivateIpAddresses	String	No	List of private IP addresses of VPC-Connected instances. This parameter is effective when <code>InstanceNetworkType = vpc</code>. The value can contain an array of up to 100 IP addresses. The IP addresses are displayed in the format of ["172.16.1.1", "172.16.2.1", ... "172.16.10.1"] and are separated by commas (,).
InnerIpAddresses	String	No	List of private IP addresses of classic network-connected instances. This parameter is effective when <code>InstanceNetworkType = classic</code>. The value can contain an array of up to 100 IP addresses. The IP addresses are displayed in the format of ["10.16.1.1", "10.16.2.1", ... "10.16.10.1"] and are separated by commas (,).

Name	Type	Required	Description
PublicIpAddresses	String	No	List of public IP addresses of classic network-connected instances. The PublicIpAddresses is valid when <code>InstanceNetworkType = classic</code> . The value can contain an array of up to 100 IP addresses. The IP addresses are displayed in the format of ["42.1.1.1", "42.1.2.1", ... "42.1.10.1"] and are separated by commas (,).
SecurityGroupId	String	No	Security group to which the instances belong.
InstanceChargeType	String	No	Billing method of the instances. Optional values: - PrePaid: Subscribed instances. - PostPaid: Pay-As-You-Go instances.
SpotStrategy	String	No	The spot price you are willing to accept for preemptible instances. This parameter is effective for <code>InstanceChargeType = PostPaid</code> . Optional values: - NoSpot: A normal Pay-As-You-Go instance. - SpotWithPriceLimit: Sets the maximum price for a spot instance. - SpotAsPriceGo: A price that is based on the highest Pay-As-You-Go instance. Default value: NoSpot.
InternetChargeType	String	No	Billing method of the instance bandwidth. Optional values: PayByTraffic: You are billed based on the traffic.
InstanceName	String	No	The name of the instance. You can use wildcard (*) for fuzzy search.
ImageId	String	No	Image ID.
DeploymentSetId	String	No	Deployment Set ID.

Name	Type	Required	Description
Status	String	No	Status of the instances. Optional values: · Running · Starting · Stopping · Stopped
IoOptimized	String	No	Whether an instance is I/O optimized. Optional values: · true · false
Tag.n.Key	String	No	The key of a tag of which n is from 1 to 20. Once you use this parameter, it cannot be a null string. It can be up to 64 characters in length. It cannot begin with "aliyun", "acs:", "http://", or "https://".
Tag.n.Value	String	No	The value of a tag of which n is a number from 1 to 20. Once you use this parameter, it can be a null string. It can be up to 128 characters in length. It cannot begin with "aliyun", "acs:", "http://", or "https://".
PageNumber	Integer	No	Displays the instances on several pages. Start value: 1. Default: 1.
PageSize	Integer	No	The number of rows per page. Maximum value: 100 Default: 10.

Response parameters

Name	Type	Description
TotalCount	Integer	Total number of instances.
PageNumber	Integer	Page number of the instance list.
PageSize	Integer	Number of lines per page set during input.
Instances	InstanceAttributeType	String format composed of InstanceAttributeType, which returns instance information.

Examples

Request example

```
https://ecs.aliyuncs.com/?Action=DescribeInstances
&RegionId=cn-hangzhou
&<CommonResponseParameters>
```

Response example

XML format

```
<DescribeInstancesResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>6</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>8EF01A45-FFFA-497B-B5C3-1DE1B74DB32D</
RequestId>
  <Instances>
    <Instance>
      <InnerIpAddress></InnerIpAddress>
      <ImageId>ubuntu_16_0402_64_20_G_alibase_20170818.vhd
</ImageId>
      <InstanceTypeFamily>ecs.g5</InstanceTypeFamily>
      <VlanId></VlanId>
      <NetworkInterfaces>
        <NetworkInterface>
          <MacAddress>00:16:3e:32:b4:dc</MacAddress>
          <PrimaryIpAddress>172.17.XX.XXX</PrimaryIpAd
dress>
          <NetworkInterfaceId>eni-2zeh9atclduxvf1zcyal</
NetworkInterfaceId>
        </NetworkInterface>
      </NetworkInterfaces>
      <InstanceId>XXXXXXXXXX</InstanceId>
      <EipAddress>
        <IpAddress></IpAddress>
        <AllocationId></AllocationId>
        <InternetChargeType></InternetChargeType>
      </EipAddress>
      <InternetMaxBandwidthIn>1000</InternetMaxBandwidth
In>
      <ZoneId>cn-beijing-e</ZoneId>
      <InternetChargeType>PayByBandwidth</InternetCh
argeType>
      <SpotStrategy>NoSpot</SpotStrategy>
      <StoppedMode>Not-applicable</StoppedMode>
      <SerialNumber>d9bd1cdc-624d-4736-9da5-2ba2f741a3
04</SerialNumber>
      <IoOptimized>true</IoOptimized>
      <Memory>8192</Memory>
      <Cpu>2</Cpu>
      <VpcAttributes>
        <NatIpAddresses></NatIpAddresses>
        <PrivateIpAddress>
          <IpAddress>172.17.XX.XXX</IpAddress>
        </PrivateIpAddress>
        <VSwitchId>vsw-2zeh0r1pabwtg6wcsgca</VSwitchId>
        <VpcId>vpc-2zeuphj08tt7q3brdb36x</VpcId>
      </VpcAttributes>
```

```

    < InternetMa  xBandwidth  Out > 1 </ InternetMa  xBandwidth  Out
  >
    < DeviceAvai  lable > true </ DeviceAvai  lable >
    < SecurityGr  oupIds >
      < SecurityGr  oupId > sg - 2ze21r9qb6  38hvttrvsus </
SecurityGr  oupId >
    </ SecurityGr  oupIds >
    < SpotPriceL  imit > 0 . 0 </ SpotPriceL  imit >
    < SaleCycle > Week </ SaleCycle >
    < AutoReleas  eTime />
    < InstanceNa  me > ECS - BUY - 2017 - 57 - 10 </ InstanceNa  me
  >
    < Descriptio  n />
    < ResourceGr  oupId />
    < OSType > linux </ OSType >
    < OSName > Ubuntu  16 . 04  64 </ OSName >
    < InstanceNe  tworkType > vpc </ InstanceNe  tworkType >
    < PublicIpAd  dress >
      < IpAddress > 47 . 94 .  XX . XX </ IpAddress >
    </ PublicIpAd  dress >
    < HostName > iZ2zeh9atc  lduxvf1zxu  ylZ </ HostName >
    < InstanceTy  pe > ecs . g5 . large </ InstanceTy  pe >
    < CreationTi  me > 2017 - 12 - 10T04 : 04Z </ CreationTi  me >
    < Tags >
      < Tag >
        < TagValue > fqwfew </ TagValue >
        < TagKey > fefqe </ TagKey >
      </ Tag >
      < Tag >
        < TagValue > weqfwq </ TagValue >
        < TagKey > fqewfwqewf </ TagKey >
      </ Tag >
      < Tag >
        < TagValue > ewqffeqw </ TagValue >
        < TagKey > fqfwewfqw </ TagKey >
      </ Tag >
    </ Tags >
    < Status > Running </ Status >
    < ClusterId />
    < Recyclable > false </ Recyclable >
    < RegionId > cn - beijing </ RegionId >
    < GPUSpec />
    < OperationL  ocks />
    < GPUAmount > 0 </ GPUAmount >
    < InstanceCh  argeType > PrePaid </ InstanceCh  argeType >
    < ExpiredTim  e > 2017 - 12 - 17T16 : 00Z </ ExpiredTim  e >
  </ Instance >
</ Instances >
</ DescribeIn  stancesRes  ponse >

```

JSON format

```

{
  "Instances": {
    "Instance": [
      {
        "CreationTi  me": " 2015 - 07 - 27T07 : 08Z ",
        "DeviceAvai  lable": " true ",
        "EipAddress": {},
        "ExpiredTim  e": " 2011 - 09 - 08T16 : 00Z ",
        "HostName": " iZ94t3s0jx  kZ ",
        "ImageId": " centos6u5_  64_20G_ali  aegis_2015  0130 . vhd
      },

```

```

      "InnerIpAddress": {
        "IpAddress": [
          "10.170.XX.XXX"
        ]
      },
      "InstanceChargeType": "PostPaid",
      "InstanceId": "XXXXXXXXXX",
      "InstanceName": "dd \ u6027 \ u80fd \ u6d4b \ u8bd5 ",
      "InstanceNetworkType": "classic",
      "InstanceType": "ecs.s2.large",
      "InternetChargeType": "PayByTraffic",
      "InternetMaxBandwidthIn": "-1",
      "InternetMaxBandwidthOut": "1",
      "IoOptimized": "false",
      "OperationLocks": {
        "LockReason": []
      },
      "PublicIpAddress": {
        "IpAddress": [
          "120.25.XX.XXX"
        ]
      },
      "RegionId": "cn-shenzhen",
      "SecurityGroupIds": {
        "SecurityGroupId": [
          "sg-94kd0cyg0"
        ]
      },
      "SerialNumber": "51d1353b-22bf-4567-a176-8b3e12e43135",
      "Status": "Running",
      "VpcAttributes": {
        "PrivateIpAddress": {
          "IpAddress": []
        }
      },
      "ZoneId": "cn-shenzhen-a"
    ]
  },
  "PageNumber": "1",
  "PageSize": 10,
  "RequestId": "14A07460-EBE7-47CA-9757-12CC4761D47A",
  "TotalCount": "1"
}

```

Error codes

Error codes specific to this interface are as follows. For more information, see [API Error Center](#).

Error code	Error messages	HTTP status code	Description
InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	400	The specified <code>Tag . n . Key</code> and <code>Tag . n . Value</code> must be key-value matched.
InvalidTag.Count	The specified tags are beyond the permitted range.	400	You can add up to five tags to the specified ECS resource in this query request.
InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records.	404	The specified <code>InstanceChargeType</code> does not exist.
InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid	404	The specified <code>InternetChargeType</code> is invalid.
InvalidNetworkType.NotFound	The specified InstanceNetworkType is not found	404	The specified <code>InstanceNetworkType</code> does not exist.
InvalidStatus.NotFound	The specified Status is not found	404	The specified <code>Status</code> does not exist.

6.4 StartInstance

You can call this operation to start an ECS instance.

Description

- The instance must be in the stopped(`Stopped`) state.
- After the instance is started, it is in the starting(`Starting`) state.

- You cannot start an ECS instance on which [Security Control](#) is enabled and whose `OperationLocks` is tagged as `"LockReason": "security"`.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-instanceid1	The ID of the instance.
Action	String	No	StartInstance	The operation that you want to perform. Set the value to StartInstance.
InitLocalDisk	Boolean	No	false	Indicates whether to restore the initial health status of the instance. It is applicable to those instances of the instance type families that contain local disks such as D1, I1, and I2. If a local disk of the D1, I1, or I2 instance type fails, you can use this parameter to restore the initial health status of the instance when you start the instance. After that, all data in the local disk will be lost. Default value: false. Valid values: · true. · false.
OwnerAccount	String	No	ECSforCloud@Alibaba.com	The logon name of the RAM user.

Response parameters

Name	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID. The system returns a unique RequestId for each API request, regardless of whether the API operation is successful.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=StartInstance
&InstanceId=i-instanceid-1
&InitLocalDisk=false
&<Common request parameters>
```

Successful response examples

XML format

```
<StartInstanceResponse>
  <RequestId>C0003E8B-B930-4F59-ADC0-0E20xxxxxx</
  RequestId>
</StartInstanceResponse>
```

JSON format

```
{
  "RequestId": "C0003E8B-B930-4F59-ADC0-0E20xxxxxx"
}
```

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 when the operation is not supported while the resource is in the current state.

HTTP status code	Error code	Error message	Description
403	DiskError	IncorrectDiskStatus.	The error message returned when the specified DiskCategory is invalid.
403	InstanceExpired	The postPaid instance has been expired. Please ensure your account have enough balance.	The error message returned when the Pay-As-You-Go instance is stopped due to overdue payment.
403	InstanceExpired	The prePaid instance has been expired.	The error message returned when the Pay-As-You-Go instance is stopped due to overdue payment.
403	InstanceNotReady	The specified instance is not ready for use	The error message returned when the operation is not supported while the resource is in the current state. Retry the operation after a few minutes.
403	IncorrectInstanceStatus	%s	The error message returned when the 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 when ECS is not authorized to access your KMS.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned when an unknown error occurs.

[View error codes](#)

6.5 RebootInstance

You can call this operation to restart an ECS instance.

Description

- You can only restart an ECS instance which is in the running (`Running`) state.
- After you restart an ECS instance, it is in the starting(`Starting`) state.
- Force restart (`ForceStop`) is supported. Force restart can cause data loss if data in the instance is not yet written to the disk.
- You cannot restart an ECS instance on which [Security Control](#) is enabled and whose `OperationLocks` is tagged as " `LockReason` " : " `security` ".

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-instance1	The ID of the instance.
Action	String	No	RebootInstance	The operation that you want to perform. Set the value to <code>RebootInstance</code> .
ForceStop	Boolean	No	false	Indicates whether to stop the instance forcibly before you restart it. Default value: false. Valid values: • true. • false.
OwnerAccount	String	No	ECSforCloud@Alibaba.com	The logon name of the RAM user.

Response parameters

Name	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID. The system returns a unique RequestId for each API request, regardless of whether the API operation is successful.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RebootInstance
&InstanceId=i-instance1
&ForceStop=false
&<Common request parameters>
```

Successful response examples

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
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned when the operation is not supported while the resource is in the current state.

HTTP status code	Error code	Error message	Description
403	DiskError	IncorrectDiskStatus.	The error message returned when the specified DiskCategory is invalid.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned when the subscription instance has expired. Renew the instance first.
403	IncorrectInstanceState	%s	The error message returned when the operation is not supported while the instance is in the current state.

[View error codes](#)

6.6 StopInstance

You can call this operation to stop an ECS instance.

Description

- You can only stop an instance which is in the running (`Running`) state.
- After you call this operation, the instance enters the stopping (`Stopping`) state. After the instance is stopped, it is in the stopped (`Stopped`) state.
- You can force stop an instance. However, this operation can cause data loss if data in the instance is not yet written to the disk.
- You cannot stop an ECS instance on which [Security Control](#) is enabled and whose `OperationLocks` is tagged as " `LockReason` " : " `security` ".
- For an instance on which [Local Disk Storage](#)(`Local _ storage`) is configured and which is of the [I1 instance type family](#), you must specify `ConfirmStop` and set its value to `True` . Otherwise, an error is returned.

- For the I1 instance type family, data in the local disk is cleared after the instance is stopped. We recommend that you implement data redundancy at the application layer to guarantee data availability.
- For instances of other instance type families, the `ConfirmStop` parameter is ignored.
- If [StopCharging](#) is selected, you can configure `StoppedMode = KeepCharging` to `KeepCharging`. Then the instance is charged after it is stopped. The instance type in stock and public IP address are reserved for this instance.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-instanceid1	The ID of the instance.
Action	String	No	StopInstance	The operation that you want to perform. Set the value to <code>StopInstance</code> .
StoppedMode	String	No	KeepCharging	Indicates whether the ECS instance is still charged after it is stopped. Valid values: <code>KeepCharging</code> If StopCharging is selected, you can configure <code>StoppedMode = KeepCharging</code> to <code>KeepCharging</code> . Then the instance is charged after it is stopped. The instance type in stock and public IP address are reserved for this instance.

Name	Type	Required	Example	Description
ForceStop	Boolean	No	false	Indicates whether to stop the instance forcibly. Valid values: · true. · false.
ConfirmStop	Boolean	No	true	Indicates whether to confirm the stop operation. This parameter is required and applies only to instances of the I1 instance type family. Default value: false.

Response parameters

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

Examples

Sample request

```
https://ecs.aliyuncs.com/?Action=StopInstance
&InstanceId=i-instanceid-1
&ConfirmStop=true
&ForceStop=false
&StoppedMode=keepcharging
&<Common request parameters>
```

Successful response examples

XML format

```
<StopInstanceResponse>
  <RequestId>1C488B66-B819-4D14-8711-C4EAAA13AC01</
  RequestId>
</StopInstanceResponse>
```

JSON format

```
{
  "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 when the operation is not supported while the resource is in the current state.
403	InstanceType.ParameterMismatch	The input parameter ConfirmStop must be true when an instance have localstorage.	The error message returned when Local Disk Storage is configured for the instance. The ConfirmStop parameter must be set to true.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned when the subscription instance has expired. Renew the instance first.
403	InvalidInstanceId.NotSupport	Classic network Instance does not support this operation.	The error message returned when the operation is not supported in classic instances.
403	InvalidInstanceId.NotSupport	Pre pay instance does not support this operation.	The error message returned when the operation is not supported in subscription instances.
403	InvalidInstanceId.NotSupport	Local disk instance does not support this operation .	The error message returned when the operation is not supported in local disk instances.
403	InvalidInstanceId.NotSupport	Spot instance does not support this operation.	The error message returned when the operation is not supported in preemptible instances.

HTTP status code	Error code	Error message	Description
403	IncorrectInstanceState	%s	The error message returned when the operation is not supported while the instance is in the current state.

[View error codes](#)

6.7 DeleteInstances

You can call the DeleteInstances action to release one or more pay-as-you-go or expired subscription ECS instances.

Description

- For an ECS instance with [security control](#) enabled and with the " LockReason " : " security " tag in OperationLocks , attached data disks are released even if DeleteWith Instance of attached data disks is set to False .
- If one of the specified ECS instances cannot be released, the value of TaskStatus is Failed . You can call the [DescribeTaskAttribute](#) operation to check TaskStatus based on the returned value of TaskId .
- After an instance is released, all of its physical resources are reclaimed. All data is erased and cannot be restored. The attached data disks with DeleteWith Instance = True are released, but their automatic snapshots are retained. Whether automatic snapshots are deleted depends on the value of DeleteAuto Snapshot . In the case of DeleteAuto Snapshot = false , the automatic snapshots are retained. In the case of DeleteAuto Snapshot = true , the automatic snapshots are 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
InstanceId • N	RepeatList	Yes	i-instanceid1	The ID of the instance. Valid values of N: 1 to 100.
Action	String	No	DeleteInstances	The operation that you want to perform. For API requests using the HTTP or HTTPS methods, <code>Action</code> is required. Set the value to <code>DeleteInstances</code> .
TerminateSubscription	Boolean	No	false	Specifies whether to release expired subscription instances. Default value: false.
Force	Boolean	No	false	Specifies whether to forcibly release instances which are in the <code>Running</code> state. Default value: false. Valid values: • <code>true</code>: forcibly releases instances which are in the <code>Running</code> state. When this value is selected, temporary data in the memory and storage for the instance is erased and cannot be restored. • <code>false</code>: This value can only be selected for instances in the <code>Stopped</code> state.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to perform check only. Default value: false . Valid values: · true: A check request is sent . The resource status is not queried. 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 message is returned. Otherwise, the DryRunOperation error code is returned. · false: A request is sent. After a successful check, the 2XX HTTP status code is returned and resource status is queried.
token	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to guarantee the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The ClientToken parameter can only contain ASCII characters and cannot exceed 64 characters in length.

Response parameters

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

Parameter	Type	Example	Description
TaskId	String	t-bp1log034h lx2died***	The ID of the task. You can call the DescribeTaskAttribute operation to query the progress of the ECS instance release task.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteInstances
&InstanceId.1=i-instance1
&Force=false
&<Common request parameters>
```

Successful sample responses

XML format

```
<DeleteInstancesResponse>
  <RequestId>7B7813C6-57BF-41XX-B12B-F172F65A6046</
  RequestId>
  <TaskId>t-bp1log034h-lx2died***</TaskId>
</DeleteInstancesResponse>
```

JSON format

```
{
  "RequestId": "7B7813C6-57BF-41XX-B12B-F172F65A6046",
  "TaskId": "t-bp1log034h-lx2died***"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidOperation.NotInWhiteList	%s	The error message returned because you have no privilege to perform the operation.
403	InvalidOperation.DeletionProtection	%s	The error message returned because release protection is enabled for the instance.

HTTP status code	Error code	Error message	Description
403	IncorrectInstanceState	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	IncorrectInstanceState	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	InternalServerError	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	InternalServerError	%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.
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 undergoing configuration.
400	DependencyViolation.RouteEntry	Specified instance is used by route entry.	The error message returned because custom routing rules still exist in the VPC.

For more information about error codes, see [API Error Center](#).

6.8 DeleteInstance

You can call this operation to release a Pay-As-You-Go instance or a subscription instance that expires.

Description

- After an instance is released, all the physical resources used by the instance are reclaimed. The data is erased and cannot be restored. The attached data disks with the `DeleteWithInstance = True` value will be released, but their automatic snapshots are retained. This depends on the value of `DeleteAutoSnapshot`. If the value is `DeleteAutoSnapshot = false`, their automatic snapshots are retained. If the value is `DeleteAutoSnapshot = true`, their automatic snapshots are released.
- For an ECS instance on which [Security Control](#) is enabled and whose `OperationLocks` is tagged as "LockReason": "security", even if `DeleteWithInstance` of attached data disks is set to `False`, this value will be ignored and attached data disks will be released.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-instance1	The ID of the instance.
Action	String	No	DeleteInstance	The operation that you want to perform. Set the value to DeleteInstance.

Name	Type	Required	Example	Description
Force	Boolean	No	false	Indicates whether to forcibly release an instance which is in the running (<code>Running</code>) state. Default value: false. Valid values: · true: forcibly releases an instance which is in the running (<code>Running</code>) state. When this value is selected, temporary data in the memory and storage for the instance is erased and cannot be restored. · false: You can select this value only for an instance which is in the stopped (<code>Stopped</code>) state.
OwnerAccount	String	No	ECSforCloud@Alibaba.com	The logon name of the RAM user.
Terminatesubscription	Boolean	No	false	Indicates whether to release an expired subscription instance. Default value: false.

Response parameters

Name	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID. The system returns a unique RequestId for each API request, regardless of whether the API operation is successful.

Examples

Sample requests


```
https://ecs.aliyuncs.com/?Action=DeleteInstance
&InstanceId=i-instance1
&Force=false
&TerminateSubscription=false
<CommonRequestParameters>
```

Successful response examples

XML format

```
<DeleteInstanceResponse>
  <RequestId>928E2273-5715-46B9-A730-238DC996A533</RequestId>
</DeleteInstanceResponse>
```

JSON format

```
{
  "RequestId": "928E2273-5715-46B9-A730-238DC996A533"
}
```

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 when the operation is not supported while the resource is in the current state.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned when this operation is not supported while this billing method is selected.
400	DependencyViolation.RouteEntry	Specified instance is used by route entry.	The error message returned when custom routing rules still exist in the VPC.
400	InvalidParameter	The input parameter InstanceId is invalid.	The error message returned when the specified InstanceId is invalid. Check whether the InstanceId exists and is correct.

HTTP status code	Error code	Error message	Description
403	IncorrectInstanceStatus.Initializing	The specified instance status does not support this operation.	The error message returned when 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 when the specified instance still has data volumes.
403	InvalidOperation.DeletionProtection	%s	The error message returned when release protection is enabled for the instance.
403	InvalidOperation.NotInWhiteList	%s	The error message returned when the parameter is not in the whitelist.

[View error codes](#)

6.9 AttachInstanceRamRole

You can call this operation to attach a RAM role to one or more ECS instances. You can only attach one RAM role to an instance at any time. If the instance already has a RAM role, an error code is returned when you attach another RAM role to the same instance.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId s	String	Yes	[“instanceId1” , “instanceId2” , “instanceId3” ...]	The instance ID set. A maximum of 100 instances can be entered at a time.
RamRoleName	String	Yes	RamRoleTest	The RAM role name of the instance. You can call the ListRoles operation to view RAM roles for the specified instance.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to view the latest region list.
Action	String	No	AttachInstanceRamRole	The operation that you want to perform. Set the value to AttachInstanceRamRole.

Response parameters

Name	Type	Example	Description
AttachInstanceRamRoleResults			The returned RAM role information. It is an array that consists of AttachInstanceRamRoleResult data.
⌞Code	String	200	Indicates whether the RAM role is attached. If 200 is returned, the operation is successful. If other values are returned, the operation fails. For more information, see Error codes .

Name	Type	Example	Description
<code>InstanceId</code>	String	i-instanceid1	The ID of the instance.
<code>Message</code>	String	Success	Indicates whether the RAM role is attached. If Success is returned, the operation is successful. If other values are returned, the operation fails. For more information, see Error codes.
<code>Success</code>	Boolean	true	Indicates whether the RAM role is attached.
<code>FailCount</code>	Integer	0	The number of RAM roles that fail to be attached.
<code>RamRoleName</code>	String	RamRoleTest	The name of the RAM role.
<code>RequestId</code>	String	D9553E4C-6C3A-4D66-AE79-9835AF705639	The request ID. The system returns a unique RequestId for each API request, regardless of whether the API operation is successful.
<code>TotalCount</code>	Integer	1	The number of RAM roles attached.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AttachInstanceRamRole
&InstanceId=i-instanceid1
&RamRoleName=RamRoleTest
&RegionId=cn-hangzhou
&<Common request parameters>
```

Successful response examples

XML format

```
<AttachInstanceRamRoleResponse>
  <RequestId>E6352369-5C2B-41CD-AB50-471550C8F674</
  RequestId>
```

```

< AttachInst anceRamRol eResults >
  < AttachInst anceRamRol eResult >
    < InstanceId > i - instance1 </ InstanceId >
    < Code > 200 </ Code >
    < Message > success </ Message >
  </ AttachInst anceRamRol eResult >
</ AttachInst anceRamRol eResults >
< TotalCount > 1 </ TotalCount >
< FailCount > 0 </ FailCount >
< RamRoleName > RamRoleTest </ RamRoleName >
</ AttachInst anceRamRol eResponse >

```

JSON format

```

{
  "TotalCount": 1,
  "RequestId": "D9553E4C - 6C3A - 4D66 - AE79 - 9835AF7056 39",
  "AttachInst anceRamRol eResults": {
    "AttachInst anceRamRol eResult": [
      {
        "Message": "success",
        "InstanceId": "i - instance1",
        "Code": "200"
      }
    ]
  },
  "RamRoleName": "RamRoleTest",
  "FailCount": 0
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRamRole. NotEcsRole	The specified ram role is not authorized for ecs , please check your role policy.	The error message returned when the specified RAM role is not authorized to access ECS.

[View error codes](#)

6.10 DetachInstanceRamRole

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

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId s	String	Yes	["instanceId1", "instanceId2", "instanceId3", "..."]	The instance ID set. A maximum of 100 instances can be entered at a time.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to view the latest region list.
Action	String	No	DetachInstanceRamRole	The operation that you want to perform. Set the value to DetachInstanceRamRole.
RamRoleName	String	No	RamRoleTest	The name of the RAM role for the instance. You can call the ListRoles operation to view RAM roles for the specified instance.

Response parameters

Name	Type	Example	Description
DetachInstanceRamRoleResults			The returned RAM role information. It is an array that consists of DetachInstanceRamRoleResult data.

Name	Type	Example	Description
<code>⌞Code</code>	String	200	Indicates whether the RAM role is detached. If 200 is returned, the operation is successful. If other values are returned, the operation fails. For more information, see Error codes.
<code>⌞InstanceId</code>	String	i-instance1	The ID of the ECS instance.
<code>⌞InstanceRamRoleSets</code>			The RAM role set.
<code>⌞InstanceId</code>	String	i-instance1	The ID of the instance.
<code>⌞RamRoleName</code>	String	RamRoleTest	The name of the RAM role for the instance.
<code>⌞Message</code>	String	Success	Indicates whether the RAM role is detached. If Success is returned, the operation is successful. If other values are returned, the operation fails. For more information, see Error codes.
<code>⌞Success</code>	Boolean	true	Indicates whether the RAM role is detached.
FailCount	Integer	0	The number of RAM roles that fail to be detached.
RamRoleName	String	RamRoleTest	The name of the RAM role.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID.
TotalCount	Integer	1	The number of RAM roles detached.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DetachInstanceRamRole
&InstanceId=i-instance1
&RegionId=cn-hangzhou
&RamRoleName=RamRoleTest
&<Common request parameters>
```

Successful response examples

XML format

```
<DetachInstanceRamRoleResponse>
  <RequestId>E6352369-5C2B-41CD-AB50-471550C8F674</
RequestId>
  <DetachInstanceRamRoleResults>
    <DetachInstanceRamRoleResult>
      <InstanceId>i-instance1</InstanceId>
      <Code>200</Code>
      <Message>success</Message>
    </DetachInstanceRamRoleResult>
  </DetachInstanceRamRoleResults>
  <TotalCount>1</TotalCount>
  <FailCount>0</FailCount>
  <RamRoleName>RamRoleTest</RamRoleName>
</DetachInstanceRamRoleResponse>
```

JSON format

```
{
  "TotalCount": 1,
  "DetachInstanceRamRoleResults": {
    "DetachInstanceRamRoleResult": [
      {
        "Message": "success",
        "InstanceId": "i-instance1",
        "Code": "200"
      }
    ]
  },
  "RequestId": "E6352369-5C2B-41CD-AB50-471550C8F674",
  "RamRoleName": "RamRoleTest",
  "FailCount": 0
}
```

Error codes

[View error codes](#)

6.11 DescribeInstanceStatus

You can call this operation to obtain the states of multiple instances.

Description

- The states of all instances are returned. For more information, see [Instance states](#).
- You can also call this operation to obtain the instance list.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to view the latest region list.
Action	String	No	DescribeInstanceStatus	The operation that you want to perform. Set the value to DescribeInstanceStatus.
ClusterId	String	No	cls-clusterid1	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 compatibility.
OwnerAccount	String	No	ECSforCloud	The logon name of the RAM user.

Name	Type	Required	Example	Description
PageNumber	Integer	No	1	The page number. This value starts from 1. Default value: 1.
PageSize	Integer	No	10	The number of rows per page. Valid values: 1 to 50. Default value: 10
ZoneId	String	No	cn-hangzhou-d	The zone ID of the instance.

Response parameters

Name	Type	Example	Description
InstanceStatuses			The returned instance state information. It is an array that consists of InstanceStatusSetType data.
└ InstanceId	String	i-instance1	The ID of the instance.
└ Status	String	Running	The state of the instance.
PageNumber	Integer	1	The page number.
PageSize	Integer	10	The number of rows per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID.
TotalCount	Integer	2	The total number of instances.

Examples

Sample request

```
https://ecs.aliyuncs.com/?Action=DescribeInstances
```

```
& RegionId = cn - hangzhou
& ZoneId = cn - hangzhou - d
&< Common request parameters >
```

Successful response examples

XML format

```
< DescribeInstancesResponse >
  < RequestId > 6EF60BEC - 0242 - 43AF - BB20 - 270359FB54 A7 </
  RequestId >
  < TotalCount > 2 </ TotalCount >
  < PageNumber > 1 </ PageNumber >
  < PageSize > 10 </ PageSize >
  < Instances >
    < Instance >
      < InstanceId > i - instance1 </ InstanceId >
      < Status > Running </ Status >
    </ Instance >
    < Instance >
      < InstanceId > i - ae4r89pp </ InstanceId >
      < Status > Stopped </ Status >
    </ Instance >
  </ Instances >
</ DescribeInstancesResponse >
```

JSON format

```
{
  "PageNumber": 1,
  "Instances": {
    "Instance": [
      {
        "Status": "Running",
        "InstanceId": "i - instance1"
      },
      {
        "Status": "Stopped",
        "InstanceId": "i - ae4r89pp"
      }
    ]
  },
  "TotalCount": 2,
  "PageSize": 10,
  "RequestId": "6EF60BEC - 0242 - 43AF - BB20 - 270359FB54 A7"
}
```

Error codes

[View error codes](#)

6.12 RenewInstance

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

Description

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

When you call this operation, note that:

- Only subscription ECS instances are supported.
- The renew operation will use available coupons under your account by default. This does not apply to discount accounts.
- You must confirm that your payment account has sufficient balance or credit.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-instance1	The ID of the instance.
Period	Integer	Yes	1	The renewal period of the subscription instance. If DedicatedHostId is specified, the value range of the Period parameter must be within the subscription period of the DDH. Valid values: • 1 to 12, 24, 36, 48, and 60 if PeriodUnit is set to Month.
Action	String	No	RenewInstance	The operation that you want to perform. Set the value to RenewInstance.

Name	Type	Required	Example	Description
OwnerAccount	String	No	happyCustomer	The logon name of the RAM user.
PeriodUnit	String	No	Month	The unit of the renewal period (Period). Default value: Month. Valid values: Month.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The token used to ensure idempotence. You can generate the token in your client, but you must ensure that it is globally unique. ClientToken can contain only ASCII characters. It must be no more than 64 characters in length. For more information, see How to ensure idempotence .

Response parameters

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

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RenewInstance
&InstanceId=i-instance1
&Period=1
&PeriodUnit=Month
&ClientToken=0c593ea1-3bea-11e9-b96b-88e9fe637760
&<Common request parameters>
```

Successful response examples

XML format

```
< ModifyInstanceSpecResponse >
  < RequestId > 473469C7 - AA6F - 4DC5 - B3DB - A3DC0DE3C8 3E </
    RequestId >
</ ModifyInstanceSpecResponse >
```

JSON format

```
{
  "RequestId ":" 473469C7 - AA6F - 4DC5 - B3DB - A3DC0DE3C8 3E "
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid.	The error message returned when the specified instance type does not exist.
400	IdempotenceParamNotMatch	Request uses a client token in a previous request but is not identical to that request.	The error message returned when ClientToken in this request is not identical to the one used in the previous request.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned when this operation is not supported while this billing method is selected.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned when the specified instance type is not supported.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned when the operation is not supported while the resource is in the current state.

HTTP status code	Error code	Error message	Description
400	InvalidInternetChargeType.InstanceNotSupported	The specified instance which is in vpc is not support the parameter InternetChargeType.	The error message returned when the specified billing method is not supported in the specified VPC-type instance.
400	Invalidperiod	The specified period is not valid.	The error message returned when the specified period is invalid.
403	Instance.UnPaidOrder	The specified instance has unpaid order.	The error message returned when you have unpaid orders under the specified instance.
400	OperationDenied	Specified instance is in VPC.	The error message returned when the specified instance is in a VPC.
400	InvalidParameter	The specified parameter " InternetMaxBandwidth Out " is not valid.	The error message returned when the specified InternetMaxBandwidthOut is invalid.
400	DependencyViolation.InstanceType	Current instancetype cannot be changed to the specified one.	The error message returned when the current instance type is modified to the specified one.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned when the specified PeriodUnit is invalid.
400	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned when the specified DDH ID does not exist.

HTTP status code	Error code	Error message	Description
400	InvalidDedicatedHostStatus.NotSupport	Operation denied due to dedicated host status	The error message returned when the operation is not supported while the resource is in the current state.
400	IncorrectDedicatedHostStatus	The current status of the resource does not support this operation.	The error message returned when 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 when the expiration date of the instance is later than that of the DDH.
400	InvalidStatus.Upgrading	The instance is upgrading ; please try again later.	The error message returned when 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 when the specified renewal period is later than the maximum expiration date.
400	LastOrderProcessing	The previous order is still processing, please try again later.	The error message returned when the order is being processed. Try again later.

[View error codes](#)

6.13 ReactivateInstances

Reactivates a Pay-As-You-Go ECS instance that is suspended because of overdue payments and in the Stopped status.

Description

When you call this interface, consider the following:

- The instance must be in the Expired (Stopped) or Overdue and Being Recycled (Stopped) status.
- You must pay the bills and reactivate the instance within 15 days after the instance is suspended because of overdue payments. Otherwise, the instance is released and the data cannot be restored. If you cannot reactivate a VPC-connected instance, try again later or [open a ticket](#) to contact Alibaba Cloud.
- For more information about the service restrictions, see [Reactivate instances](#) in the User Guide manual.
- If the operation is successful, the status of the instance becomes Starting (Starting).
- The OperationLocks of the [locked](#) instance cannot be " LockReason " : " security ".

Request parameters

Name	Type	Required	Description
Action	String	Yes	The name of this interface. Value: Reactivate Instances.
InstanceId	String	Yes	The ID of the instance that you want to reactivate.

Response parameters

All are common response parameters. See [#unique_170/unique_170_Connect_42_commonResponseParameters](#).

Examples

Request example

```
https://ecs.aliyuncs.com/?Action=ReactivateInstances&InstanceId=i-instance1
```

< Common Request Parameters >

Response examples

XML format

```
< Reactivate InstancesResponse >
  < RequestId > 51AB7717 - 6E1A - 4D1D - A44D - 54CBxxxxxx xx </
  RequestId >
</ Reactivate InstancesResponse >
```

JSON format

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

Error codes

Error codes specific to this interface are as follows. For more information, see [API Error Center](#).

Error code	Error message	HTTP status code	Description
IncorrectInstanceStatus	The current status of the resource does not support this operation.	403	The operation is not supported when the instance is in its current status.
InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	403	The request is denied because this resource is locked for safety concerns.
InsufficientBalance	Your account does not have enough balance.	403	Your account has unpaid bills. Pay all the bills and try again.
ReactivateInstances.InstanceStatusNotValid	Instance status is not Expired, ImageExpired or EcsAndImageExpired.	403	The Pay-As-You-Go instance is not in the Expired or Overdue and Being Recycled status.
InvalidInstanceId.NotFound	The specified InstanceId does not exist.	404	The specified InstanceId does not exist.

Error code	Error message	HTTP status code	Description
InvalidPayType .NotSupport	The specified pre pay instance not support.	404	This operation is supported only for Pay-As-You-Go instances.
InternalError	The request processing has failed due to some unknown error.	500	The error message returned when an internal error occurs. Please try again later.

6.14 RedeployInstance

You can call RedeployInstance to redeploy an ECS instance when the instance receives an event notification.

Description

RedeployInstance is an asynchronous operation. It migrates data before restarting the instance. After a successful redeployment, the instance enters the running state. After a failed redeployment, the instance returns to the original physical server and is restored to its original state before redeployment. When you call this operation, note that:

- You can call RedeployInstance when any of the following system events occurs. For more information about system events, see [System events](#).
 - The SystemMaintenance.Reboot and SystemMaintenance.Redeploy events in the scheduled state.
 - The SystemFailure.Reboot event in the executing state (only applicable to instances with local disks).



Warning:

When you redeploy an instance with local disks, local disks will be reinitialized and cleared. Use caution when performing this operation.

- The target instance must be in the running or stopped state. After redeployment, the instance status changes as follows:
 - Instances in the running state enter the stopping state.
 - Instances in the stopped state enter the starting state.
- An instance cannot be redeployed when the value of its OperationLocks parameter is LockReason: security.
- An instance on a dedicated host cannot be redeployed.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
InstanceId	String	Yes	i-bp1azkttqp ldxgted****	The ID of the instance that is in the running or stopped state.
Action	String	No	RedeployIn stance	The operation that you want to perform. Set this parameter to RedeployInstance. If the request HTTP or HTTPS URL contains different parameters, <code>Action</code> is required.

Parameter	Type	Required	Example	Description
ForceStop	Boolean	No	false	Specifies whether to force stop the running instance. Default value: false  Note: A force stop is equivalent to physical shutdown of the server. This operation can cause data loss if data in the instance is not yet written to the disk. We recommend that you redeploy instances in the stopped state.

Response parameters

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

Parameter	Type	Example	Description
TaskId	String	t-bp10e8orkp *****8x	The ID of the redeployment task. You can call DescribeTasks to view the migration results. The following example shows the required parameters when you call <code>DescribeTasks</code>: • Request example: TaskIds <pre>=[" t - bp10e8or *****c74o8x ", " t - bp10e8orkp qm0lc74o8y "], TaskAction = RedeployIn stance</pre> • Sample response: - TaskStatus=Processing. This state indicates that the instance is being redeployed. - TaskStatus=Finished. This state indicates that the instance has been redeployed , and the instance enters the running state. - TaskStatus=Failed. This state indicates that the redeployment has failed, and the instance is returned to its original physical server and is restored to its original state before redeployment. If the operation fails, submit a ticket to Alibaba Cloud to obtain technical support.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RedeployIn stance
&InstanceId=i-bplazkttqp ldxgtd *****
&<Common request parameters>
```

Sample success responses

XML format

```
< RedeployIn stanceResp onse >
  < RequestId > 1C488B66 - B819 - 4D14 - 8711 - C4EAAA13AC 01 </
  RequestId >
  < TaskId > t - bp10e8orkp ***** 8x </ TaskId >
</ RedeployIn stanceResp onse >
```

JSON format

```
{
  " RequestId ":" 1C488B66 - B819 - 4D14 - 8711 - C4EAAA13AC 01 ",
  " TaskId ":" t - bp10e8orkp ***** 8x "
}
```

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 instance does not exist.
403	IncorrectInstanceState	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.

HTTP status code	Error code	Error message	Description
500	InternalServerError	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	IncorrectInstanceState	%s	The error message returned because the operation is not supported while the instance is in the current state.

[View error codes](#)

6.15 DescribeInstanceVncUrl

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

Description

When you call this operation, note that:

- A management terminal URL is only valid 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 management terminal connection is 60 seconds. If you do not interact with the management terminal within 60 seconds, the management terminal will be automatically disconnected.
- When the management terminal is disconnected, you can only reconnect to the management terminal up to 30 times a minute.

- At the end of <https://g.alicdn.com/aliyun/ecs-console-vnc2/0.0.5/index.html?>, add `vncUrl = xxxx , instanceId = xxx , isWindows = True , isWindows = False , and password = XXXXXX` . Connect these parameters with `&`. Where:
 - `vncUrl` : The value of `VncUrl` is returned after a successful query.
 - `instanceId` : the ID of instance to be queried.
 - `isWindows` : specifies whether the operating system of the instance is Windows. The value of `true` indicates the Windows system. The value of `false` indicates that the Windows system is not used.
 - `password` : Optional. The password to establish a remote connection from the instance. It must be six characters in length and can contain digits and uppercase and lowercase letters. This parameter eliminates the need to enter a password on the management terminal when a connection is being established.

Example:

```
https://g.alicdn.com/aliyun/ecs-console-vnc2/0.0.5/index.html?vncUrl=ws%3A%2F%xxx&instanceId=i-wz9hhwq5a6tmxxxxxxx&isWindows=true
```

or

```
https://g.alicdn.com/aliyun/ecs-console-vnc2/0.0.5/index.html?vncUrl=ws%3A%2F%xxx&instanceId=i-wz9hhwq5a6tmxxxxxxx&isWindows=true&password=111111
```

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
InstanceId	String	Yes	i-AY121018033933eaxxxxxxx	The ID of the instance to be queried.

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 latest region list.
Action	String	No	DescribeInstanceVncUrl	The operation that you want to perform. Set the value to DescribeInstanceVncUrl.

Response parameters

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

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstancesVncURL
&InstanceId=i-AY12101803-3933eaxxxx-xxx
&RegionId=cn-hangzhou
<Common request parameters>
```

Sample success responses

XML format

```
< DescribeInstancesResponse >
  < RequestId > 1450F2D7 - 5435 - 4420 - BBC9 - 49C5xxxxxx xx </
  RequestId >
  < VncUrl > ws % 3A % 2F % 2Fhz01 - vncproxy . aliyun . com %
  2Fwebsocki fy % 2F % 3Fs % 3DDvh % 252FIA % 252BYc73gW 048cBx2gBx
  UDVzaAnSKr 74pq30mzqU YgeUMcB % 252FbkNixD xdEA996 </ VncUrl >
</ DescribeInstancesResponse >
```

JSON format

```
{
  " VncUrl ":" ws % 3A % 2F % 2Fhz01 - vncproxy . aliyun . com %
  2Fwebsocki fy % 2F % 3Fs % 3DDvh % 252FIA % 252BYc73gW 048cBx2gBx
  UDVzaAnSKr 74pq30mzqU YgeUMcB % 252FbkNixD xdEA996 ",
  " RequestId ":" 1450F2D7 - 5435 - 4420 - BBC9 - 49C5xxxxxx xx "
}
```

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	IncorrectInstanceState	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	InternalServerError	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.

HTTP status code	Error code	Error message	Description
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. Retry the operation after a few minutes.

[View error codes](#)

6.16 DescribeUserData

You can call this operation to query the user data of an ECS instance.

Description

- The returned user data is encoded in Base64.
- If user data does not exist, a null value is returned.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-instanceid1	The ID of the instance.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to view the latest region list.
Action	String	No	DescribeUserData	The operation that you want to perform. Set the value to DescribeUserdata.

Response parameters

Name	Type	Example	Description
InstanceId	String	i-instanceid1	The ID of the instance.
RegionId	String	cn-hangzhou	The region ID of the instance.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID. The system returns a unique RequestId for each API request, regardless of whether the API operation is successful.
UserData	String	ZWNobyBoZWxsbyBly3Mh	The user data of the instance. It is encoded in Base64.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeUserData
&RegionId=cn-shenzhen
&InstanceId=i-instance1
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeUserDataResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <UserData>userdata1</UserData>
  <InstanceId>i-instance1</InstanceId>
  <RegionId>cn-shenzhen</RegionId>
</DescribeUserDataResponse>
```

JSON format

```
{
  "UserData": "userdata1",
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "InstanceId": "i-instance1",
  "RegionId": "cn-shenzhen"
}
```

Error codes

[View error codes](#)

6.17 DescribeInstanceAutoRenewAttribute

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

Description

Before setting automatic or manual renewal, you can query the automatic renewal status of instances.

This operation is only supported on [subscription](#) instances. An error is returned if you call this operation on [Pay-As-You-Go](#) instances.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to view the latest region list.
Action	String	No	DescribeInstanceAutoRenewAttribute	The operation that you want to perform. Set the value to DescribeInstanceAutoRenewAttribute.
InstanceId	String	No	i-instance1,i-instance2	The ID of the instance. A maximum of 100 subscription instance IDs can be entered at a time. Separate multiple instance IDs with commas (,).

Name	Type	Required	Example	Description
OwnerAccount	String	No	ECSforCloud@Alibaba.com	The logon name of the RAM user.
PageNumber	String	No	1	The page number. This value starts from 1. Default value: 1.
PageSize	String	No	10	The number of rows per page. Maximum value: 100. Default value: 10.
RenewalStatus	String	No	AutoRenewal	The automatic renewal status of the instance. Valid values: • AutoRenewal: enables automatic renewal. • Normal: disables automatic renewal. • NotRenewal: No renewal is used. The system no longer sends an expiration reminder, but sends only a non-renewal reminder three days before the expiration date. For an instance for which no renewal is used, you can call the ModifyInstanceAutoRenewAttribute operation to change its automatic renewal status to <code>Normal</code>. Then you can manually renew it or set it to automatic renewal.

Response parameters

Name	Type	Example	Description
InstanceRenewAttributes			The renewal attribute set.
└ AutoRenewEnabled	Boolean	false	Indicates whether automatic renewal is enabled.
└ Duration	Integer	1	The automatic renewal period.
└ InstanceId	String	i-instanceid1	The ID of the instance.
└ PeriodUnit	String	week	The unit of the automatic renewal period.
└ RenewalStatus	String	Normal	The automatic renewal status of the instance. Valid values: - AutoRenewal: enables automatic renewal. - Normal: disables automatic renewal. - NotRenewal: No renewal is used. The system no longer sends an expiration reminder, but sends only a non-renewal reminder three days before the expiration date. For an instance for which no renewal is used, you can call the ModifyInstanceAutoRenewAttribute operation to change its automatic renewal status to <code>Normal</code>. Then you can manually renew it or set it to automatic renewal.
PageNumber	Integer	1	The page number. This value starts from 1. Default value: 1.

Name	Type	Example	Description
PageSize	Integer	10	The number of rows per page. Maximum value: 100. Default value: 10.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID. The system returns a unique RequestId for each API request, regardless of whether the API operation is successful.
TotalCount	Integer	6	The total number of instances.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstancesAutoRenewAttribute
&RegionId=cn-hangzhou
&InstanceId=i-instance1,i-instance2
&PageNumber=1
&PageSize=10
&RenewalStatus=AutoRenewal
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeInstancesAutoRenewAttributeResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
  <InstanceRenewAttributes>
    <InstanceRenewAttribute>
      <Instance>
        <InstanceId>i-instance1</InstanceId>
        <Duration>0</Duration>
        <AutoRenewed>false</AutoRenewed>
        <RenewalStatus>Normal</RenewalStatus>
      </Instance>
      <Instance>
        <InstanceId>i-instance2</InstanceId>
        <Duration>1</Duration>
        <AutoRenewed>true</AutoRenewed>
        <RenewalStatus>AutoRenewal</RenewalStatus>
      </Instance>
    </InstanceRenewAttribute>
  </InstanceRenewAttributes>
```

```
</ DescribeInstanceAutoRenewAttributeResponse >
```

JSON format

```
{
  "InstanceRenewAttributes":{
    "InstanceRenewAttribute":[
      {
        "RenewalStatus":"Normal",
        "InstanceId":"i-instance1",
        "Duration":0,
        "AutoRenewEnabled":false
      },
      {
        "RenewalStatus":"AutoRenewal",
        "InstanceId":"i-instance2",
        "Duration":1,
        "AutoRenewEnabled":true
      }
    ]
  },
  "RequestId":"04F0F334 - 1335 - 436C - A1D7 - 6C044FE733 68 "
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	MissingParameter. InstanceId	InstanceId should not be null.	The error message returned when InstanceId is not specified.
403	InvalidParameter. InvalidInstanceId	%s	The error message returned when InstanceId is invalid.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned when the operation is not supported while the resource is in the current state.
403	InvalidParameter. RenewalStatus	The specified parameter RenewalStatus is not valid.	The error message returned when the specified RenewalStatus is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidParameter. RenewalStatusInstanceId	The parameter RenewalStatus and InstanceId cannot be both empty.	The error message returned when both RenewalStatus and InstanceId are not specified.

[View error codes](#)

6.18 DescribeInstanceRamRole

You can call this operation to query RAM roles attached to one or more ECS instances.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the RAM role. You can call the DescribeRegions operation to view the latest region list.
Action	String	No	DescribeInstanceRamRole	The operation that you want to perform. Set the value to DescribeInstanceRamRole.
InstanceIds	String	No	["instanceId1", "instanceId2", "instanceId3", "...]	The instance ID set. A maximum of 100 instances can be entered at a time.

Name	Type	Required	Example	Description
PageNumber	Integer	No	1	The page number. This value starts from 1. Default value: 1.
PageSize	Integer	No	10	The number of rows per page. Maximum value: 50. Default value: 10.
RamRoleName	String	No	FinanceDeptOnly	All ECS instances to which the specified RAM role is attached. You can call the ListRoles operation to view RAM roles for the specified instance.

Response parameters

Name	Type	Example	Description
InstanceRamRoleSets			The returned RAM role information. It is an array that consists of InstanceRamRoleSetType data.
└ InstanceId	String	i-instance1	The ID of the instance.
└ RamRoleName	String	FinanceDeptOnly	The list of RAM role names.
RegionId	String	cn-hangzhou	The region ID of the RAM role. You can call the DescribeRegions operation to view the latest region list.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID.

Name	Type	Example	Description
TotalCount	Integer	1	The total number of RAM roles.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceRamRoles
&RegionId=cn-hangzhou
&InstanceId=i-instance1
&PageNumber=1
&PageSize=10
&RamRoleName=FinanceDepartmentOnly
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeInstanceRamRolesResponse>
  <RequestId>8F4CAE3F-7892-4662-83A5-2C2FFD639553</RequestId>
  <InstanceRamRoleSets>
    <InstanceRamRoleSet>
      <InstanceId>i-instance1</InstanceId>
      <RamRoleName>RamRoleTest</RamRoleName>
    </InstanceRamRoleSet>
  </InstanceRamRoleSets>
  <TotalCount>1</TotalCount>
</DescribeInstanceRamRolesResponse>
```

JSON format

```
{
  "TotalCount": 1,
  "RequestId": "8F4CAE3F-7892-4662-83A5-2C2FFD639553",
  "InstanceRamRoleSets": {
    "InstanceRamRoleSet": [
      {
        "InstanceId": "i-instance1",
        "RamRoleName": "RamRoleTest"
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidParameter.AllEmpty	%s	The error message returned when a required parameter is not specified .

[View error codes](#)

6.19 DescribeSpotPriceHistory

You can call this operation to query the price history of the last 30 days for a preemptible instance.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceType	String	Yes	ecs.t1.xsmall	The type of the instance.
NetworkType	String	Yes	VPC	The network type of the preemptible instance. Valid values: · classic. · vpc.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to view the latest region list.

Name	Type	Required	Example	Description
Action	String	No	DescribeSpotPriceHistory	The operation that you want to perform. Set the value to DescribeSpotPriceHistory.
EndTime	String	No	2017-08-22T08:45:08Z	The end time of the query. The time follows the ISO 8601 standard and is in UTC time. Format: yyyy-MM-ddTHH:mm:ssZ. Default value: null. If this parameter is empty, the current time is used.
IoOptimized	String	No	none	Specifies whether the instance is an I/O optimized instance. Valid values: · optimized. · none. Default value: none for generation I instances, optimized for generations II and III instances.
OSType	String	No	Linux	The type of the operating system platform.
Offset	Integer	No	0	The start row of the query. Default value: 0
OwnerAccount	String	No	ECSforCloud@Alibaba.com	The logon name of the RAM user.

Name	Type	Required	Example	Description
StartTime	String	No	2017-08-22T08:45:08Z	The start time of the query. The time follows the ISO 8601 standard and is in UTC time. Format: yyyy-MM-ddTHH:mm:ssZ. Default value: null. If this parameter is empty, the start time is defined as three days before the specified EndTime . You can specify a StartTime value of up to 30 days before the specified EndTime.
ZoneId	String	No	cn-hangzhou-g	The zone ID of the instance.

Response parameters

Name	Type	Example	Description
Currency	String	CNY	The currency unit of the price.
NextOffset	Integer	1000	The start row of the next page. It is the value of Offset.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID. The system returns a unique RequestId for each API request, regardless of whether the API operation is successful.
SpotPrices			The details of the price.
[⌞] InstanceType	String	ecs.t1.xsmall	The instance type.
[⌞] IoOptimized	String	none	Indicates whether it is an optimized instance.

Name	Type	Example	Description
<code>NetworkType</code>	String	PayByTraffic	The network type of the preemptible instance.
<code>OriginPrice</code>	Float	0.028	The original price of the Pay-As-You-Go instance.
<code>SpotPrice</code>	Float	0.006	The spot price of the preemptible instance.
<code>Timestamp</code>	String	2017-09-18T11:00:00Z	The time for the price. Format: yyyy-MM-ddTHH:MM:SS.
<code>ZoneId</code>	String	cn-hangzhou-c	The zone ID of the preemptible instance.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSpotPriceHistory
&NetworkType= vpc
&RegionId= cn-hangzhou
&InstanceType= ecs.t1.xsmall
&IoOptimized= none
&Offset= 0
&StartTime= 2017-08-22T08:45:08Z
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeSpotPriceHistoryResponse>
  <RequestId> xxxxxxxxxx </RequestId>
  <NextOffset> 1000 </NextOffset>
  <SpotPrices>
    <SpotPriceType>
      <IoOptimized> none </IoOptimized>
      <OriginPrice> 0.028 </OriginPrice>
      <NetworkType> classic </NetworkType>
      <Timestamp> 2017-09-18T11:00:00Z </Timestamp>
      <ZoneId> cn-hangzhou-c </ZoneId>
      <SpotPrice> 0.006 </SpotPrice>
      <InstanceType> ecs.t1.xsmall </InstanceType>
    </SpotPriceType>
    <SpotPriceType>
      <IoOptimized> none </IoOptimized>
```

```

    < OriginPrice > 0 . 028 </ OriginPrice >
    < NetworkType > classic < NetworkType >
    < Timestamp > 2017 - 09 - 18T12 : 00 : 00Z </ Timestamp >
    < ZoneId > cn - hangzhou - c </ ZoneId >
    < SpotPrice > 0 . 006 </ SpotPrice >
    < InstanceType > ecs . t1 . xsmall </ InstanceType >
  </ SpotPriceType >
</ SpotPrices >
</ DescribeSpotPriceHistoryResponse >

```

JSON format

```

{
  "RequestId ":" xxxxxxxxxxxx ",
  "SpotPrices ":{
    "SpotPriceType ":[
      {
        "IoOptimized ":" none ",
        "NetworkType ":" classic ",
        "OriginPrice ": 0 . 028 ,
        "ZoneId ":" cn - hangzhou - c ",
        "Timestamp ":" 2017 - 09 - 18T11 : 00 : 00Z ",
        "InstanceType ":" ecs . t1 . xsmall ",
        "SpotPrice ": 0 . 006
      }
    ]
  },
  "NextOffset ": 1000
}

```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned when your account type is not supported.
403	Abs.InvalidAccount.NotFound	%s	The error message returned when your Alibaba Cloud account does not exist or your AccessKey is expired.
400	MissingParameter	%s	The error message returned when a required parameter is not specified.

HTTP status code	Error code	Error message	Description
403	Forbidden. NotSupportRAM	%s	The error message returned when RAM users are not allowed to perform this operation.
403	Forbidden. SubUser	%s	The error message returned when RAM users are not allowed to perform this operation.
400	InvalidParameter	%s	The error message returned when the parameter format is incorrect.
400	InvalidInstanceId. MalFormed	%s	The error message returned when the instance ID format is incorrect.
400	InvalidParams. StartTime	%s	The error message returned when the StartTime format is incorrect.
400	InvalidParams. EndTime	%s	The error message returned when the EndTime format is incorrect.
400	Abs.Abs. InvalidSpotInstanceUID	%s	The error message returned when the preemptible instance ID format is incorrect.
400	InvalidParams. NetworkType	%s	The error message returned when the network type of the instance is incorrect.
400	InvalidParams. IoOptimized	%s	The error message returned when the IoOptimized parameter of the instance is incorrect.

HTTP status code	Error code	Error message	Description
400	InvalidParams. OSType	%s	The error message returned when the OSType parameter of the instance is incorrect.
400	Abs.IoOptimized.ValueNotSupported	%s	The error message returned when the IoOptimized parameter of the instance is incorrect.
400	InvalidParams. ZoneId	%s	The error message returned when the ZoneId parameter of the instance is incorrect.
400	InvalidParams. RegionId	%s	The error message returned when the RegionId parameter of the instance is incorrect.
400	InvalidParams. InstanceType	%s	The error message returned when the InstanceType parameter is incorrect.
400	InvalidParams. PageSize	%s	The error message returned when the PageSize parameter of the instance is incorrect.
400	InvalidParams. Offset	%s	The error message returned when the Offset parameter of the instance is incorrect.
400	InvalidInstanceType.ValueNotSupported	%s	The error message returned when the InstanceType parameter is incorrect.

[View error codes](#)

6.20 DescribeInstanceTypeFamilies

You can call this operation to query the instance type family list provided by ECS.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to view the latest region list.
Action	String	No	DescribeInstanceTypeFamilies	The operation that you want to perform. Set the value to <code>DescribeInstanceTypeFamilies</code> .

Name	Type	Required	Example	Description
Generation	String	No	ecs-3	The generation of the instance type family. For more information, see Instance type families. Valid values: - ecs-1: Generation I, which consists of the earliest and cost-effective instance types. - ecs-2: Generation II, which is available later than the first generation of instance type families. - ecs-3: Generation III, which consists of the quick-response and high-performance instance types. - ecs-4: Generation IV, which consists of the latest, low-latency, and wide-application instance types.
OwnerAccount	String	No	ECSforCloud@Alibaba.com	The logon name of the RAM user.

Response parameters

Name	Type	Example	Description
InstanceTypeFamilies			The returned instance type family information. It is an array that consists of InstanceTypeFamilyItem data.
└─Generation	String	ecs-1	The generation of the instance type family.
└─InstanceTypeFamilyId	String	ecs.g5	The ID of the instance type family.

Name	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID. The system returns a unique RequestId for each API request, regardless of whether the API operation is successful.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceTypeFamilies
&RegionId=cn-hangzhou
&Generation=ecs-3
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeInstanceTypeFamiliesResponse>
  <InstanceTypePeFamilies>
    <InstanceTypePeFamily>
      <InstanceTypePeFamilyId>ecs.t1</InstanceTypePeFamilyId>
      <Generation>ecs-1</Generation>
    </InstanceTypePeFamily>
    <InstanceTypePeFamily>
      <InstanceTypePeFamilyId>ecs.s2</InstanceTypePeFamilyId>
      <Generation>ecs-1</Generation>
    </InstanceTypePeFamily>
    <InstanceTypePeFamily>
      <InstanceTypePeFamilyId>ecs.s3</InstanceTypePeFamilyId>
      <Generation>ecs-1</Generation>
    </InstanceTypePeFamily>
  </InstanceTypePeFamilies>
  <RequestId>6B187E0A-C075-4D08-8B6F-6213950E8733</RequestId>
</DescribeInstanceTypeFamiliesResponse>
```

JSON format

```
{
  "InstanceTypePeFamilies": {
    "InstanceTypePeFamily": [
      {
        "InstanceTypePeFamilyId": "ecs.t1",
        "Generation": "ecs-1"
      },
      {
        "InstanceTypePeFamilyId": "ecs.s2",
        "Generation": "ecs-1"
      }
    ]
  }
}
```

```
    "InstanceTypeFamilyId ":" ecs . s3 ",
    "Generation ":" ecs - 1 "
  }
],
},
"RequestId ":" 6B187E0A - C075 - 4D08 - 8B6F - 6213950E87 33 "
}
```

Error codes

[View error codes](#)

6.21 DescribeInstanceTypes

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

Description

DescribeInstanceTypes returns the same instance type list as the list of Pay-As-You-Go instances after an instance is created. For more information, see [Pay-As-You-Go](#) and [Limits](#).

For more information, see [Instance type families](#).

For more instance types, you can [submit a ticket](#) and contact us.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
Action	String	No	DescribeInstanceTypes	The operation that you want to perform. Set the value to DescribeInstanceTypes.
InstanceTypeFamily	String	No	ecs.t1	The instance type family. For more information, see Instance type families .
OwnerAccount	String	No	ECSforCloud@Alibaba.com	The logon name of the RAM user.

Response parameters

Name	Type	Example	Description
InstanceTypes			The returned instance type information. It is an array that consists of InstanceTypeInfo data.
[⌞] BaselineCredit	Integer	4	The (combined) benchmark vCPU computing performance of the burstable performance instance (t5).
[⌞] CpuCoreCount	Integer	8	The number of vCPUs.
[⌞] EniPrivateIpAddressQuantity	Integer	2	The number of private IP addresses allocated to the ENIs bound to the instance.
[⌞] EniQuantity	Integer	2	The maximum number of ENIs attached to the instance type.
[⌞] GPUMount	Integer	2	The number of GPUs for the instance type.
[⌞] GPUSpec	String	NVIDIA V100	The category of GPUs for the instance type.
[⌞] InitialCredit	Integer	120	The initial credit value of the burstable performance instance (t5).
[⌞] InstanceBandwidthRx	Integer	2,000	The inbound bandwidth limit for the instance. Unit: Kbit/s.
[⌞] InstanceBandwidthTx	Integer	2,000	The outbound bandwidth limit for the instance. Unit: Kbit/s.

Name	Type	Example	Description
<code>InstanceFamilyLevel</code>	String	EnterpriseLevel	The level of the instance type. Valid values: - EntryLevel. - EnterpriseLevel. - CreditEntryLevel: This value is only valid for burstable performance instances (t5).
<code>InstancePpsRx</code>	Long	300	The inbound PPS limit for the instance.
<code>InstancePpsTx</code>	Long	300	The outbound PPS limit for the instance.
<code>InstanceTypeFamily</code>	String	ecs.g5	The instance type family.
<code>InstanceTypeId</code>	String	ecs.g5.large	The ID of the instance type.
<code>LocalStorageAmount</code>	Integer	1	The number of local disks attached to the instance.
<code>LocalStorageCapacity</code>	Long	5000	The capacity of a local disk.
<code>LocalStorageCategory</code>	String	ephemeral_ssd	The category of the local disk attached to the instance.
<code>MemorySize</code>	Float	1024	The capacity of the memory. Unit: GiB.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceTypes&InstanceTypeFamily=ecs.t1
```

&< Common request parameters >

Successful response examples

XML format

```
< DescribeInstancesResponse >
  < InstanceTypePes >
    < InstanceTypePe >
      < CpuCoreCount > 1 </ CpuCoreCount >
      < InstanceTypePeFamily > ecs . t1 </ InstanceTypePeFamily >
      < EniQuantity > 1 </ EniQuantity >
      < InstanceTypePeId > ecs . t1 . xsmall </ InstanceTypePeId >
      < InstanceFamilyLevel > EntryLevel </ InstanceFamilyLevel >
      < GPUSpec />
      < MemorySize > 0 . 5 </ MemorySize >
      < GPULAmount > 0 </ GPULAmount >
      < LocalStorageCategory />
    </ InstanceTypePe >
    < InstanceTypePe >
      < CpuCoreCount > 1 </ CpuCoreCount >
      < InstanceTypePeFamily > ecs . t1 </ InstanceTypePeFamily >
      < EniQuantity > 1 </ EniQuantity >
      < InstanceTypePeId > ecs . t1 . small </ InstanceTypePeId >
      < InstanceFamilyLevel > EntryLevel </ InstanceFamilyLevel >
      < GPUSpec />
      < MemorySize > 1 </ MemorySize >
      < GPULAmount > 0 </ GPULAmount >
      < LocalStorageCategory />
    </ InstanceTypePe >
  </ InstanceTypePes >
  < RequestId > 01D5A075 - FB83 - 4DDC - 9F00 - 24A17AB386 F6 </
  RequestId >
</ DescribeInstancesResponse >
```

JSON format

```
{
  "InstanceTypePes": {
    "InstanceTypePe": [
      {
        "CpuCoreCount": 1,
        "InstanceTypePeFamily": "ecs . t1",
        "EniQuantity": 1,
        "InstanceTypePeId": "ecs . t1 . xsmall",
        "GPUSpec": "",
        "InstanceFamilyLevel": "EntryLevel",
        "MemorySize": 0 . 5,
        "GPULAmount": 0,
        "LocalStorageCategory": ""
      },
      {
        "CpuCoreCount": 1,
        "InstanceTypePeFamily": "ecs . t1",
        "EniQuantity": 1,
        "InstanceTypePeId": "ecs . t1 . small",
        "GPUSpec": "",
        "InstanceFamilyLevel": "EntryLevel",
        "MemorySize": 1,
        "GPULAmount": 0,
        "LocalStorageCategory": ""
      }
    ]
  }
}
```

```
}  
]  
},  
"RequestId ":" 01D5A075 - FB83 - 4DDC - 9F00 - 24A17AB386 F6 "  
}
```

Error codes

[View error codes](#)

6.22 ModifyInstanceVpcAttribute

You can call this operation to modify the VPC attributes of an ECS instance.

Description

When you call this operation, note that:

- You can only modify the VPC attributes of an ECS instance which is in the stopped(`Stopped`) state.
- A new ECS instance must have been started and stopped before you call this operation.
- An ECS instance that has the VPC attributes modified must have been started and stopped before you call this operation.
- If `VSwitchId` is specified when you call this operation, `VSwitchId` must belong to the current VPC.
- If `VSwitchId` is specified when you call this operation but `PrivateIpAddress` is not specified, the system automatically allocates a private IP address to the ECS instance.
- The current VSwitch and the new VSwitch (`VSwitchId`) must belong to a zone in the same region.
- The current VSwitch and the new VSwitch (`VSwitchId`) must belong to the same VPC.
- If both `VSwitchId` and `PrivateIpAddress` are specified, the private IP address must belong to the [CIDR block](#) of the specified VSwitch. `PrivateIpAddress` depends on `VSwitchId` , so you cannot specify only `PrivateIpAddress` .

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-bp1iudwa5b1tqaxxxxxx	The ID of the instance.
VSwitchId	String	Yes	[vswitchid]	The ID of the new VSwitch. The current switch and the new switch (VSwitchId) must belong to a zone in the same region.
Action	String	No	ModifyInstanceVpcAttribute	The operation that you want to perform. Set the value to ModifyInstanceVpcAttribute.
OwnerAccount	String	No	ECSforCloud@Alibaba.com	The logon name of the RAM user.
PrivateIpAddress	String	No	172.17. XX.XXX	The new private IP address of the instance. PrivateIpAddress depends on VSwitchId, so you cannot specify only PrivateIpAddress.

Response parameters

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

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceVpcAttribute
&InstanceId=i-bp1iudwa5b1tqaxxxxxx
&VSwitchId=vswitchid
&<Common request parameters>
```

Successful response examples

XML format

```
<ModifyInstanceAttributeResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C8-3E</
  RequestId>
</ModifyInstanceAttributeResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C8-3E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidPrivateIpAddress.Malformed	Specified private IP address is malformed.	The error message returned when the specified private IP address is invalid.
400	IncorrectVSwitchStatus	The current status of virtual switch does not support this operation.	The error message returned when 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 when the specified VSwitch does not exist.

HTTP status code	Error code	Error message	Description
400	IncorrectInstanceState	The current status of instance does not support this operation.	The error message returned when 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 when the specified operation is denied because the instance is not in the VPC.
400	InvalidPrivateIpAddressMismatch	Specified private IP address is not in the CIDR block of virtual switch.	The error message returned when the specified private IP address is not in the CIDR block of the specified VSwitch.
404	NoSuchResource	The specified resource is not found.	The error message returned when the specified resource does not exist.

[View error codes](#)

6.23 ModifyInstanceAttribute

Modifies the information such as the name, password, host name, and description of an instance.

Description

When you call this interface, consider the following:

- You cannot reset the password for an instance when it is in the `Starting` status.
- If the specified instance is `locked`, and the `OperationLocks` of the instance indicates "`LockReason`": "`security`", you cannot reset its password.
- The new password takes effect only after the instance is `restarted` in the console or by calling the interface `RebootInstance`.

- When an instance is in the Stopped status and is not limited to pass a [user data](#) script, you can modify its user data.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The name of this interface. Value: ModifyInstanceAttribute.
InstanceId	String	Yes	The specified instance ID.
InstanceName	String	No	The name of the instance. The name is a string of 2 to 128 characters. It must begin with an English or a Chinese character. It can contain A-Z, a-z, Chinese characters, numbers, periods (.), colons (:), underscores (_), and hyphens (-).
Description	String	No	The description of the instance is null by default. It cannot begin with http:// or https://.
Password	String	No	Resets the administrative password of the instance. The password can be [8, 30] characters in length. It must contain uppercase letters, lowercase letters, and numbers. The following special characters are allowed: ()`~!@#\$%^&*~+= {}[]; ' < > , . ? / . A slash (/) cannot be the first character of Windows instances administrative password.
HostName	String	No	Host name of the instance. - It cannot start or end with a period (.) or a hyphen (-) and it cannot have two or more consecutive periods (.) or hyphens (-). - For Windows: The host name can be [2, 15] characters in length. It can contain A-Z, a-z, numbers, periods (.), and hyphens (-). It cannot only contain numbers. - For other operating systems: The host name can be [2, 64] characters in length. It can be segments separated by periods (.). It can contain A-Z, a-z, numbers, and hyphens (-).

Name	Type	Required	Description
UserData	String	No	The user-defined data of your ECS instance . The size of your UserData must be less than 16 KB before the Base64 encodement. Refrain from entering confidential information, such as SSH key pair and AccessKey, in your request. If you do so, make sure the confidential information is encrypted before Base64 encoding. Also, do not forget to decrypt the information after it passes into your ECS instance.
CreditSpecification	String	No	Modifies the running mode of an unlimited credit enabled t5 instance. Optional values: - Standard: The standard running mode. For more information, see t5 standard instances. - Unlimited: The unlimited running mode. For more information, see t5 unlimited instances. Default value: null.
DeletionProtection	Boolean	No	Whether an instance can be released manually through the console or API (DeleteInstance). - true: Enable deletion protection. - false: Disable deletion protection.  Note: This attribute applies to the Pay-As-You-Go instances. However, it can only restrict the manual release operation, not the release operation by Alibaba Cloud.

Response parameters

All are common response parameters. For more information, see [Common parameters](#).

Examples

Request example

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceAttribute
&InstanceId=i-instance1
&Password=pwd
&<CommonRequestParameters>
```

Response example

XML format

```
<ModifyInstanceAttributeResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C8-3E</
  RequestId>
</ModifyInstanceAttributeResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C8-3E"
}
```

Error codes

All are common error codes. For more information, see [API Error Center](#).

Error code	Error message	HTTP status code	Meaning
InvalidDescription.Malformed	The specified parameter “Description” is not valid.	400	The specified <code>Description</code> is invalid.
InvalidDescription.Malformed	The specified destination image description is wrongly formed.	400	The specified <code>Description</code> is invalid.
InvalidHostPassword.Malformed	The specified parameter “Password” is not valid.	400	The specified <code>Password</code> is invalid.
InvalidInstanceName.Malformed	The specified parameter “InstanceName” is not valid.	400	The specified <code>InstanceName</code> is invalid.
InvalidHostName.Malformed	The specified parameter “HostName” is not valid.	400	The specified <code>HostName</code> is invalid.

Error code	Error message	HTTP status code	Meaning
InvalidPassword. Malformed	The specified parameter “Password” is not valid.	400	The specified Password is invalid.
InvalidUserData. SizeExceeded	The specified parameter “UserData” exceeds the size.	400	The size of your UserData must be less than 16 KB.
InvalidUserData. NotSupported	The specified parameter “UserData” only support the vpc and IoOptimized Instance.	400	You can only specify UserData for a VPC instance or an I/O optimized instance.
IncorrectInstanceState	The current status of the resource does not support this operation.	403	You cannot reset the password for an instance when it is in Deleted or Starting status.
InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	403	Your instance has been locked.
OperationDenied	The Specified operation is denied as your instance is locked for security reasons.	403	Your instance has been locked.
OperationDenied	The current status of the resource does not support this operation.	403	You cannot reset the password for an instance when it is in Deleted or Starting status.
HOSTNAME_ILLEGAL	hostname is not valid.	404	The specified HostName is invalid.
InvalidInstanceId. NotFound	The specified InstanceId does not exist.	404	The specified InstanceId does not exist.
InvalidSecurityGroupId. NotFound	The specified SecurityGroupId does not exist.	404	The specified SecurityGroupId does not exist.

6.24 ModifyInstanceVncPasswd

You can call this operation to modify the Web management terminal password of an ECS instance.

Description

- The password must be 6 characters in length and can contain only uppercase and lowercase letters and digits.
- After you modify the password:
 - For an optimized instance, the new password takes effect immediately.
 - For a non-optimized instance, you must [Restart the instance](#) from the console or call the [RebootInstance](#) operation to validate the modifications.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-AY121018033933eae8689	The ID of the instance.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to view the latest region list.
VncPassword	String	Yes	123456	The new password of the management terminal.
Action	String	No	ModifyInstanceVncPasswd	The operation that you want to perform. Set the value to <code>ModifyInstanceVncPasswd</code> .
OwnerAccount	String	No	ECSforCloud@Alibaba.com	The logon name of the RAM user.

Response parameters

Name	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID. The system returns a unique RequestId for each API request, regardless of whether the API operation is successful.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceVncPassword
&RegionId=cn-hangzhou
&InstanceId=i-AY12101803-3933eae868-9
&VncPassword=123456
<Common request parameters>
```

Successful response examples

XML format

```
<ModifyInstanceVncPasswordResponse>
  <RequestId>FDB6C963-9CE8-4B7F-BCA3-845F6BD29A-FC</
  RequestId>
</ModifyInstanceVncPasswordResponse>
```

JSON format

```
{
  "RequestId": "FDB6C963-9CE8-4B7F-BCA3-845F6BD29A-FC"
}
```

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 when the operation is not supported while the resource is in the current state.

HTTP status code	Error code	Error message	Description
400	IncorrectVncPassword.Malformed	The specified parameter VncPassword is not valid.	The error message returned when the specified VNC password is invalid.
404	NoSuchResource	The specified resource is not found.	The error message returned when the specified resource does not exist.

[View error codes](#)

6.25 ModifyInstanceAutoReleaseTime

You can call this operation to set or cancel the automatic release time for a Pay-As-You-Go instance. Use caution when you set the automatic release time, because the instance is automatically released upon expiration.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-instanceid1	The ID of the instance.
Action	String	No	ModifyInstanceAutoReleaseTime	The operation that you want to perform. Set the value to ModifyInstanceAutoReleaseTime.

Name	Type	Required	Example	Description
AutoReleaseTime	String	No	2018-01-01T01:02:03Z	The automatic release time of the instance. The time follows the ISO 8601 standard and is in UTC time. Format: yyyy-MM-ddTHH:mm:ssZ. · If <code>ss</code> is set to a value other than <code>00</code>, only the value of <code>mm</code> is used, with <code>ss</code> changed to <code>00</code>. · The automatic release time must be at least half an hour later than the current time. · The automatic release time must be less than 3 years since the current time. If <code>AutoReleaseTime</code> is not specified, it indicates that the automatic release attribute is canceled and the ECS instance is not automatically released.
OwnerAccount	String	No	ECSforCloud@Alibaba.com	The logon name of the RAM user.
RegionId	String	No	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to view the latest region list.

Response parameters

Name	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID. The system returns a unique RequestId for each API request, regardless of whether the API operation is successful.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceAutoRenewTime  
&InstanceId=i-instance1  
&<Common request parameters>
```

Successful response examples

XML format

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

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 when RegionId is not specified.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned when an unknown error occurs.

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 when this operation is not supported while this billing method is selected.
404	NoSuchResource	The specified resource is not found.	The error message returned when the specified resource does not exist.

[View error codes](#)

6.26 ModifyInstanceAutoRenewAttribute

You can call this operation to set one or more subscription instances to the automatic renewal status. To reduce the maintenance workload when an instance expires, you can set automatic renewal for subscription ECS 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 automatic renewal is first made at 08:00:00 (UTC+8) nine days before the instance expires.
- If 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

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-instance1,i-instance2	The ID of the instance. A maximum of 100 instance IDs can be entered 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 view the latest region list.
Action	String	No	ModifyInstanceAutoRenewAttribute	The operation that you want to perform. Set the value to ModifyInstanceAutoRenewAttribute.
AutoRenew	Boolean	No	true	Indicates whether to enable automatic renewal. Default value: false.
Duration	Integer	No	2	The automatic renewal period. - PeriodUnit If it is set to Year , Duration can be {"1", "2", "3"}. - PeriodUnit If it is set to Month , Duration can be {"1", "2", "3", "6", "12"}.
OwnerAccount	String	No	ECSforCloud@Alibaba.com	The logon name of the RAM user.
PeriodUnit	String	No	Week	The unit of Period . Default value: month. Valid values: - Month. - Year.

Name	Type	Required	Example	Description
RenewalStatus	String	No	AutoRenewal	Indicates whether to renew the instance. <code>RenewalStatus</code> has a higher priority than <code>AutoRenew</code>. If <code>RenewalStatus</code> is not specified, the value of <code>AutoRenew</code> is used by default. Valid values: • <code>AutoRenewal</code>: enables automatic renewal. • <code>Normal</code>: disables automatic renewal. • <code>NotRenewal</code>: No renewal is used. The system no longer sends an expiration reminder, but sends only a non-renewal reminder three days before the expiration date. For an instance for which no renewal is used, you can change its automatic renewal status to <code>Normal</code>. Then you can manually renew it or set it to automatic renewal.

Response parameters

Name	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID. The system returns a unique RequestId for each API request, regardless of whether the API operation is successful.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceAutoRenewAttribute
&RegionId=cn-hangzhou
&InstanceId=i-instance1,i-instance2
&Duration=2
&AutoRenew=True
<CommonRequestParameters>
```

Successful response examples

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 when InstanceId is not specified.
403	InvalidParameter.InvalidInstanceId	%s	The error message returned when the specified InstanceId is invalid.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned when the operation is not supported while the resource is in the current state.
403	InvalidParameter.Duration	%s	The error message returned when the Duration parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidParameter.RenewalStatus	%s	The error message returned when the RenewalStatus parameter is invalid.
403	InvalidPeriodUnit.ValueNotSupported	The specified parameter "Period" is not valid.	The error message returned when the specified PeriodUnit is invalid.

[View error codes](#)

6.27 ModifyInstanceChargeType

You can call this operation to change the billing method for one or more instances. You can change the billing method between Pay-As-You-Go and subscription, or change all Pay-As-You-Go data disks attached to an instance to subscription ones.

Description

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

When you call this operation, note that:

- The instance must be in the running(`Running`) or stopped(`Stopped`) state and has no overdue payment.
- After you change the billing method, `AutoPay` is set to true. Make sure that your account has sufficient balance. Otherwise, your order becomes invalid and you have to cancel this order. If your account balance is insufficient, you can set `AutoPay` to `false` . Then, an order is generated. You can log on to the [ECS console](#) to pay for it.
- From subscription to Pay-As-You-Go:
 - Users that achieve a certain level of trust can change the billing method from subscription to Pay-As-You-Go.
 - After you change the billing method from subscription to Pay-As-You-Go, the new billing method will take effect for the entire lifecycle of the instance. The

price difference is refunded to the payment account you used. Price difference of coupon purchases are not refunded.

- Refund rule: You can only freely use a certain amount of refund within a month, and the refund that is not used within the current month will not be accumulated to the next month. After you have used up the refund amount for this month, you can only change the billing method when the next month arrives. The refund amount incurred when you change billing methods is calculated with the following formula: $\text{Number of vCPUs} \times (\text{Number of remaining days} \times 24 \pm \text{Number of remaining or elapsed hours})$.
- From Pay-As-You-Go to subscription:
 - You can change all Pay-As-You-Go data disks attached to an instance to subscription ones.
 - This operation cannot be called if the automatic release time has been set for the Pay-As-You-Go instance.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId s	String	Yes	["i-xxxxx1","i-xxxxx2"]	The ID of the instance. The value can be a JSON array that consists of multiple instance IDs. Separate multiple instance IDs with commas (,). A maximum of 20 IDs can be entered at a time.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to view the latest region list.

Name	Type	Required	Example	Description
Action	String	No	ModifyInstanceChargeType	The operation that you want to perform. Set the value to ModifyInstanceChargeType.
AutoPay	Boolean	No	false	Indicates whether to enable automatic payment. When OperatorType is set to downgrade, AutoPay is ignored . Default value: true. Valid values: · true: enables automatic payment. Make sure that your account has sufficient balance. Otherwise, your order becomes invalid and you have to cancel this order . · false: No payment is made and only an order is generated. After you change the billing method, AutoPay is set to true. Make sure that your account has sufficient balance. Otherwise, your order becomes invalid and you have to cancel this order. If your account balance is insufficient, you can set AutoPay to false. Then, an order is generated. You can log on to the ECS console to pay for it.

Name	Type	Required	Example	Description
DryRun	Boolean	No	false	Indicates whether to send a check request only. Default value: false. · true: Only a check request is sent and no query is performed. The system checks whether your AccessKey is valid, whether RAM users are authorized, and whether the required parameters are set. If the check fails, the corresponding error code is returned. If the check succeeds, the <code>DryRunOperation</code> error code is returned. · false: A request is sent and then the query is performed if the 2XX HTTP status code is returned.
IncludeDataDisks	Boolean	No	true	Indicates whether to change all Pay-As-You-Go data disks attached to the instance to subscription ones. Default value: true.
InstanceChargeType	String	No	PrePaid	The new billing method. Default value: PrePaid. Valid values: · PrePaid: subscription. · PostPaid: Pay-As-You-Go.
OwnerAccount	String	No	EcsforCloud@Alibaba.com	The logon name of the RAM user.

Name	Type	Required	Example	Description
Period	Integer	No	2	The renewal period of the subscription instance. If DedicatedHostId is specified, the value range of the Period parameter must be within the subscription period of the DDH. . Valid values: If PeriodUnit is set to Month, Period can be { "1", "2", "3", "4", "5", "6", "7", "8", "9", "12", "24", "36", "48", "60" }
PeriodUnit	String	No	Month	The unit of Period. Default value: Month. Valid values: Month.
ClientToken	String	No	155780923770084104105115073115084104101070105114115116082101113117101115116	The token used to ensure idempotence. You can generate the token in your client, but you must ensure that it is globally unique. ClientToken can contain only ASCII characters. It must be no more than 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Name	Type	Example	Description
OrderId	String	101111111111xxxxx	The ID of the order.

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

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceChargeType
&RegionId=cn-hangzhou
&InstanceId=instance-xxxxx1,"instance-xxxxx2"]
&Period=1
&PeriodUnit=Month
&AutoPay=false
&IncludeAllDisks=true
&ClientToken=xxxxxxxxxxxxxxx
&<Common request parameters>
```

Successful response examples

XML format

```
<ModifyInstanceChargeTypeResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxx-xx</RequestId>
  <OrderId>1011111111-1xxxxx</OrderId>
</ModifyInstanceChargeTypeResponse>
```

JSON format

```
{
  "OrderId": "1011111111-1xxxxx",
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxx-xx"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidParameter.InstanceIds	The specified InstanceIds are invalid.	The error message returned when the specified instance is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParameter	%s	The error message returned when the parameter format is incorrect.
400	InvalidStatus.ValueNotSupported	%s	The error message returned when the operation is not supported while the resource is in the current state.
400	InvalidInstanceChargeType.ValueNotSupported	%s	The error message returned when the specified billing method is not supported.
403	InvalidInstance.TempBandwidthUpgrade	Cannot switch to Pay-As-You-Go during the period of temporary bandwidth upgrade.	The error message returned when you change the billing method to Pay-As-You-Go during temporary bandwidth upgrade.
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned when the parameter is invalid.
403	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned when the specified instance type is not supported.
403	InstanceType.Offline	%s	The error message returned when the specified instance type is unavailable.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned when an unknown error occurs.

HTTP status code	Error code	Error message	Description
400	ReleaseTimeHaveBeenSet	The specified instance has been set released time.	The error message returned when the automatic release time has been set for the specified instance.
403	InvalidAccountStatus. NotEnoughBalance	Your account does not have enough balance.	The error message returned when your account has insufficient balance.
403	Account. Arrearage	Your account has an outstanding payment.	The error message returned when you have unpaid orders under your account.
403	InvalidParameter. NotMatch	%s	The error message returned when the parameter is in conflict with another parameter.
403	InvalidAction	%s	The error message returned when the operation is invalid.
400	Throttling	%s	The error message returned when the request is denied due to request throttling.
400	InvalidParameter. Bandwidth	%s	The error message returned when the parameter is invalid.
400	InvalidPeriod. UnitMismatch	The specified Period must be correlated with the PeriodUnit.	The error message returned when the specified renewal period and its unit do not match.
400	InvalidImageType. NotSupported	%s	The error message returned when the specified image type is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned when the expiration date of the instance is later than that of the DDH.
400	InvalidMarketImageChargeType.NotSupport	The specified chargeType of marketImage is unsupported.	The error message returned when the billing method for marketplace images is invalid.
403	ImageNotSupportInstanceType	The specified instanceType is not supported by instance with marketplace image.	The error message returned when the marketplace image does not support the instance type.
403	InvalidInstanceType.PhasedOut	This instanceType is no longer offered.	The error message returned when the instance type is unavailable on the Alibaba Cloud market.
400	InvalidSystemDiskCategory.ValueNotSupported	%s	The error message returned when the parameter is invalid.

[View error codes](#)

6.28 ModifyInstanceSpec

You can call this operation to change the instance type or public bandwidth of a Pay-As-You-Go instance.

Description

When you call this operation, note that:

- The instance must have no overdue payment.
- You can change the public bandwidth only when the instance is in the running (`Running`) or stopped (`Stopped`) state.

- Before changing the Pay-As-You-Go instance type, you can call the [DescribeResourcesModification](#) operation to query the instance types you can change to.
- You can change the instance type only when the instance is in the stopped (`Stopped`) state.
- You can only change either the instance type or the public bandwidth each time.
- After a successful downgrade, you must wait five minutes before you can initiate another instance type downgrade.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-instanceid1	The ID of the instance.
Action	String	No	ModifyInstanceSpec	The operation that you want to perform. Set the value to <code>ModifyInstanceSpec</code> .

Name	Type	Required	Example	Description
AllowMigrateAcrossZone	Boolean	No	false	Indicates whether to enable cross-cluster instance type upgrade. Default value: false When AllowMigrateAcrossZone is set to true and you upgrade the instance type based on the returned information, make sure that: Classic instances: - For phased-out instance types, when a non-optimized instance is upgraded to an optimized instance, the following items are modified: private IP address, driver name, and software authorization code. For Linux instances, basic disks (cloud) are identified as xvda or xvdb. Ultra disks (cloud_efficiency) and SSDs (cloud_ssd) are identified as vda or vdb. - For instance type families available on the Alibaba Cloud market, the private IP is modified after instance type upgrade. VPC-type instances: For phased-out instance types, when a non-optimized instance is upgraded to an optimized instance, the following items are modified: driver name and software authorization code. For Linux instances, basic disks (cloud) are identified

Name	Type	Required	Example	Description
Async	Boolean	No	false	Indicates whether to submit an asynchronous request. Default value: false.
InstanceType	String	No	ecs.g5.large	The new instance type. For more information, see Instance type families , or call the DescribeInstanceTypes operation to obtain the latest instance type list.
InternetMaxBandwidthIn	Integer	No	200	The maximum inbound bandwidth for the public network. Unit: Mbit/s. Valid values: 1 to 200.
InternetMaxBandwidthOut	Integer	No	10	The maximum outbound bandwidth for the public network. Unit: Mbit/s. Valid values: 0 to 100.
OwnerAccount	String	No	ECSforCloud	The logon name of the RAM user.

Name	Type	Required	Example	Description
SystemDisk · Category	String	No	cloud_ssd	System disk change option. This parameter is only valid when you upgrade one of the phased-out instance types to one of the instance type families available on the Alibaba Cloud market and upgrade a non-optimized instance to an optimized instance. Valid values: · cloud_efficiency: ultra disk. · cloud_ssd: SSD.
Temporary . EndTime	String	No	2017-12-05T22:40:00Z	The end time of the temporary bandwidth upgrade. The time follows the ISO 8601 standard and is in UTC time. Format: yyyy-MM-ddTHH:mm:ssZ.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.

Name	Type	Required	Example	Description
Temporary . InternetMa xBandwidth Out	Integer	No	50	The maximum outbound bandwidth for the public network after temporary bandwidth upgrade. Valid values: 1 to 100.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
Temporary . StartTime	String	No	2017-12-05T22:40:00Z	The start time of the temporary bandwidth upgrade. The time follows the ISO 8601 standard and is in UTC time. Format: yyyy-MM-ddTHH:mm:ssZ.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
ClientToke n	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The token used to ensure idempotence. You can generate the token in your client, but you must ensure that it is globally unique. ClientToken can contain only ASCII characters. It must be no more than 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

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

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceSpec
&InstanceId=i-xxxxx1
&InstanceType=ecs.s1.large
&InternetMaxBandwidthOut=10
&InternetMaxBandwidthIn=100
&ClientToken=xxxxxxxx
&<Common request parameters>
```

Successful response examples

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 when the specified instance type does not exist.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType does not exist or beyond the permitted range.	The error message returned when the specified instance type is not supported.

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 when the specified instance type is not supported.
400	InvalidParameter. Mismatch	Too many parameters in one request.	The error message returned when the request contains too many parameters.
403	CategoryViolation	The specified instance does not support this operation because of its disk category.	The error message returned when configurations are changed for instances with local disks attached.
403	InvalidStatus. ValueNotSupported	The current status of the resource does not support this operation.	The error message returned when the operation is not supported while the resource is in the current state.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned when an unknown error occurs.
403	InvalidAccountStatus. NotEnoughBalance	Your account does not have enough balance.	The error message returned when your account has insufficient balance.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned when this operation is not supported while this billing method is selected.
400	BandwidthUpgradeDenied. EipBoundInstance	The specified VPC instance has bound EIP , temporary bandwidth upgrade is denied.	The error message returned when temporary bandwidth upgrade is not supported while an EIP has been bound to this instance.

HTTP status code	Error code	Error message	Description
404	MissingTemporary.StartTime	Temporary.StartTime is not specified.	The error message returned when the start time of the temporary bandwidth upgrade is not specified.
404	MissingTemporary.EndTime	Temporary.EndTime is not specified.	The error message returned when the end time of the temporary bandwidth upgrade is not specified.
400	InvalidTemporary.StartTime	The specified Temporary.StartTime is not valid.	The error message returned when the start time of the temporary bandwidth upgrade is invalid.
400	InvalidTemporary.EndTime	The specified Temporary.EndTime is not valid.	The error message returned when the end time of the temporary bandwidth upgrade is invalid.
400	Downgrade.NotSupported	Downgrade operation is not supported.	The error message returned when configuration downgrade is not supported.
400	DependencyViolation.InstanceType	The current InstanceType cannot be changed to the specified InstanceType.	The error message returned when the instance cannot be changed to the specified instance type.
403	InvalidInstanceType.ValueNotSupported	The specified zone does not offer the specified instancetype.	The error message returned when the specified instance type is not supported.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned when you have unpaid orders under your account.

HTTP status code	Error code	Error message	Description
400	InvalidParameter. AllowMigrateAcrossZone	The specified parameter CanMigrateAcrossZone is not valid.	The error message returned when the specified CanMigrateAcrossZone is invalid.
400	InvalidParameter.SystemDisk Category	The specified parameter SystemDisk.Category is not valid.	The error message returned when the specified SystemDisk.Category is invalid.
403	InstanceType. Offline	The specified InstanceType has been offline	The error message returned when the instance type is unavailable on the Alibaba Cloud market.
400	IdempotenceParamNotMatch	There is a idempotence signature mismatch between this and last request.	The error message returned when the idempotent signatures are inconsistent.
403	InvalidParameter. NotMatch	%s	The error message returned when the parameter is in conflict with another parameter.
403	InvalidInstance. EipNotSupport	The specified instance with eip is not supported , please unassociate eip first.	The error message returned when the operation is not supported while an EIP has been bound to this instance. Unbind the EIP first.
400	InvalidAction. NotSupport	The ecs on dedicatedHost not support modify instanceType.	The error message returned when the instance on the DDH does not support instance type change.
403	InvalidOperation. Ipv4CountExceeded	%s	The error message returned when the maximum number of IPv4 addresses is reached.

HTTP status code	Error code	Error message	Description
403	InvalidOperation. Ipv6CountExceeded	%s	The error message returned when the maximum number of IPv6 addresses is reached.
403	InvalidOperation. Ipv6NotSupport	%s	The error message returned when IPv6 addresses are not supported by the instance type.

[View error codes](#)

6.29 ModifyPrepayInstanceSpec

You can call this operation to change the type of your subscription instance. The new instance type will take effect for the entire lifecycle of the instance.

Description

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

When you call this operation, note that:

- The instance must be in the stopped (`Stopped`) state.
- The specified instance cannot have overdue payment.
- Before changing the [subscription](#) instance type, you can call the [DescribeResourcesModification](#) operation to query the instance types you can change to.
- For instance type downgrade:
 - You can downgrade the type of an instance up to three times. The refund for the price difference cannot exceed three times.
 - The price difference is refunded to the payment account you used. Price difference of coupon purchases are not refunded.
 - You have to wait for five minutes to initiate another instance type downgrade after a successful downgrade for an instance.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-xxxxx1	The ID of the instance.
InstanceType	String	Yes	ecs.s1.large	The new instance type. For more information, see Instance type families , or call the DescribeInstanceTypes operation to obtain the latest instance type list.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to view the latest region list.
Action	String	No	ModifyPrepayInstanceSpec	The operation that you want to perform. Set the value to <code>ModifyPrepayInstanceSpec</code> .

Name	Type	Required	Example	Description
AutoPay	Boolean	No	true	Indicates whether to enable automatic payment. When <code>OperatorType</code> is set to <code>downgrade</code>, <code>AutoPay</code> is ignored . Default value: <code>true</code>. Valid values: · <code>true</code>: enables automatic payment. Make sure that your account has sufficient balance. Otherwise, your order becomes invalid and you have to cancel this order . · <code>false</code>: No payment is made and only an order is generated. After you change the billing method, <code>AutoPay</code> is set to <code>true</code>. Make sure that your account has sufficient balance. Otherwise, your order becomes invalid and you have to cancel this order. If your account balance is insufficient, you can set <code>AutoPay</code> to <code>false</code>. Then an order is generated. You can log on to the ECS console to pay for it.

Name	Type	Required	Example	Description
MigrateAcrossZone	Boolean	No	false	Indicates whether to enable cross-cluster instance type upgrade. Default value: false. When MigrateAcrossZone is set to true and you upgrade the instance type based on the returned information, make sure that: Classic instances: - For phased-out instance types, when a non-optimized instance is upgraded to an optimized instance, the following items are modified: private IP address, driver name, and software authorization code. For Linux instances, basic disks (cloud) are identified as xvda or xvdb. Ultra disks (cloud_efficiency) and SSDs (cloud_ssd) are identified as vda or vdb. - For instance type families available on the Alibaba Cloud market, the private IP is modified after instance type upgrade. VPC-type instances: For phased-out instance types, when a non-optimized instance is upgraded to an optimized instance, the following items are modified: driver name and software authorization code. For Linux instances, basic disks (cloud) are identified as xvda or xvdb. Ultra disks (cloud_efficiency) and SSDs (cloud_ssd) are identified as vda or vdb.

Name	Type	Required	Example	Description
OperatorType	String	No	downgrade	The configuration change type . Default value: downgrade. Valid values: - upgrade. When <code>OperatorType</code> is set to <code>upgrade</code> , make sure that your payment account has sufficient balance or credit. - downgrade. [DO NOT TRANSLATE] ~~55263~~~25378~~[DO NOT TRANSLATE] [DO NOT TRANSLATE] [DO NOT TRANSLATE] [DO NOT TRANSLATE] [DO NOT TRANSLATE]
SystemDisk . Category	String	No	cloud_efficiency	System disk change option. This parameter is valid only when you upgrade one of the phased-out instance types to one of the instance type families available on the Alibaba Cloud market and upgrade a non-optimized instance to an optimized instance. Valid values: - cloud_efficiency: ultra disk. - cloud_ssd: SSD.

Name	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The token used to ensure idempotence. You can generate the token in your client, but you must ensure that it is globally unique. ClientToken can contain only ASCII characters. It must be no more than 64 characters in length. For more information, see How to ensure idempotence .

Response parameters

Name	Type	Example	Description
OrderId	String	1111111111 1111111111111110	The ID of the order.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyPrepayInstanceSpec
&RegionId=cn-hangzhou
&InstanceId=i-xxxxx1
&InstanceType=ecs.s1.large
&AutoPay=true
&OperatorType=upgrade
&ClientToken=xxxxxxxxxx
&<Common request parameters>
```

Successful response examples

XML format

```
<ModifyPrepayInstanceSpecResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
  <OrderId>1011111111 111111</OrderId>
```

```
</ ModifyPrep ayInstance SpecRespon se >
```

JSON format

```
{
  " OrderId ": 1011111111 111111 ,
  " RequestId ":" 04F0F334 - 1335 - 436C - A1D7 - 6C044FE733 68 "
}
```

Error codes

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 when the specified instance type is not supported.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned when an unknown error occurs.
400	InvalidBillingMethod.ValueNotSupported	The operation is not permitted due to an invalid billing method of the instance.	The error message returned when the operation is not supported due to the invalid billing method for the instance.
400	InvalidInstanceId.Released	The specified instance has been released.	The error message returned when the instance has been released.
400	InvalidInstance.PurchaseNotFound	The specified instance has no purchase history.	The error message returned when the order record for this instance does not exist.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned when you have unpaid orders under your account.

HTTP status code	Error code	Error message	Description
403	InvalidUser.PassRoleForbidden	The RAM user does not have privilege to pass a role.	The error message returned when RAM users attempt to assign RAM roles.
400	InvalidRebootTime.MalFormed	The specified rebootTime is not valid.	The error message returned when the specified RebootTime is invalid.
403	ImageNotSupportInstanceType	The specified image does not support the specified InstanceType.	The error message returned when the specified instance type is not supported in the specified image.
403	InstanceType.Offline	%s	The error message returned when the specified instance type is unavailable.
400	IdempotenceParamNotMatch	Request uses a client token in a previous request but is not identical to that request.	The error message returned when ClientToken in this request is not identical to the one used in the previous request.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned when the operation is not supported while the resource is in the current state.
400	IdempotenceParamNotMatch	%s	The error message returned when the idempotent signatures are inconsistent.
400	InvalidInstanceChargeType.ValueNotSupported	%s	The error message returned when the specified billing method is not supported.

HTTP status code	Error code	Error message	Description
400	InvalidStatus. NotStopped	Instance status must be stopped.	The error message returned when the instance is not in the stopped state.
400	InvalidAction	%s	The error message returned when the operation is invalid.
400	InstanceDowngrade. QuotaExceed	Quota of instance downgrade is exceed.	The error message returned when the maximum number of instance type downgrades for the instance is reached .
400	InvalidInstanceType. ValueNotSupported	%s	The error message returned when the instance type attribute is incorrect.
403	InvalidParameter. InstanceId	%s	The error message returned when the specified InstanceId is invalid.
400	InvalidParameter	%s	The error message returned when the parameter format is incorrect.
403	ImageNotSupportInstanceType	The specified instanceType is not supported by instance with marketplace image.	The error message returned when the 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 when the operation is not supported while the instance is in the current state.

HTTP status code	Error code	Error message	Description
403	InvalidInstance.PreInstanceExpired	Instance business status is not Expired	The error message returned when the instance status is incorrect.
403	InvalidInstance.EipNotSupport	The special instance with eip not support operate , please unassociate eip first.	The error message returned when the operation is not supported while an EIP has been bound to this instance. Unbind the EIP first.
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned when the maximum number of IPv4 addresses is reached.
403	InvalidOperation.Ipv6CountExceeded	%s	The error message returned when the maximum number of IPv6 addresses is reached.
403	InvalidOperation.Ipv6NotSupport	%s	The error message returned when IPv6 addresses are not supported by the instance type.

[View error codes](#)

7 Launch templates

7.1 CreateLaunchTemplate

Creates an instance launch template, or template for short. An instance launch template removes the need to configure a large number of parameters every time you create an instance.

Description

Instance launch templates contain preset configurations used to create instances, such as the instance region, image ID, instance type, security group ID, and public bandwidth settings. If the configuration of a certain parameter is not included in the template, that parameter must be specified manually during instance creation. After you create a template (`CreateLaunchTemplate`), its version number is set to 1 by default. You can create multiple versions (`CreateLaunchTemplateVersion`) based on this template. Version numbers start from 1 and increase sequentially. If you do not specify a template version number when creating an instance ([RunInstances](#)), the default version will be used.

When you call this operation, note that:

- You can create up to 30 instance launch templates in each region. Each template can have up to 30 versions.
- Most instance launch template parameters are optional. When you create a template, ECS does not verify the existence or validity of its parameter values. The validity of specified parameter values cannot be verified until you create instances with the template.
- If you configure a certain parameter in an instance launch template, you cannot filter out this parameter when creating an instance ([RunInstances](#)). For example, if `HostName = LocalHost` is configured in the template, and the value of the `HostName` parameter is not specified in the `RunInstances` operation, the host name of the instance is still `LocalHost` . If you want to overwrite the `HostName = LocalHost` configuration, you can configure `RunInstances` or other parameters in the `HostName = MyHost` operation.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
LaunchTemplateName	String	Yes	JoshuaWinPrePaid	The name of the instance 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 (-).
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	CreateLaunchTemplate	The operation that you want to perform. Set the value to CreateLaunchTemplate.

Name	Type	Required	Example	Description
AutoReleaseTime	String	No	2018-01-01T12:05:00Z	The time when the instance is automatically released. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ. • If the value of the seconds place (<code>ss</code>) is not <code>00</code> , the time will automatically be set to the start of the specified minute (<code>mm</code>). • The specified release time must be at least half an hour later than the current time. • The specified release time cannot be more than three years later than the current time.
DataDisk. N. Category	String	No	cloud_ssd	The category of data disk N. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: SSD • ephemeral_ssd: local SSD • cloud_essd: ESSD disk
DataDisk. N. DeleteWithInstance	Boolean	No	true	Indicates whether data disk N is released together with the instance.
DataDisk. N. Description	String	No	FinanceDept	The description of data disk N. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> .

Name	Type	Required	Example	Description
DataDisk . N . DiskName	String	No	cloud_ssdData	The name of a data 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 (-).
DataDisk . N . Encrypted	String	No	false	Indicates whether data disk N is encrypted.
DataDisk . N . Size	Integer	No	2000	The size of data disk N. Valid values of N: 1 to 16. Unit: GiB. Valid values: • cloud: 5 to 2000 • cloud_efficiency: 20 to 32768 • cloud_ssd: 20 to 32768 • cloud_essd: 20 to 32768 • ephemeral_ssd: 5 to 800 The value of this parameter must be greater than or equal to that of the snapshot specified by the <code>SnapshotId</code> parameter.

Name	Type	Required	Example	Description
DataDisk. N. SnapshotId	String	No	s-bp17441ohw ka0yuhx3h0	The ID of the snapshot used to create the data disk. Valid values of n: 1 to 16. If the <code>DataDisk.N.SnapshotId</code> parameter is specified, the <code>DataDisk.N.Size</code> parameter will be ignored, and the size of the created disk will be the size of the specified snapshot. The specified snapshot cannot be created on or before July 15, 2013. Otherwise, an error will be returned.
Description	String	No	FinaceDept	The description for the instance. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> .
EnableVmOs Config	Boolean	No	false	Indicates 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 compatibility.

Name	Type	Required	Example	Description
HostName	String	No	JoshuaHost	The name of the host that will contain the created ECS instances. • It cannot start or end with a period (.) or a hyphen (-). It cannot contain consecutive periods (.) or hyphens (-). • On Windows, the hostname must be 2 to 15 characters in length. The hostname cannot contain periods (.) or contain only digits. It can contain letters, digits, and hyphens (-). • On other OSs such as Linux, the hostname must be 2 to 64 characters in length. It can be segments separated with periods (.). Each segment can contain letters, digits, and hyphens (-).
ImageId	String	No	win2008r2_64_ent_sp1_en-us_40G_alibase_20170915.vhd	The ID of the image file to be used to create the instances. You can call DescribeImages to query available images.

Name	Type	Required	Example	Description
ImageOwner Alias	String	No	system	The source of the image. Valid values: • system: public images provided by Alibaba Cloud. • self: your custom images. • others: shared images from other Alibaba Cloud users. • marketplace: available images from Alibaba Cloud Marketplace. If images from Marketplace are returned in the result, you can directly use these images without prior subscription. You must pay attention to the billing details of images from Marketplace. Default value: null, indicating that the results matching system, self, and others are returned.
InstanceChargeType	String	No	PrePaid	The billing method of the instance. Valid values: • PrePaid: Subscription If you select this billing method, ensure that you have activated credit card payment for your account. Otherwise, the error message <code>InvalidPaymentMethod</code> will be returned. • Postpaid: Pay-As-You-Go.

Name	Type	Required	Example	Description
InstanceName	String	No	JoshuaHost	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 (-).
InstanceType	String	No	ecs.g5.large	The instance type. For more information, see Instance type families or call DescribeInstanceTypes to query latest instance types.
InternetChargeType	String	No	PayByTraffic	The billing method of network bandwidth. Valid values: PayByTraffic: You are billed based on the actual amount of bandwidth used by traffic.
InternetMaxBandwidthIn	Integer	No	200	The maximum inbound bandwidth from the Internet. Unit: Mbit/s. Valid values: 1 to 200.
InternetMaxBandwidthOut	Integer	No	5	The maximum outbound bandwidth to the Internet. Unit: Mbit/s. Valid values: 0 to 100.
IoOptimized	String	No	optimized	Indicates whether the instance is I/O optimized. Valid values: - none: The instance is not I/O optimized. - optimized: The instance is I/O optimized.

Name	Type	Required	Example	Description
KeyPairName	String	No	Instancetest	The name of the key pair. - For a Windows ECS instance, this parameter is ignored. The Password parameter is still effective even when the KeyPairName parameter is specified. - For a Linux ECS instance, the username and password authentication method is disabled by default.
NetworkInterface.N.Description	String	No	FinnanceDept	The description of an ENI. The description must be 2 to 256 characters in length and cannot start with http:// or https://.  Note: The value of N in the NetworkInterface.N parameter must be either 0 or 1.
NetworkInterface.N.NetworkInterfaceName	String	No	FinnanceJoshua	The name of the ENI.  Note: The value of N in the NetworkInterface.N parameter must be either 0 or 1.

Name	Type	Required	Example	Description
NetworkInterface.N.PrimaryIpAddress	String	No	192.168.2.XXX	The primary private IP address of the ENI.  Note: The value of N in the <code>NetworkInterface.N</code> parameter must be either 0 or 1.
NetworkInterface.N.SecurityGroupId	String	No	sg-bp15ed6xe1yxeycg7ov3	The ID of the security group to which the ENI belongs. The security group of the ENI must belong to the same VPC as that of the instance.  Note: The value of N in the <code>NetworkInterface.N</code> parameter must be either 0 or 1.
NetworkInterface.N.VSwitchId	String	No	vsw-bp1s5fnvk4gn2tw503ziX	The ID of the VSwitch to which the ENI belongs. The instance must be in the same zone of the same VPC network as the ENI, but they can belong to different VSwitches.  Note: The value of N in the <code>NetworkInterface.N</code> parameter must be either 0 or 1.

Name	Type	Required	Example	Description
NetworkType	String	No	vpc	The network type of the instance. Valid values: - classic - vpc
Period	Integer	No	1	The duration of the subscription. Unit: month. This parameter is required when the value of the <code>InstanceChargeType</code> parameter is set to <code>PrePaid</code> and only takes effect when this condition is met. If the <code>DedicatedHostId</code> parameter is specified, the value range of the <code>Period</code> parameter must be within the subscription period of the dedicated host. Valid values: - When the <code>PeriodUnit</code> parameter is set to <code>Week</code>, the valid values of the <code>Period</code> parameter are {"1", "2", "3", "4"}. - When the <code>PeriodUnit</code> parameter is set to <code>Month</code>, the valid values of the <code>Period</code> parameter are {"1", "2", "3", "4", "5", "6", "7", "8", "9", "12", "24", "36", "48", "60"}.
RamRoleName	String	No	FinanceDept	The RAM role name of the instance. You can call the RAM operation ListRoles to query the RAM roles that you have created.

Name	Type	Required	Example	Description
ResourceGroupId	String	No	rg-resourcegroupid1	The ID of the resource group to which the instance, disk, and ENI belong.
SecurityEnhancementsStrategy	String	No	Deactive	Indicates whether to enable security hardening for the operating system. Valid values: - Active: enables security hardening for public images. - Deactive: disables security hardening for all images.
SecurityGroupId	String	No	sg-bp15ed6xe1yxeycg7ov3	The ID of the security group that the created instance will belong to. Instances within the same security group can access one another. A security group can contain up to 1,000 instances.
SpotDuration	Integer	No	1	The protection period of the instance.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.

Name	Type	Required	Example	Description
SpotPriceLimit	Float	No	0.97	The maximum hourly price of the instance. This parameter supports up to three decimal places and takes effect when the value of the <code>SpotStrategy</code> parameter is <code>SpotWithPriceLimit</code> .
SpotStrategy	String	No	NoSpot	The preemption policy of a Pay-As-You-Go instance. This parameter takes effect only when the value of the <code>InstanceChargeType</code> parameter is <code>PostPaid</code> . Valid values: - NoSpot: a normal Pay-As-You-Go instance - SpotWithPriceLimit: a preemptible instance with a maximum hourly price - SpotAsPriceGo: an instance that is billed based on the actual market price
SystemDisk.Category	String	No	cloud_ssd	The category of the system disk. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: SSD - ephemeral_ssd: local SSD - cloud_essd: ESSD

Name	Type	Required	Example	Description
SystemDisk . Description	String	No	FinanceDept	The description of the system disk. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
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 . 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 GiB, or greater than or equal to the value of ImageSize.
Tag . N . Key	String	No	FinanceDept	The tag key of an instance, disk, or NIC. Valid values of N: 1 to 5. It cannot be a null string. It can be a maximum of 64 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https://.

Name	Type	Required	Example	Description
Tag . N . Value	String	No	FinanceDept. Joshua	The tag value of an instance, disk, or NIC. Valid values of N : 1 to 5. It can be a null string . It can be a maximum of 128 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https ://.
TemplateResourceGroupId	String	No	rg-resourcegroupid2	The ID of the resource group to which the launch template belongs.
TemplateTag . N . Key	String	No	LTFinance	The tag key of the launch template. Valid values of N: 1 to 20. It cannot be a null string . It can be a maximum of 64 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https ://.
TemplateTag . N . Value	String	No	LTFinanceJoshua	The tag value of the launch template. Valid values of N: 1 to 20. It can be a null string. It can be a maximum of 128 characters in length. It cannot start with aliyun, acs:, http://, or https://.
UserData	String	No	ZWNobyBoZWsbyBIY3Mh	The custom data of the instance. It is encoded by using Base64. The maximum size of the raw data is 16 KB.

Name	Type	Required	Example	Description
VSwitchId	String	No	vsw-bp1s5fnvk4gn2tw03ziX	The ID of the VSwitch. If you are creating VPC-type instances, you must specify this parameter.
VersionDescription	String	No	LTFinanceJoshua	The description of instance launch template version 1. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
VpcId	String	No	vpc-bp12433upq1y5sceni07X	The ID of the VPC.
ZoneId	String	No	cn-hangzhou-g	The ID of the zone to which the instance belongs.

Response parameters

Name	Type	Example	Description
LaunchTemplateId	String	lt-m5eiaupmvm2op9dxxxxx	The ID of the instance launch template.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateLaunchTemplate
&LaunchTemplateName=JoshuaWinPrePaid
&RegionId=cn-hangzhou
&TemplateTag.1.Key=LTFinance
&TemplateTag.1.Value=LTFinanceJoshua
&VersionDescription=LTFinanceJoshua
&ImageId=win2008r2_64_ent_sp1_en-us_40G_alibase_20170915.vhd
&InstanceType=ecs.g5.large
```



```

& SecurityGroupIds = sg - bp15ed6xe1_yxeycg7ov3
& VpcId = vpc - bp12433upq_1y5sceni07_X
& VSwitchId = vsw - bp1s5fnvk4_gn2tws03zi_X
& InstanceName = JoshuaHost
& Description = FinaceDept
& InternetMaxBandwidthIn = 200
& InternetMaxBandwidthOut = 5
& HostName = JoshuaHost
& ZoneId = cn - hangzhou - g
& SystemDisk.Category = cloud_ssd
& SystemDisk.Size = 40
& SystemDisk.DiskName = cloud_ssd_System
& SystemDisk.Description = FinanceDept
& DataDisk.1.Size = 2000
& DataDisk.1.SnapshotId = s - bp17441ohw_ka0yuhx3h0
& DataDisk.1.Category = cloud_ssd
& DataDisk.1.Encrypted = false
& DataDisk.1.DiskName = cloud_ssd_Data
& DataDisk.1.Description = FinanceDept
& DataDisk.1.DeleteWithInstance = true
& IoOptimized = optimized
& NetworkInterface.1.PrimaryIpAddress = 192 . 168 . 2 .
  XXX
& NetworkInterface.1.VSwitchId = vsw - bp1s5fnvk4_gn2tws03zi_X
& NetworkInterface.1.SecurityGroupId = sg - bp15ed6xe1_yxeycg7ov3
& NetworkInterface.1.NetworkInterfaceName = FinnanceJoshua
& NetworkInterface.1.Description = FinnanceDept
& InstanceChargeType = PrePaid
& Period = 1
& InternetChargeType = PayByTraffic
& NetworkType = vpc
& UserData = ZWNobyBoZWxsbyBLY3Mh
& KeyPairName = InstanceTest
& RamRoleName = FinanceDept
& AutoReleaseTime = 2018 - 01 - 01T12 : 05 : 00Z
& SpotStrategy = NoSpot
& SpotPriceLimit = 0 . 97
& SecurityEnhancementStrategy = Deactive
& Tag.1.Key = FinanceDept
& Tag.1.Value = FinanceDept . Joshua
&< Common request parameters >

```

Successful response examples

XML format

```

< CreateLaunchTemplate Response >
  < RequestId > 04F0F334 - 1335 - 436C - A1D7 - 6C044FExxx_xx </
    RequestId >
    < LaunchTemplateId > lt - m5eiaupmvm_2op9dxxxxx </ LaunchTemp
      lateId >
  </ CreateLaunchTemplate Response >

```

JSON format

```

{
  "LaunchTemplateId": "lt - m5eiaupmvm_2op9dxxxxx",
  "RequestId": "04F0F334 - 1335 - 436C - A1D7 - 6C044FExxx_xx"
}

```

}

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion. NotExist	%s	The error message returned when the specified region does not exist.
403	LaunchTemplateLimitExceed	%s	The error message returned when the number of launch templates has reached the upper limit.
403	LaunchTemplateName. Duplicated	%s	The error message returned when the specified template name is already in use.
400	MissingParameter	%s	The error message returned when a required parameter is not specified .
400	InvalidParameter	%s	The error message returned when the parameter format is invalid.
400	InvalidLaunchTemplateName. Malformed	The specified parameter LaunchTemplateName is not valid.	The error message returned when the specified value of the LaunchTemplateName parameter is invalid.
400	InvalidDescription. Malformed	The specified parameter VersionDescription is not valid.	The error message returned when the format of the specified template version description is invalid.
403	InnerServiceFailed	%s	The error message returned when an internal service failed to be called.

HTTP status code	Error code	Error message	Description
400	InvalidUserData.SizeExceeded	%s	The error message returned when the size of the specified custom data exceeds the limit.
400	InvalidUserData.Base64FormatInvalid	%s	The error message returned when the format of the specified template version description is invalid.

[View error codes](#)

7.2 CreateLaunchTemplateVersion

Creates a new version for a specified instance launch template.

Description

You can create up to 30 versions of each instance launch template. The `CreateLaunchTemplateVersion` operation allows you to create new versions of templates instead of modifying existing template versions. To modify the parameters of a specific version, you can create a new template version. For more information, see [CreateLaunchTemplate](#).

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.

Name	Type	Required	Example	Description
Action	String	No	CreateLaunchTemplateVersion	The operation that you want to perform. Set the value to CreateLaunchTemplateVersion.
AutoReleaseTime	String	No	2018-01-01T12:05:00Z	The time when the instance is automatically released. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ. • If the value of the seconds place (ss) is not 00 , the time will automatically be set to the start of the specified minute (mm). • It must be at least half an hour past the current time. • It must be less than three years from the current time.
DataDisk . N . Category	String	No	cloud_ssd	The category of data disk N. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: SSD • ephemeral_ssd: local SSD • cloud_essd: ESSD
DataDisk . N . DeleteWithInstance	Boolean	No	true	Indicates whether the data disk is released together with the instance.

Name	Type	Required	Example	Description
DataDisk . N . Description	String	No	FinanceDept	The description of the instance . The description must be 2 to 256 characters in length and cannot start with http:// or https://.
DataDisk . N . DiskName	String	No	cloud_ssdData	The name of a data 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 (-).
DataDisk . N . Encrypted	String	No	false	Indicates whether data disk N is encrypted.
DataDisk . N . Size	Integer	No	2000	The size of data disk N. Valid values of N: 1 to 16. Unit: GiB. Valid values: - cloud: 5 to 2000 - cloud_efficiency: 20 to 32768 - cloud_ssd: 20 to 32768 - cloud_essd: 20 to 32768 - ephemeral_ssd: 5 to 800 The value of this parameter must be greater than or equal to that of the snapshot specified by the <code>SnapshotId</code> parameter.

Name	Type	Required	Example	Description
<code>DataDisk . N . SnapshotId</code>	String	No	<code>s-bp17441ohwka0yuhx3h0</code>	The ID of the snapshot used to create data disk n. Valid values of n: 1 to 16. If the <code>DataDisk . n . SnapshotId</code> parameter is specified, the <code>DataDisk . n . Size</code> parameter will be ignored, and the size of the created disk will be the size of the specified snapshot. The specified snapshot cannot be created on or before July 15, 2013. Otherwise, an error will be returned.
<code>Description</code>	String	No	<code>FinaceDept</code>	The description of the instance . The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> .
<code>EnableVmOs Config</code>	Boolean	No	<code>false</code>	Indicates whether to enable the operating system configuration of the instance.

Name	Type	Required	Example	Description
HostName	String	No	JoshuaHost	The name of the host where the created ECS instances reside. • It cannot start or end with a period (.) or a hyphen (-). It cannot contain consecutive periods (.) or hyphens (-). • On Windows, the hostname must be 2 to 15 characters in length. The hostname cannot contain periods (.) or contain only digits. It can contain letters, digits, and hyphens (-). • On other OSs such as Linux, the hostname must be 2 to 64 characters in length. It can be segments separated with periods (.). Each segment can contain letters, digits, and hyphens (-).
ImageId	String	No	win2008r2_64_ent_sp1_en-us_40G_alibase_20170915.vhd	The ID of the image to be used to create instances. You can call DescribeImages 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 compatibility.

Name	Type	Required	Example	Description
InstanceChargeType	String	No	PrePaid	The billing method of the instance. Valid values: • PrePaid: Subscription If you select this billing method, ensure that you have activated credit card payment for your account. Otherwise, the error message <code>InvalidPaymentMethod</code> will be returned. • PostPaid: Pay-As-You-Go
InstanceName	String	No	JoshuaHost	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 <code>http://</code> or <code>https://</code>. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
InstanceType	String	No	ecs.g5.large	The instance type. For more information, see Instance type families or call DescribeInstanceTypes to query latest instance types.
InternetChargeType	String	No	PayByTraffic	The billing method of the network bandwidth. Valid values: • PayByTraffic: You are billed based on the actual traffic usage.

Name	Type	Required	Example	Description
InternetMaxBandwidthIn	Integer	No	200	The maximum inbound bandwidth for Internet traffic. Unit: Mbit/s. Valid values: 1 to 200.
InternetMaxBandwidthOut	Integer	No	5	The maximum outbound bandwidth for Internet traffic. Unit: Mbit/s. Valid values: 0 to 100.
IoOptimized	String	No	optimized	Indicates whether the instance is I/O optimized. Valid values: · none: The instance is not I/O optimized. · optimized: The instance is I/O optimized.
KeyPairName	String	No	Instancetest	The name of the key pair. · For Windows ECS instances, this parameter is ignored. The Password parameter is still effective even when the KeyPairName parameter is specified. · By default, the username and password authentication method is disabled for Linux ECS instances.

Name	Type	Required	Example	Description
LaunchTemplateId	String	No	lt-m5eiaupmvm2op9dxxxxx	The ID of the instance launch template. For more information, call DescribeLaunchTemplates . You must specify either the <code>LaunchTemplateId</code> parameter or the <code>LaunchTemplateName</code> parameter to determine a launch template.
LaunchTemplateName	String	No	JoshuaWinPrePaid	The name of the instance launch template. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code> . It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
NetworkInterface.N.Description	String	No	FinnanceDept	The description of the ENI. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code>.  Note: The value of N in the <code>NetworkInterface.N</code> parameter cannot be greater than 1.

Name	Type	Required	Example	Description
NetworkInterface.N.NetworkInterfaceName	String	No	FinnanceJoshua	The name of the ENI.  Note: The value of N in the <code>NetworkInterface.N</code> parameter cannot be greater than 1.
NetworkInterface.N.PrimaryIpAddress	String	No	192.168.2.XXX	The primary private IP address of the ENI.  Note: The value of N in the <code>NetworkInterface.N</code> parameter cannot be greater than 1.
NetworkInterface.N.SecurityGroupId	String	No	sg-bp15ed6xe1yxeycg7ov3	The ID of the security group to which the ENI belongs. The security group of the ENI must belong to the same VPC as the instance.  Note: The value of N in the <code>NetworkInterface.N</code> parameter cannot be greater than 1.

Name	Type	Required	Example	Description
NetworkInterface.N.VSwitchId	String	No	vsw-bp1s5fnvk4gn2tw03ziX	The ID of the VSwitch to which the ENI belongs. The instance must be in the same zone of the same VPC network as the ENI, but they can belong to different VSwitches.  Note: The value of N in the <code>NetworkInterface.N</code> parameter cannot be greater than 1.
NetworkType	String	No	vpc	The network type of the instance. Valid values: • classic • vpc

Name	Type	Required	Example	Description
Period	Integer	No	1	The subscription duration. Unit: month. This parameter takes effect and is required only when the value of the <code>InstanceChargeType</code> parameter is set to <code>PrePaid</code>. If the <code>DedicatedHostId</code> parameter is specified, the value range of the <code>Period</code> parameter must be within the subscription period of the dedicated host. Valid values: - When the <code>PeriodUnit</code> parameter is set to <code>Week</code>, the valid values of the <code>Period</code> parameter are {"1", "2", "3", "4"}. - When the <code>PeriodUnit</code> parameter is set to <code>Month</code>, the valid values of the <code>Period</code> parameter are {"1", "2", "3", "4", "5", "6", "7", "8", "9", "12", "24", "36", "48", "60"}.
RamRoleName	String	No	FinanceDept	The RAM role name of the instance. You can call the RAM operation ListRoles to query the RAM roles that you have created.

Name	Type	Required	Example	Description
ResourceGroupId	String	No	rg-resourcegroupid	The ID of the resource group.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
SecurityEnhancementsStrategy	String	No	Active	Indicates whether to enable security hardening for the operating system. Valid values: - Active: enables security hardening for public images. - Deactive: disables security hardening for all images.
SecurityGroupId	String	No	sg-bp15ed6xe1yxeycg7ov3	The ID of the security group to which the created instances belong. Instances within the same security group can access one another.
SpotDuration	Integer	No	1	The protection period of the instance.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
SpotPriceLimit	Float	No	0.97	The maximum hourly price of the instance. This parameter supports up to three decimal places.

Name	Type	Required	Example	Description
SpotStrategy	String	No	NoSpot	The preemption policy of a Pay-As-You-Go instance. This parameter takes effect when the value of the <code>InstanceChargeType</code> parameter is <code>PostPaid</code>. Valid values: <code>NoSpot</code>: a normal Pay-As-You-Go instance <code>SpotWithPriceLimit</code>: a preemptible instance with a maximum hourly price <code>SpotAsPriceGo</code>: an instance that is billed based on the actual market price
SystemDiskCategory	String	No	cloud_ssd	The category of the system disk. Valid values: <code>cloud</code>: basic disk <code>cloud_efficiency</code>: ultra disk <code>cloud_ssd</code>: SSD <code>ephemeral_ssd</code>: local SSD <code>cloud_essd</code>: ESSD
SystemDiskDescription	String	No	FinanceDept	The description of the system disk. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code>.

Name	Type	Required	Example	Description
SystemDisk . DiskName	String	No	cloud_ssdS ystem	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 . 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 GiB, or greater than or equal to the value of ImageSize.
Tag . N . Key	String	No	FinanceDept	The tag key of an instance, disk , or NIC. Valid values of N: 1 to 5. It cannot be a null string . It can be a maximum of 64 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https ://.
Tag . N . Value	String	No	FinanceDept. Joshua	The tag value of an instance, disk, or NIC. Valid values of N : 1 to 5. It can be a null string . It can be a maximum of 128 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https ://.

Name	Type	Required	Example	Description
UserData	String	No	ZWNobyBoZW xsbyBIY3Mh	The custom data of the instance. It is encoded by using Base64. The maximum size of the raw data is 16 KB.
VSwitchId	String	No	vsw- bp1s5fnvk4 gn2tw03ziX	The ID of the VSwitch. If you are creating VPC-type instances, you must specify this parameter.
VersionDescription	String	No	LTFinanceJ oshua	The description of instance launch template. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
VpcId	String	No	vpc- bp12433upq 1y5sceni07X	The ID of the VPC.
ZoneId	String	No	cn-hangzhou-g	The ID of the zone to which the instance belongs.

Response parameters

Name	Type	Example	Description
LaunchTemplateVersionNumber	Long	2	The version number of the instance launch template.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateLaunchTemplate
Version
&RegionId=cn-hangzhou
&LaunchTemplateId=lt-m5eiaupmvm2op9dxxxxx
&LaunchTemplateName=JoshuaWinPrePaid
&VersionDescription=LTFinanceJoshua
&ImageId=win2008r2_64_ent_sp1_en-us_40G_alibase_20170915.vhd
&InstanceType=ecs.g5.large
&SecurityGroupIds=sg-bp15ed6xe1yxeycg7ov3
&VpcId=vpc-bp12433upq1y5sceni07X
&VSwitchId=vsw-bp1s5fnvk4gn2tw03ziX
&InstanceName=JoshuaHost
&Description=FinanceDept
&InternetMaxBandwidthIn=200
&InternetMaxBandwidthOut=5
&HostName=JoshuaHost
&ZoneId=cn-hangzhou-g
&SystemDisk.Category=cloud_ssd
&SystemDisk.Size=40
&SystemDisk.DiskName=cloud_ssd_System
&SystemDisk.Description=FinanceDept
&DataDisk.1.Size=2000
&DataDisk.1.SnapshotId=s-bp17441ohwka0yuhx3h0
&DataDisk.1.Category=cloud_ssd
&DataDisk.1.Encrypted=false
&DataDisk.1.DiskName=cloud_ssd_Data
&DataDisk.1.Description=FinanceDept
&DataDisk.1.DeleteWithInstance=true
&IoOptimized=optimized
&NetworkInterface.1.PrimaryIpAddress=192.168.2.XXX
&NetworkInterface.1.VSwitchId=vsw-bp1s5fnvk4gn2tw03ziX
&NetworkInterface.1.SecurityGroupId=sg-bp15ed6xe1yxeycg7ov3
&NetworkInterface.1.NetworkInterfaceName=FinnanceJoshua
&NetworkInterface.1.Description=FinanceDept
&InstanceChargeType=PrePaid
&Period=1
&InternetChargeType=PayByTraffic
&NetworkType=vpc
&UserData=ZWNoByBoZWxsbyBLY3Mh
&KeyPairName=InstanceTest
&RamRoleName=FinanceDept
&AutoReleaseTime=2018-01-01T12:05:00Z
&SpotStrategy=NoSpot
&SpotPriceLimit=0.97
&SecurityEnhancementStrategy=Active
&Tag.1.Key=FinanceDept
&Tag.1.Value=FinanceDept.Joshua
&<Common request parameters>
```

Successful response examples

XML format

```
< CreateLaunchTemplateVersionResponse >
  < RequestId > 04F0F334 - 1335 - 436C - A1D7 - 6C044FExxx xx </
    RequestId >
    < LaunchTemplateVersionNumber > 2 </ LaunchTemplateVersion
      Number >
</ CreateLaunchTemplateVersionResponse >
```

JSON format

```
{
  "RequestId": "04F0F334 - 1335 - 436C - A1D7 - 6C044FExxx xx",
  "LaunchTemplateVersionNumber": 2
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotFound	%s	The error message returned when the specified region does not exist.
403	LaunchTemplateVersionLimitExceed	%s	The error message returned when the number of launch template versions has reached the upper limit.
404	InvalidLaunchTemplate.NotFound	%s	The error message returned when the specified launch template name does not exist.
400	MissingParameter	%s	The error message returned when a required parameter is not specified.
400	InvalidParameter	%s	The error message returned when the parameter format is invalid.

HTTP status code	Error code	Error message	Description
403	InnerServiceFailed	%s	The error message returned when an internal service failed to be called.
400	InvalidUserData.SizeExceeded	%s	The error message returned when the size of the specified custom data exceeds the limit.
400	InvalidUserData.Base64FormatInvalid	%s	The error message returned when the specified template version description is not formatted correctly.

[View error codes](#)

7.3 DeleteLaunchTemplate

Deletes an instance launch template.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the instance launch template belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.

Name	Type	Required	Example	Description
Action	String	No	DeleteLaunchTemplate	The operation that you want to perform. Set the value to DeleteLaunchTemplate.
LaunchTemplateId	String	No	lt-bp1apo0bbb-kuy0rj3b9X	The ID of the instance launch template. For more information, call DescribeLaunchTemplates . You must specify either the LaunchTemplateId parameter or the LaunchTemplateName parameter to determine a launch template.
LaunchTemplateName	String	No	JoshuaWinPostPaid	The name of the instance launch template. You must specify either the LaunchTemplateId parameter or the LaunchTemplateName parameter to determine a launch template.

Response parameters

Name	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-bp1apo0bbb-kuy0rj3b9X
&LaunchTemplateName=JoshuaWinPostPaid
```

&< Common request parameters >

Successful response examples

XML format

```
< DeleteLaunchTemplateResponse >
  < RequestId > 04F0F334 - 1335 - 436C - A1D7 - 6C044FExxx xx </
  RequestId >
</ DeleteLaunchTemplateResponse >
```

JSON format

```
{
  "RequestId ":" 04F0F334 - 1335 - 436C - A1D7 - 6C044FExxx xx "
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotFound	%s	The error message returned when the specified region does not exist.
400	MissingParameter	%s	The error message returned when a required parameter is not specified.
400	InvalidParameter	%s	The error message returned when the parameter format is invalid.
403	InternalServerErrorFailed	%s	The error message returned when an internal service failed to be called.

[View error codes](#)

7.4 DeleteLaunchTemplateVersion

Deletes an instance launch template version. This operation does not delete the default version of an instance launch template. To delete the default version, you must call `DeleteLaunchTemplate` to delete the instance launch template.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
DeleteVersion . N	RepeatList	Yes	2	The version number of the template. Valid values of N: 1 to 29. You can call DescribeLaunchTemplateVersions to query all versions of an instance launch template.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the template belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DeleteLaunchTemplateVersion	The operation that you want to perform. Set the value to <code>DeleteLaunchTemplateVersion</code> .
LaunchTemplateId	String	No	lt-bp1apo0bbbkuy0rj3b9X	The ID of the instance launch template. For more information, call DescribeLaunchTemplates .

Name	Type	Required	Example	Description
LaunchTemplateLateName	String	No	JoshuaWinP ostPaid	The name of the instance launch template.

Response parameters

Name	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
&RegionId=cn-hangzhou
&LaunchTemplateId=lt-bp1apo0bbb-kuy0rj3b9X
&LaunchTemplateLateName=JoshuaWinP-ostPaid
&<Common request parameters>
```

Successful response examples

XML format

```
<DeleteLaunchTemplateVersionResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxx-xx</RequestId>
</DeleteLaunchTemplateVersionResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxx-xx"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotFound	%s	The error message returned when the specified region does not exist.

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned when a required parameter is not specified .
400	InvalidParameter	%s	The error message returned when the parameter format is invalid.
403	InternalServerErrorFailed	%s	The error message returned when an internal service failed to be called.

[View error codes](#)

7.5 DescribeLaunchTemplates

Queries one or more instance launch templates.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DescribeLaunchTemplates	The operation that you want to perform. Set the value to DescribeLaunchTemplates.

Name	Type	Required	Example	Description
LaunchTemplateId . N	RepeatList	No	lt-m5e3ofjr1zn1aw7qdxxx	The IDs of one or more instance launch templates to be queried. You can specify a maximum of 100 launch template IDs. You must specify either the LaunchTemplateId parameter or the LaunchTemplateName parameter to determine a launch template.
LaunchTemplateName . N	RepeatList	No	wd-1526307480xxx	The names of one or more instance launch templates to be queried. You can specify a maximum of 100 launch template names.
PageNumber	Integer	No	1	The page number that you query in the instance launch template list. Starting value: 1. Default value: 1.
PageSize	Integer	No	10	The number of entries per page . Maximum value: 50. Default value: 10.
TemplateResourceGroupId	String	No	rg-resourcegroupid1	The ID of the resource group to which the launch template belongs.
TemplateTag . N . Key	String	No	FinanceDept	The tag key of the launch template. Valid values of N: 1 to 20.

Name	Type	Required	Example	Description
TemplateTag.N.Value	String	No	FinanceDeptJoshua	The tag value of the launch template. Valid values of N: 1 to 20.

Response parameters

Name	Type	Example	Description
LaunchTemplateSets			A set of instance launch templates.
└─CreateTime	String	2018-05-14T14:18:00Z	The creation time of the instance launch template.
└─CreatedBy	String	1942111349714xxx	The creator of the instance launch template.
└─DefaultVersionNumber	Long	1	The default version number of the template.
└─LatestVersionNumber	Long	1	The latest version number of the template.
└─LaunchTemplateId	String	lt-m5e3ofjr1zn1aw7qdxxx	The ID of the instance launch template.
└─LaunchTemplateName	String	wd-1526307480xxx	The name of the instance launch template.
└─ModifiedTime	String	2018-05-14T14:18:00Z	The time when the template was last modified.
└─ResourceGroupId	String	rg-resourcegroupid1	The ID of the resource group to which the launch template belongs.
└─Tags			The tag of the launch template.
└─TagKey	String	FinanceDept	The tag key of the launch template.

Name	Type	Example	Description
^L TagValue	String	FinanceDep tJoshua	The tag value of the launch template.
PageNumber	Integer	1	The current page number.
PageSize	Integer	10	The number of entries per page.
RequestId	String	04F0F334-1335-436C-A1D7-6C044FExxxxx	The ID of the request. This parameter is returned regardless of whether the operation is successful.
TotalCount	Integer	1	The total number of instance launch templates.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeLaunchTemplates
&RegionId=cn-hangzhou
&TemplateTag.1.Key=FinanceDept
&TemplateTag.1.Value=FinanceDeptJoshua
&LaunchTemplateId.1=lt-m5e3ofjr1zn1aw7qdxxx
&LaunchTemplateName.1=wd-1526307480xxx
&PageNumber=1
&PageSize=10
&TemplateResourceGroupId=rg-resourcegroupid1
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeLaunchTemplatesResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</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-m5e3ofjr1zn1aw7xxxx</LaunchTemplateId>
```

```

    < LaunchTemp    lateName > wd - 1526307480   xxx </ LaunchTemp
lateName >
    < DefaultVer    sionNumber > 1 </ DefaultVer    sionNumber >
    < LatestVers    ionNumber > 1 </ LatestVers    ionNumber >
    < CreatedBy > 1942111349   714xxx </ CreatedBy >
    </ LaunchTemp    lateSet >
  </ LaunchTemp    lateSets >
</ DescribeLa    unchTempla    tesRespons    e >

```

JSON format

```

{
  " PageNumber ": 1 ,
  " TotalCount ": 1 ,
  " LaunchTemp    lateSets ":{
    " LaunchTemp    lateSet ":[
      {
        " DefaultVer    sionNumber ": 1 ,
        " LaunchTemp    lateId ":" lt - m5e3ofjr1z   n1aw7qdxxx ",
        " LatestVers    ionNumber ": 1 ,
        " CreateTime ":" 2018 - 05 - 14T14 : 18 : 00Z ",
        " CreatedBy ":" 1942111349   714xxx ",
        " ModifiedTi    me ":" 2018 - 05 - 14T14 : 18 : 00Z ",
        " LaunchTemp    lateName ":" wd - 1526307480   xxx "
      }
    ]
  },
  " PageSize ": 10 ,
  " RequestId ":" 04F0F334 - 1335 - 436C - A1D7 - 6C044FExxx   xx "
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion. NotExist	%s	The error message returned when the specified region does not exist.
400	MissingPar ameter	%s	The error message returned when a required parameter is not specified .
400	InvalidPar ameter	%s	The error message returned when the parameter format is invalid.

HTTP status code	Error code	Error message	Description
403	InnerServiceFailed	%s	The error message returned when an internal service failed to be called.

[View error codes](#)

7.6 DescribeLaunchTemplateVersions

Queries one or more instance launch template versions.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the instance launch template belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DescribeLaunchTemplateVersions	The operation that you want to perform. Set the value to DescribeLaunchTemplateVersions.
DefaultVersion	Boolean	No	true	Indicates whether to query the default version.

Name	Type	Required	Example	Description
DetailFlag	Boolean	No	true	Indicates whether the details tag is supported.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
LaunchTemplateId	String	No	lt-launchtemplateid1	The ID of the instance launch template. You must specify either the LaunchTemplateId parameter or the LaunchTemplateName parameter to determine a launch template.
LaunchTemplateName	String	No	FinanceJoshua	The name of the instance launch template.
LaunchTemplateVersion . N	RepeatList	No	1	One or more instance launch template versions.
MaxVersion	Long	No	10	The maximum version number when a range is used to specify the template.
MinVersion	Long	No	1	The minimum version number when a range is used to specify the template.
OwnerAccount	String	No	EcsforCloud@Alibaba.com	The logon name of a RAM user.

Name	Type	Required	Example	Description
PageNumber	Integer	No	1	The page number that you query in the instance launch template list. Starting value: 1. Default value: 1.
PageSize	Integer	No	10	The number of entries per page. Maximum value: 50. Default value: 10.

Response parameters

Name	Type	Example	Description
LaunchTemplateVersionSets			A set of template versions.
└─CreateTime	String	2018-05-14T14:18:00Z	The creation time of the template.
└─CreatedBy	String	1942111349714xxx	The creator of the template.
└─DefaultVersion	Boolean	true	The default version of the template.
└─LaunchTemplateData			The specific configurations of the template.
└─AutoReleaseTime	String	2018-05-14T14:18:00Z	The automatic release time of the template.
└─DataDisks			A set of data disks.
└─Category	String	cloud_ssd	The category of the data disk.
└─DeleteWithInstance	Boolean	true	Indicates whether the data disk is released together with the instance.
└─Description	String	FinanceDept	The description of the data disk.

Name	Type	Example	Description
<code>└Device</code>	String	<code>/dev/xvda</code>	The device name of the data disk.
<code>└DiskName</code>	String	<code>FinanceJoshua</code>	The name of the data disk.
<code>└Encrypted</code>	String	<code>false</code>	Indicates whether the data disk is encrypted.
<code>└Size</code>	Integer	<code>2000</code>	The size of the data disk.
<code>└SnapshotId</code>	String	<code>s-snapshotid1</code>	The ID of the snapshot used to create the data disk.
<code>└Description</code>	String	<code>FinanceDept</code>	The description of the instance.
<code>└EnableVmOsConfig</code>	Boolean	<code>false</code>	Indicates whether the operating system configuration of the instance is enabled.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
<code>└HostName</code>	String	<code>JoshuaHost</code>	The hostname of the instance.
<code>└ImageId</code>	String	<code>m-imagid1</code>	The ID of the image used by the instance.
<code>└ImageOwnerAlias</code>	String	<code>system</code>	The source of the image.
<code>└InstanceChargeType</code>	String	<code>Postpaid</code>	The billing method of the instance.
<code>└InstanceName</code>	String	<code>FinanceJoshua</code>	The name of the instance.
<code>└InstanceType</code>	String	<code>ecs.g5.large</code>	The instance type.

Name	Type	Example	Description
<code>InternetChargeType</code>	String	PayByTraffic	The billing method of Internet bandwidth.
<code>InternetMaxBandwidthIn</code>	Integer	5	The maximum inbound Internet bandwidth.
<code>InternetMaxBandwidthOut</code>	Integer	200	The maximum outbound Internet bandwidth.
<code>IoOptimized</code>	String	none	Indicates whether the instance is I/O optimized.
<code>KeyPairName</code>	String	FinanceJoshuaV25	The name of the key pair.
<code>NetworkInterfaces</code>			The attributes of the ENI.
<code>Description</code>	String	FinanceDept	The description of the ENI.
<code>NetworkInterfaceName</code>	String	FinanceJoshua	The name of the ENI.
<code>PrimaryIpAddress</code>	String	203.0.113.2	The primary private IP address.
<code>SecurityGroupId</code>	String	sg-securitygroupid1	The ID of the security group to which the ENI belongs.
<code>VSwitchId</code>	String	vsw-vswitchid1	The ID of the VSwitch to which the ENI belongs.
<code>NetworkType</code>	String	vpc	The network type.
<code>PasswordInherit</code>	Boolean	true	Indicates whether the username and password pair of the original image is used.
<code>Period</code>	Integer	1	The duration of the subscription.

Name	Type	Example	Description
<code>└RamRoleName</code>	String	FinanceDeptTest	The RAM role name of the instance.
<code>└ResourceGroupId</code>	String	rg-resourcegroupid1	The ID of the resource group to which the launch template belongs.
<code>└SecurityEnhancementStrategy</code>	String	active	Indicates whether to enable security hardening.
<code>└SecurityGroupId</code>	String	sg-securitygroupid1	The ID of the security group.
<code>└SpotDuration</code>	Integer	1	The protection period of the instance.
<code>└SpotPriceLimit</code>	Float	0.98	The maximum hourly price of the instance.
<code>└SpotStrategy</code>	String	NoSpot	The bidding policy of a Pay-As-You-Go instance.
<code>└SystemDisk.Category</code>	String	cloud_ssd	The category of the system disk.
<code>└SystemDisk.Description</code>	String	FinanceDept	The description of the system disk.
<code>└SystemDisk.DiskName</code>	String	FinanceJoshua	The name of the system disk.
<code>SystemDisk.Iops</code>	Integer	30000	The number of I/O operations per second for the system disk.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
<code>└SystemDisk.Size</code>	Integer	80	The size of the system disk. Unit: GiB.

Name	Type	Example	Description
└Tags			The tag of the instance.
└Key	String	FinanceDept	The tag key of the instance.
└Value	String	FinanceDeptJoshua	The tag value of the instance.
└UserData	String	SGVsbG9FQ1M=	The custom data of the instance. It is encoded by using Base64.
└VSwitchId	String	vsw-vswitchid2	The ID of the VSwitch to which the instance belongs.
└VpcId	String	v-vpcid2	The ID of the VPC.
└ZoneId	String	cn-hangzhou-g	The ID of the zone.
└LaunchTemplateId	String	lt-launchtemplateid	The ID of the template.
└LaunchTemplateName	String	FinanceJoshua	The name of the template.
└ModifiedTime	String	2018-05-14T14:18:00Z	The time when the template was last modified.
└VersionDescription	String	InitialVersion	The description of the template version.
└VersionNumber	Long	1	The version number of the template.
RequestId	String	04F0F334-1335-436C-A1D7-6C044FExxxxx	The ID of the request.
PageSize	Integer	10	The number of entries per page.
PageNumber	Integer	1	The current page number.

Name	Type	Example	Description
TotalCount	Integer	1	The total number of instance launch templates.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeLaunchTemplateVersions
&RegionId=cn-hangzhou
&LaunchTemplateName=lt-name1
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeLaunchTemplateVersionsResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxx</RequestId>
  <TotalCount>1</TotalCount>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <LaunchTemplateVersions>
    <LaunchTemplateVersionSet>
      <CreateTime>2018-05-14T14:18:00Z</CreateTime>
      <ModifiedTime>2018-05-14T14:18:00Z</ModifiedTime>
      <LaunchTemplateId>lt-m5e3ofjr1z-n1aw7xxxx</LaunchTemplateId>
      <LaunchTemplateName>wd-1526307480-xxx</LaunchTemplateName>
      <DefaultVersion>true</DefaultVersion>
      <VersionNumber>1</VersionNumber>
      <CreatedBy>1942111349-714xxx</CreatedBy>
      <VersionDescription>www</VersionDescription>
      <launchtemplatedata>
        <imageowneralias>ImageOwnerAlias1</imageowneralias>
      >
      <description>Description1</description>
      <resourcegroupid>ResourceGroupId1</resourcegroupid>
    >
    <datadisks>
      <datadisk>
        <snapshotid>SnapshotId1</snapshotid>
        <description>Description1</description>
        <category>cloud_efficiency</category>
        <encrypted>false</encrypted>
        <size>44</size>
        <deletewithinstance>true</deletewithinstance>
        <diskname>DataDiskName1</diskname>
      </datadisk>
    </datadisks>
    <userdata>UserData1</userdata>
    <systemdisk.diskname>SystemDiskName1</systemdisk.diskname>
  </LaunchTemplateVersions>
</DescribeLaunchTemplateVersionsResponse>
```

```

    < systemdisk . size > 44 </ systemdisk . size >
    < ramrolenam e > RamRoleNam e1 </ ramrolenam e >
    < networktyp e > NetworkTyp e1 </ networktyp e >
    < networkint erfaces >
      < networkint erface >
        < descriptio n > Descriptio n1 </ descriptio n >
        < securitygr oupid > SecurityGr oupId1 </ securitygr
oupid >
        < vswitchid > VSwitchId1 </ vswitchid >
        < networkint erfacename > NetworkInt erfaceName 1 </
networkint erfacename >
        < primaryipa ddress > PrimaryIpA ddress1 </ primaryipa
ddress >
      </ networkint erface >
    </ networkint erfaces >
    < imageid > windows200 8 . vhd </ imageid >
    < spotpricel imit > 1 </ spotpricel imit >
    < systemdisk . category > cloud_effi ciency </ systemdisk .
category >
    < instancety pe > ecs . xn4 . small </ instancety pe >
    < spotstrate gy > SpotWithPr iceLimit </ spotstrate gy >
    < hostname > HostName1 </ hostname >
    < tags >
      < instanceta g >
        < value > bb </ value >
        < key > ss </ key >
      </ instanceta g >
    </ tags >
    < keypairnam e > KeyPairNam e1 </ keypairnam e >
    < systemdisk . iops > 22 </ systemdisk . iops >
    < iooptimize d > true </ iooptimize d >
    < zoneid > ZoneId1 </ zoneid >
    < systemdisk . descriptio n > SystemDisk Descriptio n1 </
systemdisk . descriptio n >
    < securitygr oupid > sg - tiantt1234 </ securitygr oupid >
    < vswitchid > vsw - xxxxxx </ vswitchid >
    < period > 1 </ period >
    < internetch argetype > PayByBandw idth </ internetch
argetype >
    < instancena me > InstanceNa me1 </ instancena me >
    < internetma xbandwidth out > 20 </ internetma xbandwidth
out >
    < internetma xbandwidth in > 1 </ internetma xbandwidth in
>
    < securityen hancements trategy > Active </ securityen
hancements trategy >
    < autoreleas etime > 2019 - 10 - 21T00 : 00 : 00Z </
autoreleas etime >
  </ launchtemp latedata >
  </ LaunchTemp lateVersio nSet >
  </ LaunchTemp lateVersio nSets >
</ DescribeLa unchTempla teVersions Response >

```

JSON format

```

{
  " PageNumber ": 1 ,
  " TotalCount ": 1 ,
  " PageSize ": 10 ,
  " RequestId ": " 3989ED0C - 20A1 - 4351 - A127 - 2067FF8390 AX ",
  " LaunchTemp lateVersio nSets ": {
    " LaunchTemp lateVersio nSet ": [
      {

```

```

" LaunchTemp lateId ":" lt - bp16jovvln 1cgaaqg01X ",
" CreateTime ":" 2018 - 10 - 17T07 : 36 : 22Z ",
" CreatedBy ":" 1942111349 714xxx ",
" ModifiedTime ":" 2018 - 10 - 17T07 : 36 : 22Z ",
" VersionNumber ": 1 ,
" LaunchTemplateData ":{
  " ImageId ":" centos_7_0 4_64_20G_a libase_201 701015 . vhd ",
  " SecurityGroupId ":" sg - bplazkttqp ldxgtedupX ",
  " Description ":" DocV587 !",
  " NetworkInterfaces ":{
    " NetworkInterface ":[ ]
  },
  " DataDisks ":{
    " DataDisk ":[ ]
  },
  " SecurityEnhancementStrategy ":" Active ",
  " ZoneId ":" random ",
  " ImageOwnerAlias ":" system ",
  " InternetChargeType ":" PayByTraffic ",
  " VSwitchId ":" vsw - bp1s5fnvk4 gn2tws03zi X ",
  " VpcId ":" vpc - bp1opxu1zk hn00gzv26c X ",
  " HostName ":" LocalHost ",
  " InstanceType ":" ecs . g5 . large ",
  " IoOptimized ":" true ",
  " NetworkType ":" vpc ",
  " Tags ":{
    " InstanceTag ":[ ]
  },
  " InternetMaxBandwidth Out ": 5 ,
  " SystemDisk . Size ": 40 ,
  " SystemDisk . Category ":" cloud_efficiency ",
  " InstanceChargeType ":" PostPaid ",
  " InstanceName ":" JoshuaCent OSPAYG "
},
" DefaultVersion ": true ,
" LaunchTemplateLateName ":" JoshuaCent OSPAYG ",
" VersionDescription ":" EcsV587 !"
}
}
}
}
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotFound	%s	The error message returned when the specified region does not exist.
400	MissingParameter	%s	The error message returned when a required parameter is not specified .

HTTP status code	Error code	Error message	Description
400	InvalidParameter	%s	The error message returned when the parameter format is invalid.
404	InvalidLaunchTemplate.NotFound	The specified LaunchTemplate is not found.	The error message returned when the specified launch template does not exist.
403	InternalServerErrorFailed	%s	The error message returned when an internal service failed to be called.

[View error codes](#)

7.7 ModifyLaunchTemplateDefaultVersion

Modifies the default version of a launch template. If you do not specify a template version number when creating an instance (RunInstances), the default version will be used.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
DefaultVersionNumber	Long	Yes	2	The default version number for the instance launch template.

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the template belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	ModifyLaunchTemplateDefaultVersion	The operation that you want to perform. Set the value to ModifyLaunchTemplateDefaultVersion.
LaunchTemplateId	String	No	lt-templateid1	The ID of the instance launch template. You must specify either the LaunchTemplateId parameter or the LaunchTemplateName parameter to determine a launch template.
LaunchTemplateName	String	No	lt-name1	The name of the instance launch template. You must specify either the LaunchTemplateId parameter or the LaunchTemplateName parameter to determine a launch template.

Response parameters

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

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyLaunchTemplate
DefaultVersion
&DefaultVersionNumber=2
&RegionId=cn-hangzhou
&LaunchTemplateId=lt-templateid-1
&LaunchTemplateName=lt-name1
<Common request parameters>
```

Successful response examples

XML format

```
<ModifyLaunchTemplateDefaultVersionResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxx-xx</
  RequestId>
</ModifyLaunchTemplateDefaultVersionResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxx-xx"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotFound	%s	The error message returned when the specified region does not exist.
404	InvalidLaunchTemplateName.NotFound	%s	The error message returned when the specified launch template name does not exist.
400	MissingParameter	%s	The error message returned when a required parameter is not specified.

HTTP status code	Error code	Error message	Description
400	InvalidParameter	%s	The error message returned when the parameter format is invalid.
403	InternalServerErrorFailed	%s	The error message returned when an internal service failed to be called.

[View error codes](#)

8 Auto provisioning group

8.1 CreateAutoProvisioningGroup

You can call this operation to create an auto provisioning group.

Auto Provisioning is free to use. However, instance resources created through auto provisioning will incur charges. For more information on pricing, see [Preemptible instance](#) and [Pay-as-you-go](#).

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
LaunchTemplateId	String	Yes	lt-bp1fgzds4bdogu03****	The ID of the instance launch template associated with the auto provisioning group. You can call the DescribeLaunchTemplates operation to query available instance launch templates. An auto provisioning group can be associated with only one instance launch template. But you can configure multiple extended configurations for the launch template through the LaunchTemplateConfig parameter.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group. You can call the DescribeRegions operation to query the latest region list.
TotalTargetCapacity	String	Yes	60	The total target capacity of the auto provisioning group. The target capacity consists of the following three parts: • The target capacity of pay-as-you-go instances specified by the PayAsYouGoTargetCapacity parameter • The target capacity of preemptible instances specified by the SpotTargetCapacity parameter • The supplemental capacity besides PayAsYouGoTargetCapacity and SpotTargetCapacity
Action	String	No	CreateAutoProvisioningGroup	The operation that you want to perform. Set this parameter to CreateAutoProvisioningGroup.
AutoProvisioningGroupName	String	No	apg-test	The name of the auto provisioning group to be created. It 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 (-).

Parameter	Type	Required	Example	Description
AutoProvisioningGroupType	String	No	maintain	The type of the auto provisioning group. Valid values: • request: One-time delivery. After the auto provisioning group is started, it only attempts to create an instance cluster once. If the cluster fails to be created, the group does not try again. • maintain: The continuous delivery and maintain capacity type. After the auto provisioning group is started, it continuously attempts to create and maintain the instance cluster. The auto provisioning group compares the real-time and target capacity of the cluster. If the cluster does not meet the target capacity, the group will create instances until the cluster meets the target capacity. Default value: maintain

Parameter	Type	Required	Example	Description
DefaultTargetCapacityType	String	No	Spot	The type of supplemental instances. When the total value of PayAsYouGoTargetCapacity and SpotTargetCapacity is smaller than the value of TotalTargetCapacity, the auto provisioning group will create instances of the specified type to meet the capacity requirements. Valid values: • PayAsYouGo: Pay-as-you-go instances. • Spot: Preemptible instances. Default value: Spot
Description	String	No	test	The description of the auto provisioning group.

Parameter	Type	Required	Example	Description
ExcessCapacityTerminationPolicy	String	No	termination	The shutdown policy for excess preemptible instances followed when the capacity of the auto provisioning group exceeds the target capacity. Valid values: - no-termination: Excess preemptible instances are not shut down. - termination: Excess preemptible instances are to be shut down. The action to be performed on these shutdown instances is specified by the SpotInstanceInterruptionBehavior parameter. Default value: no-termination
LaunchTemplateConfig.N.InstanceType	String	No	ecs.g5.large	The instance type of the Nth extended configurations of the launch template.
LaunchTemplateConfig.N.MaxPrice	Double	No	3	The maximum price of the instance type specified in the Nth extended configurations of the launch template.
LaunchTemplateConfig.N.Priority	Integer	No	1	The priority of the instance type specified in the Nth extended configurations of the launch template. A value of 0 indicates the highest priority.

Parameter	Type	Required	Example	Description
LaunchTemplateConfig.N.VSwitchId	String	No	vsw-sn5bsitu4lfzgc5o7****	The ID of the VSwitch in the Nth extended configurations of the launch template.
LaunchTemplateConfig.N.WeightedCapacity	Double	No	2	The weight of the instance type specified in the Nth extended configurations of the launch template. The weight is calculated based on the computing power of a specified instance type and the minimum computing power of a single node of the cluster. A greater weight indicates that the instance has more computing power, and as a result fewer instances are required. For example, when the minimum computing power of a single node is 8 vCPUs and 60 GiB of memory, the weight of the instance type with 8 vCPUs and 60 GiB of memory is 1, and the weight of the instance type with 16 vCPUs and 120 GiB of memory is 2.

Parameter	Type	Required	Example	Description
LaunchTemplateVersion	String	No	1	The version of the instance launch template associated with the auto provisioning group. You can call the DescribeLaunchTemplateVersions operation to query the versions of available instance launch templates.
MaxSpotPrice	Float	No	2	The global maximum price for preemptible instances in the auto provisioning group. If both the MaxSpotPrice and LaunchTemplateConfig.N.MaxPrice parameters are specified, the maximum price is the lower value of the two.
PayAsYouGoAllocationStrategy	String	No	prioritized	The scale-out policy for pay-as-you-go instances. Valid values: • lowest-price: The cost optimization policy the auto provisioning group follows to select instance types of the lowest cost to create instances. • prioritized: The priority-based policy the auto provisioning group follows to create instances. The priority of an instance type is specified by the LaunchTemplateConfig.N.Priority parameter. Default value: lowest-price

Parameter	Type	Required	Example	Description
PayAsYouGoTargetCapacity	String	No	30	The target capacity of pay-as-you-go instances in the auto provisioning group.
SpotAllocationStrategy	String	No	diversified	The scale-out policy for preemptible instances. Valid values: • lowest-price: The cost optimization policy the auto provisioning group follows to select instance types of the lowest cost to create instances. • diversified: The distribution balancing policy the auto provisioning group follows to evenly create instances across zones specified in multiple extended template configurations. Default value: lowest-price
SpotInstanceInterruptionBehavior	String	No	terminate	The default behavior after preemptible instances are shut down. Value values: • stop: stops preemptible instances. • terminate: releases preemptible instances. Default value: stop

Parameter	Type	Required	Example	Description
SpotInstancePoolsToUseCount	Integer	No	2	This parameter takes effect when the SpotAllocationStrategy parameter is set to lowest-price. The auto provisioning group selects instance types of the lowest cost to create instances.
SpotTargetCapacity	String	No	20	The target capacity of preemptible instances in the auto provisioning group.
TerminateInstances	Boolean	No	true	Specifies whether to release instances of the auto provisioning group. Valid values: · true · false Default: false
TerminateInstancesWithExpiration	Boolean	No	true	The shutdown policy for preemptible instances when the auto provisioning group expires. Valid values: · true: shuts down preemptible instances. The action to be performed on these shutdown instances is specified by the SpotInstanceInterruptionBehavior parameter. · false: does not shut down preemptible instances. Default: false

Parameter	Type	Required	Example	Description
ValidFrom	String	No	2019-04-01T15:10:20Z	The time when the auto provisioning group is 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. By default, an auto provisioning group is immediately started after creation.
ValidUntil	String	No	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. By default, an auto provisioning group never expires.

Response parameters

Parameter	Type	Example	Description
AutoProvisioningGroupId	String	apg-sn54avj8htgvtyh8****	The ID of the auto provisioning group.
RequestId	String	745CEC9F-0DD7-4451-9FE7-8B752F39****	The ID of the request.

Examples

Sample requests

```
http ( s ):// ecs . aliyuncs . com /? Action = CreateAuto
Provisioni ngGroup
& LaunchTemp lateId = lt - bp1fgzds4b dogu03 ****
& RegionId = cn - hangzhou
& TotalTarge tCapacity = 60
&< Common request parameters >
```

Sample success responses

XML format

```
< CreateAuto Provisioni ngGroupRes ponse >
  < CreateAuto Provisioni ngGroupId > apg - sn54avj8ht gvtyh8
  ****</ CreateAuto Provisioni ngGroupId >
  < RequestId > 745CEC9F - 0DD7 - 4451 - 9FE7 - 8B752F39 ****</
  RequestId >
</ CreateAuto Provisioni ngGroupRes ponse >
```

JSON format

```
{
  " RequestId ":" 745CEC9F - 0DD7 - 4451 - 9FE7 - 8B752F39 ****",
  " CreateAuto Provisioni ngGroupId ":" apg - sn54avj8ht gvtyh8
  ****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError	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.

[View error codes](#)

8.2 ModifyAutoProvisioningGroup

You can call this operation to modify the configurations of an auto provisioning group.

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

- If you modify the capacity or capacity-related settings of an auto provisioning group, the group will execute scheduling tasks once after modification.
- You cannot modify an auto provisioning group when the group is being deleted.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group to be modified.
Action	String	No	ModifyAutoProvisioningGroup	The operation that you want to perform. Set this parameter to ModifyAutoProvisioningGroup.
AutoProvisioningGroupId	String	No	apg-uf6jel2bbl62wh13****	The ID of the auto provisioning group to be modified.

Parameter	Type	Required	Example	Description
DefaultTargetCapacityType	String	No	PayAsYouGo	The type of supplemental instances. When the total value of <code>PayAsYouGoTargetCapacity</code> and <code>SpotTargetCapacity</code> is smaller than the value of <code>TotalTargetCapacity</code>, the auto provisioning group will create instances of the specified type to meet the capacity requirements. Valid values: • <code>PayAsYouGo</code>: Pay-as-you-go instances. • <code>Spot</code>: Preemptible instances.

Parameter	Type	Required	Example	Description
ExcessCapacityTerminationPolicy	String	No	no-termination	The shutdown policy of the auto provisioning group for excess preemptible instances when the target capacity has been exceeded. Valid values: • no-termination: Excess preemptible instances are not shut down. • termination: Excess preemptible instances are to be shut down. The action to be performed on these shutdown instances is specified by the <code>SpotInstanceInterruptionBehavior</code> parameter.  Note: The <code>SpotInstanceInterruptionBehavior</code> parameter is set during the auto provisioning group creation process and cannot be modified. For more information, see CreateAutoProvisioningGroup.

Parameter	Type	Required	Example	Description
MaxSpotPrice	Float	No	8	The global maximum price for preemptible instances in the auto provisioning group. If both the MaxSpotPrice and LaunchTemplateConfig.N.MaxPrice parameters are specified, the maximum price is the lower value of the two.  Note: The LaunchTemplateConfig.N.MaxPrice parameter is set during the auto provisioning group creation process and cannot be modified. For more information, see CreateAutoProvisioningGroup.
PayAsYouGoTargetCapacity	String	No	5	The target capacity of pay-as-you-go instances in the auto provisioning group.
SpotTargetCapacity	String	No	5	The target capacity of preemptible instances in the auto provisioning group.

Parameter	Type	Required	Example	Description
TerminateInstancesWithExpiration	Boolean	No	false	The shutdown policy for preemptible instances when the auto provisioning group expires. Valid values: · true: shuts down preemptible instances. The action to be performed on these shutdown instances is specified by the SpotInstanceInterruptionBehavior parameter. · false: does not shut down preemptible instances.  Note: The SpotInstanceInterruptionBehavior parameter is set during the auto provisioning group creation process and cannot be modified. For more information, see CreateAutoProvisioningGroup.
TotalTargetCapacity	String	No	10	The total capacity of the auto provisioning group. The capacity consists of the following three parts: · The target capacity of pay-as-you-go instances specified by the PayAsYouGoTargetCapacity parameter · The target capacity of preemptible instances specified by the SpotTargetCapacity parameter · The supplemental capacity besides PayAsYouGoTargetCapacity and SpotTargetCapacity

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 = ModifyAuto
Provisioni ngGroup
& RegionId = cn - hangzhou
& AutoProvis ioningGrou pId = apg - uf6jel2bbl 62wh13 ****
&< Common request parameters >
```

Sample success responses

XML format

```
< ModifyAuto Provisioni ngGroupRes ponse >
  < RequestId > 928E2273 - 5715 - 46B9 - A730 - 238DC996 ****</
  RequestId >
</ ModifyAuto Provisioni ngGroupRes ponse >
```

JSON format

```
{
  " RequestId ":" B48A12CD - 1295 - 4A38 - A8F0 - 0E92C937 ****"
}
```

Error codes

HTTP status code	Error code	Description	Error message
403	Forbidden.RAM	User not authorized to operate on the specified resource, or this API doesn't support RAM.	The error message returned because the RAM user is not authorized.

[View error codes](#)

8.3 DeleteAutoProvisioningGroup

You can call this operation to delete an auto provisioning group.

When deleting an auto provisioning group, you can use the `TerminateInstances` parameter to specify the behavior of the instances within the group.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
<code>AutoProvisioningGroupId</code>	String	Yes	apg-uf6jel2bbl62wh13****	The ID of the auto provisioning group to be deleted.
<code>RegionId</code>	String	Yes	cn-hangzhou	The region ID of the auto provisioning group.
<code>TerminateInstances</code>	Boolean	Yes	true	Specifies whether to release instances of the auto provisioning group. Valid values: · true · false
<code>Action</code>	String	No	DeleteAutoProvisioningGroup	The operation that you want to perform. Set this parameter to <code>DeleteAutoProvisioningGroup</code> .

Response parameters

Parameter	Type	Example	Description
<code>RequestId</code>	String	B48A12CD-1295-4A38-A8F0-0E92C937****	The ID of the request.

Examples

Sample requests

```
http ( s ):// ecs . aliyuncs . com /? Action = DeleteAuto
Provisioni ngGroup
& AutoProvis ioningGrou pId = fleet - uf6jel2bbl 62wh13 ****
& RegionId = cn - hangzhou
& TerminateI nstances = true
&< Common request parameters >
```

Sample success responses

XML format

```
< DeleteAuto Provisioni ngGroupRes ponse >
  < RequestId > 928E2273 - 5715 - 46B9 - A730 - 238DC996 ****</
  RequestId >
</ DeleteAuto Provisioni ngGroupRes ponse >
```

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 the RAM user is not authorized.

[View error codes](#)

8.4 DescribeAutoProvisioningGroups

You can call this operation to query auto provisioning groups.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group.
Action	String	No	DescribeAutoProvisioningGroups	The operation that you want to perform. Set this parameter to DescribeAutoProvisioningGroups.
AutoProvisioningGroupId	RepeatList	No	apg-sn54avj8htgvt8****	The ID of the auto provisioning group to be queried.
AutoProvisioningGroupName	String	No	test	The name of the auto provisioning group to be queried.

Parameter	Type	Required	Example	Description
AutoProvisioningGroupStatus	RepeatList	No	active	The status of the auto provisioning group to be queried. Valid values: - submitted: The auto provisioning group has been created but has not started to execute scheduling tasks. - active: The auto provisioning group is executing scheduling tasks. - deleted: The auto provisioning group has been deleted. - deleted-running: The auto provisioning group is being deleted. - modifying: The auto provisioning group is being modified.
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
AutoProvisioningGroups			The information about queried auto provisioning groups.
AutoProvisioningGroupId	String	apg-sn54avj8htgvtyh8****	The ID of the auto provisioning group.

Parameter	Type	Example	Description
<code>└AutoProvisioningGroupName</code>	String	apg-test	The name of the auto provisioning group.
<code>└AutoProvisioningGroupType</code>	String	maintain	The type of the auto provisioning group. Valid values: · request: The one-time delivery type. After the auto provisioning group is started, it only attempts to create an instance cluster once. If the cluster fails to be created, the group does not try again. · maintain: The continuous delivery and maintain capacity type. After the auto provisioning group is started, it continuously attempts to create and maintain the instance cluster. The auto provisioning group compares the real-time and target capacity of the cluster. If the cluster does not meet the target capacity, the group will create instances until the cluster meets the target capacity.
<code>└CreationTime</code>	String	2019-04-01T15:10:20Z	The time when the auto provisioning group was created.

Parameter	Type	Example	Description
<code>↳ExcessCapacityTerminationPolicy</code>	String	termination	The shutdown policy of the auto provisioning group for excess preemptible instances when the target capacity has been exceeded. Valid values: · no-termination: Excess preemptible instances are not shut down. · termination: Excess preemptible instances are to be shut down. The action to be performed on these shutdown instances is specified by the <code>SpotInstanceInterruptionBehavior</code> parameter.  Note: The <code>SpotInstanceInterruptionBehavior</code> parameter is set during the auto provisioning group creation process and cannot be modified. For more information, see CreateAutoProvisioningGroup.
<code>↳LaunchTemplateConfigs</code>			The extended configurations of the launch template for the auto provisioning group.
<code>↳InstanceType</code>	String	ecs.g5.large	The instance type specified in extended configurations.
<code>↳MaxPrice</code>	Float	3	The maximum price of the instance type specified in extended configurations.

Parameter	Type	Example	Description
<code>└Priority</code>	Float	1	The priority of the instance type specified in extended configurations. A value of 0 indicates the highest priority.
<code>└VSwitchId</code>	String	vsw-sn5bsitu4lfzgc5o7****	The ID of the VSwitch in extended configurations.
<code>└WeightedCapacity</code>	Float	2	The weight of the instance type specified in extended configurations.
<code>└LaunchTemplateId</code>	String	lt-bp1fgzds4bdogu03****	The ID of the launch template associated with the auto provisioning group.
<code>└LaunchTemplateVersion</code>	String	1	The version of the launch template associated with the auto provisioning group.
<code>└MaxSpotPrice</code>	Float	2	The global maximum price for preemptible instances in the auto provisioning group. If both the <code>MaxSpotPrice</code> and <code>LaunchTemplateConfig.N.MaxPrice</code> parameters are specified, the maximum price is the lower value of the two.  Note: The <code>LaunchTemplateConfig.N.MaxPrice</code> parameter is set during the auto provisioning group creation process and cannot be modified. For more information, see CreateAutoProvisioningGroup.

Parameter	Type	Example	Description
└ PayAsYouGo Options			The policies related with pay-as-you-go instances.
└ Allocation Strategy	String	prioritized	The scale-out policy for pay-as-you-go instances. Valid values: · lowest-price: The cost optimization policy the auto provisioning group follows to select instance types of the lowest cost to create instances. · prioritized: The priority-based policy the auto provisioning group follows to create instances. The priority of an instance type is specified by the LaunchTemplateConfig.N.Priority parameter.  Note: The LaunchTemplateConfig.N.Priority parameter is set during the auto provisioning group creation process and cannot be modified. For more information, see CreateAutoProvisioningGroup.
└ RegionId	String	cn-hangzhou	The region ID of the auto provisioning group.
└ SpotOptions			The policy of preemptible instances.

Parameter	Type	Example	Description
<code>└AllocationStrategy</code>	String	diversified	The scale-out policy for preemptible instances. Valid values: · lowest-price: The cost optimization policy the auto provisioning group follows to select instance types of the lowest cost to create instances. · diversified: The distribution balancing policy the auto provisioning group follows to create instances evenly across multiple zones specified in extended template configurations.
<code>└InstanceInterruptionBehavior</code>	String	stop	The default behavior after preemptible instances are shut down. Value values: · stop: stops preemptible instances. · terminate: releases preemptible instances.
<code>└InstancePoolsToUseCount</code>	Integer	2	This parameter takes effect when the <code>SpotAllocationStrategy</code> parameter is set to <code>lowest-price</code>. The auto provisioning group selects the instance types of the lowest cost to create instances.  Note: The <code>SpotAllocationStrategy</code> parameter is set during the auto provisioning group creation process and cannot be modified. For more information, see CreateAutoProvisioningGroup.

Parameter	Type	Example	Description
<code>└State</code>	String	fulfilled	The overall status of instance scheduling of the auto provisioning group. Valid values: • fulfilled: Scheduling has been completed and the instance cluster has been 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.
<code>└Status</code>	String	submitted	The status of the auto provisioning group. Valid values: • submitted: The auto provisioning group has been created but has not started to execute scheduling tasks. • active: The auto provisioning group is executing scheduling tasks. • deleted: The auto provisioning group has been deleted. • deleted-running: The auto provisioning group is being deleted. • modifying: The auto provisioning group is being modified.
<code>└TargetCapacitySpecification</code>			The settings of the target capacity of the auto provisioning group.

Parameter	Type	Example	Description
<code>└DefaultTargetCapacityType</code>	String	Spot	The type of supplemental instances. When the total value of <code>PayAsYouGoTargetCapacity</code> and <code>SpotTargetCapacity</code> is smaller than the value of <code>TotalTargetCapacity</code>, the auto provisioning group will create instances of the specified type to meet the capacity requirements. Valid values: • <code>PayAsYouGo</code>: Pay-as-you-go instances. • <code>Spot</code>: Preemptible instances.
<code>└PayAsYouGoTargetCapacity</code>	Float	30	The target capacity of pay-as-you-go instances in the auto provisioning group.
<code>└SpotTargetCapacity</code>	Float	20	The target capacity of preemptible instances in the auto provisioning group.
<code>└TotalTargetCapacity</code>	Float	60	The total capacity of the auto provisioning group. The capacity consists of the following three parts : • The target capacity of pay-as-you-go instances specified by the <code>PayAsYouGoTargetCapacity</code> parameter • The target capacity of preemptible instances specified by the <code>SpotTargetCapacity</code> parameter • The supplemental capacity besides <code>PayAsYouGoTargetCapacity</code> and <code>SpotTargetCapacity</code>

Parameter	Type	Example	Description
<code>⌞TerminateInstances</code>	Boolean	false	Indicates whether to release instances of the auto provisioning group. Valid values: · true · false
<code>⌞TerminateInstancesWithExpiration</code>	Boolean	true	The shutdown policy for preemptible instances when the auto provisioning group expires. Valid values: · true: shuts down preemptible instances. The action to be performed on these shutdown instances is specified by the <code>SpotInstanceInterruptionBehavior</code> parameter. · false: does not shut down preemptible instances.  Note: The <code>SpotInstanceInterruptionBehavior</code> parameter is set during the auto provisioning group creation process and cannot be modified. For more information, see CreateAutoProvisioningGroup.
<code>⌞ValidFrom</code>	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 <code>ValidUntil</code> parameter is the effective time period of the auto provisioning group.

Parameter	Type	Example	Description
<code>ValidUntil</code>	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.
<code>PageNumber</code>	Integer	1	The number of the page returned.
<code>PageSize</code>	Integer	10	The number of entries returned on each page.
<code>RequestId</code>	String	745CEC9F-0DD7-4451-9FE7-8B752F39****	The ID of the request.
<code>TotalCount</code>	Integer	10	The number of queried auto provisioning groups.

Examples

Sample requests

```
http ( s ) : // ecs . aliyuncs . com / ? Action = DescribeAutoProvisioningGroups
& AutoProvisioningGroupId . 1 = apg - sn54avj8ht gvtvh8 ****
& < 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 </ TerminateI
nstancesWithExpiration >
      < TerminateInstances > false </ TerminateInstances >
      < ValidFrom > 2019 - 06 - 17T15 : 22Z </ ValidFrom >
```

```

    < AutoProvis  ioningGrou  pType > maintain </ AutoProvis
ioningGrou  pType >
    < PayAsYouGo  Options >
        < Allocation  Strategy > lowest - price </ Allocation
Strategy >
        </ PayAsYouGo  Options >
        < AutoProvis  ioningGrou  pName > test61 ****</ AutoProvis
ioningGrou  pName >
        < CreationTi  me />
        < ExcessCapa  cityTermin  ationPolic  y > no - terminatio  n </
ExcessCapa  cityTermin  ationPolic  y >
        < Status > active </ Status >
        < MaxSpotPri  ce > 5 </ MaxSpotPri  ce >
        < LaunchTemp  lateVersio  n > 1 </ LaunchTemp  lateVersio  n >
        < ValidUntil > 2100 - 01 - 01T07 : 59Z </ ValidUntil >
        < TargetCapa  citySpecif  ication >
            < SpotTarget  Capacity > 180 </ SpotTarget  Capacity >
            < TotalTarge  tCapacity > 300 </ TotalTarge  tCapacity >
            < PayAsYouGo  TargetCapa  city > 120 </ PayAsYouGo
TargetCapa  city >
            < DefaultTar  getCapacit  yType > PayAsYouGo </ DefaultTar
getCapacit  yType >
            </ TargetCapa  citySpecif  ication >
            < State > fulfilled </ State >
            < LaunchTemp  lateId > lt - uf657o6auo  b6aivd ****</
LaunchTemp  lateId >
            < RegionId > cn - shanghai </ RegionId >
            < AutoProvis  ioningGrou  pId > apg - uf6c7pl7b3  0t4m98 ****</
AutoProvis  ioningGrou  pId >
            < SpotOption  s >
                < InstancePo  olsToUseCo  unt > 1 </ InstancePo  olsToUseCo
unt >
                < InstanceIn  terruption  Behavior > terminate </ InstanceIn
terruption  Behavior >
                < Allocation  Strategy > lowest - price </ Allocation
Strategy >
                </ SpotOption  s >
                < LaunchTemp  lateConfig  s >
                    < LaunchTemp  lateConfig >
                        < MaxPrice > 3 </ MaxPrice >
                        < WeightedCa  pacity > 1 </ WeightedCa  pacity >
                        < VSwitchId > vsw - uf6qbjwokz  l67uqqf ****</ VSwitchId >
                        < Priority > 1 </ Priority >
                        < InstanceTy  pe > ecs . c5 . xlarge </ InstanceTy  pe >
                    </ LaunchTemp  lateConfig >
                    < LaunchTemp  lateConfig >
                        < MaxPrice > 2 </ MaxPrice >
                        < WeightedCa  pacity > 2 </ WeightedCa  pacity >
                        < VSwitchId > vsw - uf6n6iy1ib  39eqvph ****</ VSwitchId >
                        < Priority > 1 </ Priority >
                        < InstanceTy  pe > ecs . g5 . large </ InstanceTy  pe >
                    </ LaunchTemp  lateConfig >
                    < LaunchTemp  lateConfig >
                        < MaxPrice > 1 </ MaxPrice >
                        < WeightedCa  pacity > 3 </ WeightedCa  pacity >
                        < VSwitchId > vsw - uf6gs8uerj  5osels4 ****</ VSwitchId >
                        < Priority > 1 </ Priority >
                        < InstanceTy  pe > ecs . hfc5 . large </ InstanceTy  pe >
                    </ LaunchTemp  lateConfig >
                </ LaunchTemp  lateConfig  s >
            </ AutoProvis  ioningGrou  p >
</ AutoProvis  ioningGrou  ps >

```

```
</ 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",
        "LaunchTemplateId": "lt - uf657o6auo b6aivd ****",
        "State": "fulfilled",
        "TargetCapacitySpecification": {
          "TotalTargetCapacity": 300,
          "SpotTargetCapacity": 180,
          "PayAsYouGoTargetCapacity": 120,
          "DefaultTargetCapacityType": "PayAsYouGo"
        },
        "RegionId": "cn - shanghai",
        "AutoProvisioningGroupId": "apg - uf6c7pl7b3 0t4m98 ****",
        "SpotOptions": {
          "InstancePoolsToUseCount": 1,
          "InstanceInterruptionBehavior": "terminate",
          "AllocationStrategy": "lowest - price"
        },
        "LaunchTemplateConfigs": {
          "LaunchTemplateConfig": [
            {
              "MaxPrice": 3,
              "WeightedCapacity": 1,
              "VSwitchId": "vsw - uf6qbjwokz l67uqqf ****",
              "InstanceType": "ecs . c5 . xlarge",
              "Priority": 1
            },
            {
              "MaxPrice": 2,
              "WeightedCapacity": 2,
              "VSwitchId": "vsw - uf6n6iy1ib 39eqvph ****",
              "InstanceType": "ecs . g5 . large",
              "Priority": 1
            },
            {
              "MaxPrice": 1,
              "WeightedCapacity": 3,
              "VSwitchId": "vsw - uf6gs8uerj 5osels4 ****",
              "InstanceType": "ecs . hfc5 . large",
              "Priority": 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.

[View error codes](#)

8.5 DescribeAutoProvisioningGroupInstances

You can call this operation to query instances in an auto provisioning group.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
AutoProvisioningGroupId	String	Yes	apg-uf6jel2bbl62wh13****	The ID of the auto provisioning group for which to query instances.
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group.

Parameter	Type	Required	Example	Description
Action	String	No	DescribeAutoProvisioningGroupInstances	The operation that you want to perform. Set this parameter to DescribeAutoProvisioningGroupInstances.
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			The information about all the instances in the auto provisioning group.
└CPU	Integer	2	The number of vCPUs.
└CreationTime	String	2017-12-10T04:04Z	The time when the instance was created.
└InstanceId	String	i-instanc****	The ID of the instance.
└InstanceType	String	ecs.g5.large	The type of the instance.
└IoOptimized	Boolean	true	Indicates whether the instance is I/O optimized.
└IsSpot	Boolean	true	Indicates whether the instance is preemptible.

Parameter	Type	Example	Description
<code>Memory</code>	Integer	1024	The memory size of the instance. Unit: MiB.
<code>NetworkType</code>	String	vpc	The network type of the instance. Valid values: - vpc - classic
<code>OsType</code>	String	linux	The operating system type of the instance. Valid values: - windows - linux
<code>RegionId</code>	String	cn-hangzhou	The region ID of the instance.
<code>Status</code>	String	Running	The status of the instance.
<code>ZoneId</code>	String	cn-hangzhou-g	The zone ID of the instance.
<code>PageNumber</code>	Integer	1	The number of the page to return.
<code>PageSize</code>	Integer	10	The number of entries to return on each page.
<code>RequestId</code>	String	B48A12CD-1295-4A38-A8F0-0E92C937****	The ID of the request.
<code>TotalCount</code>	Integer	10	The number of queried instances in the auto provisioning group.

Examples

Sample requests

```
http (s)://ecs.aliyuncs.com/? Action = DescribeAutoProvisioningGroupInstances
$ AutoProvisioningGroupId = apg-uf6jel2bbl62wh13****
```

&< Common request parameters >

Sample success responses

XML format

```
< DescribeAutoProvisioningGroupInstancesResponse >
  < PageNumber > 1 </ PageNumber >
  < TotalCount > 100 </ 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 - uf64neea72 - piruk0 ****</ 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 - uf64neea72 - piruk0 ****</ InstanceId >
      < CPU > 2 </ CPU >
      < ZoneId > cn - shanghai - a </ ZoneId >
      < InstanceType > ecs . g5 . large </ InstanceType >
    </ Instance >
  </ Instances >
</ DescribeAutoProvisioningGroupInstancesResponse >
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 100,
  "PageSize": 2,
  "RequestId": "A43735F7 - 30BD - 4D89 - AB8A - 030EB24B ****",
  "Instances": {
    "Instance": [
      {
        "IoOptimized": true,
        "CreationTime": "2019 - 06 - 17T15 : 25Z",
        "Status": "Running",
        "NetworkType": "vpc",
        "OsType": "linux",
        "Memory": 8192,
        "InstanceId": "i - uf64neea72 - piruk0 ****",
        "RegionId": "cn - shanghai",
        "CPU": 2,

```

```

    " ZoneId ":" cn - shanghai - a ",
    " InstanceTy pe ":" ecs . g5 . large "
  },
  {
    " IoOptimize d ": true ,
    " CreationTi me ":" 2019 - 06 - 17T15 : 25Z ",
    " Status ":" Running ",
    " NetworkTyp e ":" vpc ",
    " OsType ":" linux ",
    " Memory ": 8192 ,
    " InstanceId ":" i - uf64neea72   piruk0 ****",
    " RegionId ":" cn - shanghai ",
    " CPU ": 2 ,
    " ZoneId ":" cn - shanghai - a ",
    " InstanceTy pe ":" 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 the RAM user is not authorized.
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.

[View error codes](#)

8.6 DescribeAutoProvisioningGroupHistory

You can call this operation to query the scheduling tasks of an auto provisioning group.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
AutoProvisioningGroupId	String	Yes	apg-uf6jel2bbl62wh13****	The ID of the auto provisioning group for which to query scheduling tasks.
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group.
Action	String	No	DescribeAutoProvisioningGroupHistory	The operation that you want to perform. Set this parameter to DescribeAutoProvisioningGroupHistory.
EndTime	String	No	2019-06-20T15:10:20Z	The end of the time range where the data is queried. The period of time between this point in time and the point in time specified by StartTime is the time range for query.
StartTime	String	No	2019-04-01T15:10:20Z	The beginning of the time range where the data is queried. The period of time between this point in time and the point in time specified by EndTime is the time range for query.

Response parameters

Parameter	Type	Example	Description
AutoProvisioningGroupHistories			The information about all scheduling tasks.

Parameter	Type	Example	Description
<code>└ActivityDetails</code>			The detailed information about a single scheduling task.
<code>└Detail</code>	String	New ECS instances "i- instanc****, i- instanc****" created.	The execution details of instance creation performed by a single scheduling task.
<code>└Status</code>	String	Successful	The execution status of instance creation performed by a 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.
<code>└LastEventTime</code>	String	2019-04-01T15:10:20Z	The execution time of the last instance creation performed by a single scheduling task.
<code>└StartTime</code>	String	2019-04-01T15:10:20Z	The execution time of a single scheduling task.
<code>└Status</code>	String	success	The execution status of a 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.
<code>└TaskId</code>	String	apg-task-uf60 ****	The ID of the scheduling task.

Parameter	Type	Example	Description
PageNumber	Integer	1	The number of the page returned.
PageSize	Integer	10	The number of entries returned on each 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

```
http ( s ) : // ecs . aliyuncs . com / ? Action = DescribeAutoProvisioningGroupHistory
& AutoProvisioningGroupId = apg - uf6jel2bbl 62wh13 ****
& 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 - 048865BE76 03 </ RequestId >
  < AutoProvisioningGroupHistorys >
    < AutoProvisioningGroupHistory >
      < Status > success </ Status >
      < ActivityDetails >
        < ActivityDetail />
      </ ActivityDetails >
      < LastEventTime > 2019 - 06 - 17T08 : 48 : 00Z </ LastEventTime >
      < StartTime > 2019 - 06 - 17T08 : 47 : 52Z </ StartTime >
      < TaskId > apg - task - uf66bqtabg 10wcf6 **** </ TaskId >
    </ AutoProvisioningGroupHistory >
  </ AutoProvisioningGroupHistorys >
```

```
</ DescribeAutoProvisioningGroups >
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 1,
  "PageSize": 10,
  "RequestId": "BA55349F - 6E36 - 4E64 - 964B - 419515D1 ****",
  "AutoProvisioningGroupHistorys": {
    "AutoProvisioningGroupHistory": [
      {
        "Status": "success",
        "LastEventTime": "2019 - 06 - 17T08 : 48 : 00Z",
        "ActivityDetails": {
          "ActivityDetail": []
        },
        "TaskId": "apg - task - uf66bqtabg_10wcf6 ****",
        "StartTime": "2019 - 06 - 17T08 : 47 : 52Z"
      }
    ]
  }
}
```

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 the RAM user is not authorized.
400	MissingParameter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.

[View error codes](#)

9 Disks

9.1 CreateDisk

Creates a Pay-As-You-Go or Subscription data disk. You can create a basic disk, an Ultra disk, or an SSD disk.

Description

- To ensure that instances can be successfully created, you must maintain a sufficient balance in your linked credit card or PayPal account. For more information, see [Charging overview](#).
- By default, the `DeleteAutoSnapshot` parameter is set to true when a disk is created. This indicates that when the disk is released, snapshots that were created from the disk are deleted together with the disk. You can call [ModifyDiskAttribute](#) to modify the parameter value.
- The default performance level of an ESSD cloud disk is PL1 if you do not specify the performance level when you create the ESSD cloud disk. You can call [ModifyDiskSpec](#) to modify the performance level of an ESSD cloud disk.
- By default, the `Portable` attribute of disks created by calling this operation is set to true, and the billing method is Pay-As-You-Go.
- You must specify either the `Size` or `SnapshotId` parameter. The `Size` parameter specifies the size of the disk and the `SnapshotId` parameter specifies the snapshot that is used to create the disk.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the instance belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	CreateDisk	The operation that you want to perform. Set the value to CreateDisk.
ZoneId	String	No	cn-hangzhou-g	Creates a Pay-As-You-Go disk in a specified availability zone. You cannot specify ZoneId and InstanceId simultaneously.
InstanceId	String	No	i-bp1g6zv0ce8og*****p	Creates a Subscription disk and the system automatically attaches it to a Subscription instance with the InstanceId you specified. - If you enter the InstanceId in this request, the ResourceGroupId, Tag.N, Key, Tag.N.Value, ClientToken, and KMSKeyId are not effective any longer. - You cannot specify ZoneId and InstanceId simultaneously. Default value: null, which indicates you create a Pay-As-You-Go disk. While you must specify the ZoneId if you choose the default setting for InstanceId.

Name	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The ClientToken parameter must be no more than 64 ASCII characters in length. For more information, see How to ensure idempotence .
Description	String	No	FinanceDisk	The description of the disk. The description must be 2 to 256 characters in length and cannot start with http:// or https://. Default value: null.
DiskCategory	String	No	cloud_ssd	The category of the data disk. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: SSD - cloud_essd: ESSD Default value: cloud.
DiskName	String	No	FinanceJoshua	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 (-). Default value: null.

Name	Type	Required	Example	Description
Encrypted	Boolean	No	false	Indicates whether the disk is encrypted. Default value: false.
KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d3fb40826X	The ID of the KMS key corresponding to the data disk.
ResourceGroupId	String	No	rg-resourcegroupid1	The ID of the resource group to which the disk belongs.
Size	Integer	No	2000	The size of the disk. Unit: GiB. The value of this parameter must be equal to or greater than the size of the specified snapshot. Valid values: - cloud: 5 to 2000 - cloud_efficiency: 20 to 32768 - cloud_ssd: 20 to 32768 - cloud_essd: 20 to 32768
SnapshotId	String	No	s-snapshot1	The ID of the snapshot used to create the disk. If this parameter is specified, the Size parameter will be ignored, and the size of the created disk will be the size of the specified snapshot. The specified snapshot cannot be created on or before July 15, 2013.

Name	Type	Required	Example	Description
Tag . N . Key	String	No	FinanceDept	The tag key of the disk. Valid values of N: 1 to 20. It cannot be a null string. It can be a maximum of 64 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https://.
Tag . N . Value	String	No	FinanceDeptJoshua	The tag value of the disk. Valid values of N: 1 to 20. It can be a null string. It can be a maximum of 128 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https://.
PerformanceLevel	String	No	PL1	The performance level you select for an ESSD cloud disk. Valid values: • PL1 (default value): The maximum random read/write IOPS of a single disk is 50,000. • PL2 : The maximum random read/write IOPS of a single disk is 100,000. • PL3 : The maximum random read/write IOPS of a single disk is 1,000,000. For information about how to select a performance level for an ESSD cloud disk, see #unique_247.

Response parameters

Name	Type	Example	Description
DiskId	String	d-bp131n0q38u3a4ziXXXXX	The ID of the 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-snapshot1
&DiskName=FinanceJos_hua
&Size=2000
&DiskCategory=cloud_ssd
&Description=FinanceDisk
&Encrypted=false
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&Tag.1.value=FinanceDeptJoshua
&Tag.1.key=FinanceDept
&Tag.1.Key=FinanceDept
&Tag.1.Value=FinanceDeptJoshua
<Common request parameters>
```

Successful response examples

XML format

```
<CreateDiskResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <DiskId>d-bp131n0q38u3a4ziXXXXX</DiskId>
</CreateDiskResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "DiskId": "d-bp131n0q38u3a4ziXXXXX"
}
```

Errors

HTTP status code	Error code	Error message	Meaning
403	InvalidDataDiskCategory. NotSupported	Specified disk category is not supported.	The error message returned when the specified disk category does not support this operation.
404	InvalidRegionId. NotFound	The specified RegionId does not exist.	The error message returned when the specified Region ID does not exist. Check whether the service is available in this region.
404	InvalidZoneId. NotFound	The specified zone does not exist.	The error message returned when the specified zone does not exist.
403	InvalidSnapshot. TooOld	This operation is forbidden because the specified snapshot is created before 2013-07-15.	The error message returned when the specified source snapshot was created on or before July 15, 2013 and cannot be reinitialized.
403	InvalidSnapshot. TooLarge	The capacity of snapshot exceeds 2000GB.	The error message returned when the size of the specified snapshot exceeds 2,000 GB.
403	OperationDenied	The specified snapshot is not allowed to create disk.	The error message returned when the specified snapshot cannot be used to create a disk.
400	MissingParameter	The input parameter either SnapshotId or Size should be specified.	The error message returned when neither the SnapshotId parameter nor the Size parameter is specified.

HTTP status code	Error code	Error message	Meaning
403	InvalidDiskCategory. ValueUnauthorized	The disk category is not authorized.	The error message returned when you are not authorized to use the specified disk category.
403	InvalidSnapshotId. NotReady	The specified snapshot has not completed yet.	The error message returned when the specified snapshot is being created.
403	InvalidDiskSize. TooSmall	Specified disk size is less than the size of snapshot.	The error message returned when the specified disk size is smaller than that of the snapshot.
403	OperationDenied	The type of the disk does not support the operation.	The error message returned when the specified data disk type does not support this operation.
403	InvalidDataDiskCategory. NotSupported	%s	The error message returned when the specified data disk type does not support this operation.
400	Account. Arrearage	Your account has an outstanding payment.	The error message returned when your account has overdue payments.
400	InvalidDiskCategory. ValueNotSupported	The specified parameter DiskCategory is not valid.	The error message returned when the specified value of the DiskCategory parameter is invalid.

HTTP status code	Error code	Error message	Meaning
403	InvalidAccountStatus. NotEnoughBalance	Your account does not have enough balance.	The error message returned when your account balance is insufficient. You must top up your account before proceeding.
400	InvalidDataDiskCategory. ValueNotSupported	%s	The error message returned when the parameter is not supported.
400	InvalidParameter.Conflict	%s	The error message returned when the parameter conflicts with another parameter.
400	InvalidDataDiskSize. ValueNotSupported	%s	The error message returned when the parameter is not supported.
400	OperationDenied	The specified Zone is not available or not authorized.	The error message returned when the specified zone is unavailable or you are not authorized to access it.
403	InvalidDiskCategory. NotSupported	The specified disk category is not supported.	The error message returned when the specified disk category is not supported.
403	InvalidDiskSize. NotSupported	The specified disk size is not supported.	The error message returned when the specified disk size is not supported.
400	InvalidDiskSize. NotSupported	The specified parameter size is not valid.	The error message returned when the specified Size parameter is invalid.

HTTP status code	Error code	Error message	Meaning
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned when you are not authorized to use the specified disk.
400	InvalidParameter. EncryptedIllegal	%s	The error message returned when the parameter is not supported because the disk is encrypted.
400	InvalidParameter. EncryptedNotSupported	%s	The error message returned when the parameter is not supported because the disk is encrypted.
400	EncryptedOption.Conflict	%s	The error message returned when the parameter is not supported because the disk is encrypted.
400	InvalidParameter. Encrypted. KmsNotEnabled	The encrypted disk need enable KMS	The error message returned when KMS has not been activated. KMS must be activated to encrypt disks.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned when an unknown error occurs.
403	InvalidRegion.NotSupport	The specified region does not support byok.	The error message returned when BYOK is not supported in this region.
403	UserNotInTheWhiteList	The user is not in byok white list.	The error message returned when you are not authorized to use BYOK.

HTTP status code	Error code	Error message	Meaning
400	InvalidParameter. EncryptedIllegal	The specified parameter Encrypted must be true when kmsKeyId is not empty.	The error message returned when you have not enabled the encryption attribute after specifying the KMSKeyId parameter.
404	InvalidParameter. KMSKeyId.NotFound	The specified KMSKeyId does not exist.	The error message returned when the specified KMSKeyId parameter does not exist.
403	InvalidParameter. KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned when ECS is not authorized to access your KMS resources.

[View error codes](#)

9.2 DeleteDisk

Releases a Pay-As-You-Go data disk. You can release a basic disk, an ultra disk, or an SSD.

Description

When you call this operation, note that:

- This operation does not delete manual snapshots of your disk.
- You can call [ModifyDiskAttribute](#) to configure whether automatic snapshots are retained or released together with the disk. We recommend that you delete unnecessary snapshots to ensure enough snapshot data storage for periodical automatic snapshot policies.
- When you release a disk, the disk must be in the Available state.
- If no disk with the specified ID exists, the request will be ignored.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
DiskId	String	Yes	d-23jbf2v5m	The ID of the disk to be released.
Action	String	No	DeleteDisk	The operation that you want to perform. Set the value to DeleteDisk.

Response parameters

Name	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-23jbf2v5m
&<Common request parameters>
```

Successful response examples

XML format

```
<DeleteDiskResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA9 84</RequestId>
</DeleteDiskResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA9 84"
}
```


Error codes

HTTP status code	Error code	Error message	Description
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is	The error message returned when a snapshot of the specified disk is currently being created.
403	DiskStillAttached	The disk is still attached to the disk.	The error message returned when the disk to be released is still attached to the disk.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned when you are not authorized to use the specified disk.
400	InvalidRegionId.Malformed	The specified parameter RegionId is not valid.	The error message returned when the specified value of the RegionId parameter is invalid.

[View error codes](#)

9.3 DescribeDisks

Queries the list of disks.

Description

- Request parameters such as `RegionId` , `ZoneId` , `DiskIds` ,and `InstanceId` act as filtering conditions and have a Boolean AND relationship with each other.
- The `DiskIds` value is a JSON-formatted array. If the parameter is not specified, the filtering conditions are not applied. If the `DiskIds` parameter is an empty array, the filtering condition is applied and a blank result will be returned.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the disk belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DescribeDisks	The operation that you want to perform. Set the value to <code>DescribeDisks</code> .
AdditionalAttributes	RepeatList	No	null	Other attribute values.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
AutoSnapshotPolicyId	String	No	auto_20140724_2	The ID of the automatic snapshot policy.

Name	Type	Required	Example	Description
Category	String	No	all	The category of the disk. Valid values: • all: all disks • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: SSD • ephemeral: local I/O-intensive disk • local_hdd_pro: local throughput-intensive disk • local_ssd_pro: local disk • ephemeral_ssd: local SSD • cloud_essd: ESSD Default value: all.
DeleteAuto Snapshot	Boolean	No	false	Indicates whether the automatic snapshot is deleted when the disk is released. Valid values: • true: The automatic snapshot is deleted when the disk is released. • False: The automatic snapshot is retained when the disk is released. Default value: false.

Name	Type	Required	Example	Description
DeleteWithInstance	Boolean	No	false	Indicates whether the disk is released together with the instance. Valid values: · true: When the instance is deleted, the disk will be released together with it. · false: When the instance is released, the disk will be retained. Default value: false.
DiskChargeType	String	No	PostPaid	The billing method of the disk. Valid values: · PrePaid: Subscription · PostPaid: Pay-As-You-Go
DiskIds	String	No	["d-xxxxxxxxx", "d-yyyyyyyyy", ... "d-zzzzzzzzz"]	The IDs of the disks. The parameter value is an array of disk IDs separated with commas (.). You can specify a maximum of 100 disk IDs at a time.
DiskName	String	No	JoshuaFinance	The name of the disk.
DiskType	String	No	all	The type of the disk. Valid values: · all: queries both the system disk and data disks · system: queries the system disk only · data: queries data disks only Default value: all.

Name	Type	Required	Example	Description
DryRun	Boolean	No	false	Indicates whether the system performs a permission check only. · true: Sends a permission check request, without querying resource status. The system checks whether your AccessKey is valid, whether RAM users are authorized, and whether the required parameters are set. For a failed check, corresponding error message is returned. For a successful check, the <code>DryRunOperation</code> error code is returned. · false: Sends a normal request, returns the 2XX HTTP status code after the check, and queries the resource status directly. Default value: false.
EnableAutoSnapshot	Boolean	No	false	Indicates whether an automatic snapshot policy is applied to the disk. Your automatic snapshot policy must be enabled. Default value: false.

Name	Type	Required	Example	Description
EnableAutomatedSnapshotPolicy	Boolean	No	false	Indicates whether an automatic snapshot policy is configured for the disk.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
EnableShared	Boolean	No	false	Indicates whether the disk is a shared block storage.
Encrypted	Boolean	No	false	Indicates whether encrypted disks are queried. Valid values: · true: Only encrypted disks are queried. · false: Encrypted disks are not queried. Default value: false.
InstanceId	String	No	i-instance1	The ID of the instance.
KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d3fb40826X	The ID of the KMS key corresponding to the data disk.

Name	Type	Required	Example	Description
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 for security reasons. • recycling: The preemptible instance is locked and is pending for release. • dedicatedhostfinancial: The ECS instance is locked because of overdue payments on the Dedicated Host.
PageNumber	Integer	No	1	The page number that you query in the disk status list. Starting value: 1. Default value: 1.
PageSize	Integer	No	10	The number of entries per page. Maximum value: 100. Default value: 10.

Name	Type	Required	Example	Description
Portable	Boolean	No	true	Indicates whether the disk is detachable. This attribute cannot be modified. Valid values: · true: The disk can be attached to or detached from instances within the same zone. · false: The disk cannot be detached, and is created or released together with the instance it is attached to. Disks whose Portable attribute is true can be attached or detached, except the following disks: · Local disks · Local SSDs · System disks of the basic, ultra, ESSD, and SSD disk categories · Subscription-based disks of the basic, ultra, ESSD, and SSD categories The Portable attribute of the preceding disks is false.
ResourceGroupId	String	No	rg-resourcegroupid1	The ID of the resource group to which the disk belongs.
SnapshotId	String	No	s-snapshotid1	The ID of the snapshot used to create the disk.

Name	Type	Required	Example	Description
Status	String	No	all	The status of the disk. For more information, see Basic disk statuses . Valid values: · In_use · Available · Attaching · Detaching · Creating · ReIniting · All Default value: All.
Tag . N . Key	String	No	FinanceJoshua	The tag key of the disk.
Tag . N . Value	String	No	FinanceDept	The tag value of the disk.
ZoneId	String	No	cn-hangzhou-g	The ID of the zone.

Response parameters

Name	Type	Example	Description
Disks			The disk information.
└ AttachedTime	String	2018-01-01T01:04:22Z	The time when the disk is detached . The time follows the ISO 8601 standard and uses UTC time. The format is YYYY-MM-DDThh:mmZ. This parameter is valid only when the disk is in the Available state.
└ AutoSnapshotPolicyId	String	s-23f2i9s4t	The ID of the automatic snapshot policy applied to the disk.

Name	Type	Example	Description
└Category	String	cloud_ssd	The category of the disk. Valid values: · cloud: basic disk · cloud_efficiency: ultra disk · cloud_ssd: SSD · ephemeral_ssd: local SSD · ephemeral: local disk · cloud_essd: ESSD
└CreationTime	String	2018-01-01T01:01:22Z	The creation time of the disk.
└DeleteAutoSnapshot	Boolean	false	Indicates whether the automatic snapshot is deleted when the disk is released. Snapshots created using CreateSnapshot or on the console are retained permanently and not affected by this attribute.
└DeleteWithInstance	Boolean	true	Indicates whether the disk is released together with the instance . Valid values: · true: When the instance is deleted, the disk will be released together with it. · false: When the instance is released, the disk will be retained.
└Description	String	FinanceDept	The description of the disk.
└DetachedTime	String	2018-01-08T01:01:22Z	The time when the disk is detached . This parameter is valid only when the disk is in the Available state.

Name	Type	Example	Description
<code>└Device</code>	String	<code>/dev/xvdb</code>	The device name of the instance that the disk is attached to, such as <code>/dev/xvdb</code>. It is null unless the disk is in the <code>In_use</code> state.  Note: This parameter is currently undergoing beta testing and has not yet been officially launched. We recommend that you do not use this parameter for the time being.
<code>└DiskChargeType</code>	String	<code>PostPaid</code>	The billing method of the disk. Valid values: • <code>PrePaid</code>: Subscription • <code>PostPaid</code>: Pay-As-You-Go
<code>└DiskId</code>	String	<code>d-23jbf2v5m</code>	The ID of the disk.
<code>└DiskName</code>	String	<code>FinanceDeptJoshua</code>	The name of the disk.
<code>└EnableAutoSnapshot</code>	Boolean	<code>false</code>	Indicates whether an automatic snapshot policy is applied to the disk. Default value: <code>false</code>.
<code>└EnableAutomatedSnapshotPolicy</code>	Boolean	<code>false</code>	Indicates whether an automatic snapshot policy is applied to the disk.
<code>└Encrypted</code>	Boolean	<code>false</code>	Indicates whether the disk is encrypted.
<code>└ExpiredTime</code>	String	<code>2018-01-10T01:01:22Z</code>	The time when the subscription-based disk expires.

Name	Type	Example	Description
<code>⌞IOPS</code>	Integer	4000	The number of input/output operations per second. Unit: times/s.
<code>⌞IOPSRead</code>	Integer	2000	The number of I/O reads. Unit: times/s.
<code>⌞IOPSWrite</code>	Integer	2000	The number of I/O writes. Unit: times/s.
<code>⌞ImageId</code>	String	m-bp13aqm171qynt3udgd	The ID of the image from which the disk is created. It is null unless the disk is created from an image. The value of this parameter will remain unchanged throughout the lifecycle of the disk.
<code>⌞InstanceId</code>	String	i-instanceid1	The ID of the instance that the disk is attached to. It is null unless the disk is in the In_use state.
<code>⌞KMSKeyId</code>	String	0e478b7a-4262-4802-b8cb-00d3fb40826X	The ID of the KMS key corresponding to the data disk.
<code>⌞MountInstanceNum</code>	Integer	1	The number of instances that a shared block storage can be attached to.
<code>⌞MountInstances</code>			The information about instance attachment.
<code>⌞AttachedTime</code>	String	2017-12-05T2340:00Z	The time when the disk is attached. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ.

Name	Type	Example	Description
↳Device	String	/dev/xvda	The mount point of the disk.  Note: This parameter is currently undergoing beta testing and has not yet been officially launched. We recommend that you do not use this parameter for the time being.
↳InstanceId	String	i-instanceid1	The ID of the instance that the disk is attached to.
↳OperationLocks			The reason why the disk is locked.
↳LockReason	String	security	The reason why the disk is locked.
↳PerformanceLevel	String	PL2	The performance level you select for an ESSD cloud disk. Valid values : • PL1 : The maximum random read/write IOPS of a single disk is 50,000. • PL2 : The maximum random read/write IOPS of a single disk is 100,000. • PL3 : The maximum random read/write IOPS of a single disk is 1,000,000.

Name	Type	Example	Description
└Portable	Boolean	false	Indicates whether the disk is detachable. Valid values: · true: The disk is an independent basic disk. This type of disk can be attached to or detached from instances within the same zone. · false: The disk is not an independent basic disk. This type of disk is created or released together with the instance it is attached to. Disks whose Portable attribute is true can be attached (AttachDisk) or detached (DetachDisk). The Portable attribute of the following disks is false: system disks of the local, local SSD, basic, and SSD disk categories, and subscription-based basic disks. The Portable attribute of these disks cannot be modified.
└ProductCode	String	jxsc000204	The product code in Alibaba Cloud Marketplace.
└RegionId	String	cn-hangzhou	The ID of the region to which the disk belongs.
└ResourceGroupId	String	rg-resourcegroup-id1	The ID of the resource group to which the disk belongs.
└Size	Integer	2000	The size of the disk. Unit: GiB.

Name	Type	Example	Description
[⌞] SourceSnapshotId	String	s-snapshotid1	The ID of the snapshot used to create the disk. It is null if no snapshot is used to create the disk. The value of this parameter will remain unchanged throughout the lifecycle of the disk.
[⌞] Status	String	Available	The status of the disk. Valid values: • In_use • Available • Attaching • Detaching • Creating • ReIniting
[⌞] Tags			A set of disk tags.
[⌞] TagKey	String	FinanceJoshua	The tag key of the disk.
[⌞] TagValue	String	FinanceDept	The tag value of the disk.
[⌞] Type	String	data	The type of the disk. Valid values: • system: system disk • data: data disk
[⌞] ZoneId	String	cn-hangzhou-g	The ID of the zone to which the disk belongs.
PageNumber	Integer	1	The page number that you query in the disk list.
PageSize	Integer	10	The number of entries per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of disks.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDisks
&RegionId=cn-hangzhou
&ZoneId=cn-hangzhou-g
&DiskIds=["d-disk1"]
&InstanceId=i-instance1
&DiskType=all
&Category=all
&Status=all
&SnapshotId=s-snapshotid-1
&Portable=true
&DeleteWithInstance=false
&DeleteAutoSnapshot=false
&PageNumber=1
&PageSize=10
&DiskName=JoshuaFinance
&AutoSnapshotPolicyId=auto_20140724_2
&EnableAutoSnapshot=false
&Encrypted=false
&DryRun=false
<Common request parameters>
```

Successful response examples

XML format

```
<DescribeDisksResponse>
  <Disks>
    <Disk>
      <DeleteAutoSnapshot>true</DeleteAutoSnapshot>
      <DeleteWithInstance>false</DeleteWithInstance>
      <EnableAutoSnapshot>false</EnableAutoSnapshot>
      <Category>cloud</Category>
      <Description />
      <DiskName />
      <Size>5</Size>
      <Type>data</Type>
      <InstanceId />
      <CreationTime>2014-07-23T02:44:07Z</CreationTime>
      <ImageId />
      <ZoneId>cn-qingdao-b</ZoneId>
      <AttachedTime>2014-07-23T07:47:35Z</AttachedTime>
      <DetachedTime>2014-07-23T08:28:48Z</DetachedTime>
      <Device />
      <OperationLocks />
      <Portable>true</Portable>
      <ProductCode />
      <RegionId>cn-qingdao</RegionId>
      <DiskId>d-28m5zbua0</DiskId>
      <SourceSnapshotId />
      <Status>Available</Status>
    </Disk>
    <Disk>
      <DeleteAutoSnapshot>true</DeleteAutoSnapshot>
      <DeleteWithInstance>false</DeleteWithInstance>
```



```

    < EnableAuto Snapshot > false </ EnableAuto Snapshot >
    < Category > cloud </ Category >
    < Description />
    < DiskName />
    < Size > 5 </ Size >
    < Type > data </ Type >
    < InstanceId />
    < CreationTime > 2014 - 07 - 23T02 : 44 : 06Z </ CreationTime >
  </ Disk >
</ Disks >
< PageNumber > 1 </ PageNumber >
< PageSize > 2 </ PageSize >
< TotalCount > 9 </ TotalCount >
< RequestId > ED5CF6DD - 71CA - 462C - 9C94 - A61A78A014 79 </
RequestId >
</ DescribeDisksResponse >

```

JSON format

```

{
  "PageNumber": 1,
  "TotalCount": 9,
  "PageSize": 2,
  "RequestId": "ACD9BBB0 - A9D1 - 46D7 - 9630 - B7A69889E1 10",
  "Disks": {
    "Disk": [
      {
        "ImageId": "",
        "Description": "",
        "Device": "",
        "ProductCode": "",
        "Portable": true,
        "DetachTime": "2014 - 07 - 23T08 : 28 : 48Z",
        "Type": "data",
        "InstanceId": "",
        "ZoneId": "cn - qingdao - b",
        "EnableAutoSnapshot": false,
        "DiskName": "",
        "AttachedTime": "2014 - 07 - 23T07 : 47 : 35Z",
        "SourceSnapshotId": "",
        "CreationTime": "2014 - 07 - 23T02 : 44 : 07Z",
        "Status": "Available",
        "DeleteAutoSnapshot": true,
        "Category": "cloud",
        "RegionId": "cn - qingdao",
        "DeleteWithInstance": false,
        "OperationLocks": {
          "OperationLock": []
        },
        "DiskId": "d - 28m5zbua0",

```

```

    " Size ": 5
  },
  {
    " ImageId ": "",
    " Descriptio n ": "",
    " Device ": "",
    " ProductCod e ": "",
    " Portable ": true ,
    " DetachedTi me ": "",
    " Type ": " data ",
    " InstanceId ": "",
    " ZoneId ": " cn - qingdao - b ",
    " EnableAuto Snapshot ": false ,
    " DiskName ": "",
    " AttachedTi me ": "",
    " SourceSnap shotId ": "",
    " CreationTi me ": " 2014 - 07 - 23T02 : 44 : 06Z ",
    " Status ": " Available ",
    " DeleteAuto Snapshot ": true ,
    " Category ": " cloud ",
    " RegionId ": " cn - qingdao ",
    " DeleteWith Instance ": false ,
    " OperationL ocks ": {
      " OperationL ock ": []
    },
    " DiskId ": " d - 28zfrmo13 ",
    " Size ": 5
  }
]
}
}
}

```

Errors

HTTP status code	Error code	Error message	Meaning
403	InvalidDiskIds. Malformed	The amount of specified disk Ids exceeds the limit.	The error message returned when the specified value of the DiskIds parameter is invalid.
404	InvalidDiskChargeType. NotFound	The DiskChargeType does not exist in our records	The error message returned when the specified disk type does not exist.

HTTP status code	Error code	Error message	Meaning
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned when the specified Tag.n.Key parameter does not correspond to the specified Tag.n.Value parameter.
400	InvalidRegion.NotFound	The specified parameter RegionId is not valid.	The error message returned when the specified RegionId parameter is invalid.
400	InvalidZoneId.NotFound	The zoneId provided does not exist in our records.	The error message returned when the specified zone ID does not exist.
400	InvalidParamter	Some parameters are invalid in this request.	The error message returned when the request contains invalid parameter values.
400	InvalidSnapshot.NotFound	The specified parameter SnapshotId is not valid.	The error message returned when the specified value of the SnapshotId parameter is invalid.
404	InvalidDiskIds.ValueNotSupported	The specified parameter DiskIds is not supported.	The error message returned when the specified value of the DiskIds parameter is invalid.

[View error codes](#)

9.4 AttachDisk

Attaches a data disk to an ECS instance.

Description

When you call this operation, note that:

- The operation can be performed only when the instance is in the Running or Stopped state.
- The data disk to be attached must be in the Available state.
- The instance must not be locked by [security control](#). The OperationLocks parameter of the ECS instance must not be set to "LockReason": "security".
- If an instance is locked for security reasons (the OperationLocks parameter is "LockReason": "security"), the DeleteWithInstance attribute will be ignored and the disk will be released together with the instance.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
DiskId	String	Yes	d-23jbf2v5m	The ID of the disk to be attached. The disk and the instance must belong to the same zone.
InstanceId	String	Yes	i-instance1	The ID of the ECS instance that the disk is to be attached to.
Action	String	No	AttachDisk	The operation that you want to perform. Set the value to AttachDisk.

Name	Type	Required	Example	Description
DeleteWith Instance	Boolean	No	false	Indicates whether the disk is to be released together with the instance. Default value: false.
Device	String	No	/dev/xvda	The name of the disk. This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.

Response parameters

Name	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-23jbf2v5m
&InstanceId=i-instance1
&DeleteWithInstance=false
&<Common request parameters>
```

Successful response examples

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 port is not valid.	The error message returned when the specified disk name does not exist.
403	InstanceDiskLimitExceeded	The amount of the disk on instance in question reach its limits.	The error message returned when the specified instance is already attached with the maximum number of disks.
403	InvalidDevice.InUse	The specified device has been occupied.	The error message returned when the specified device already has an attached disk.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned when the specified instance is locked for security reasons and the operation cannot be completed.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned when the subscription of the instance has expired. You must renew the subscription before proceeding.
400	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned when the specified resource is in a state that does not support the current operation.
403	DiskError	IncorrectDiskStatus.	The error message returned when the status of the specified disk is invalid.

HTTP status code	Error code	Error message	Description
403	DiskId.ValueNotSupported	The specified parameter diskid is not supported.	The error message returned when the specified disk type does not support this operation.
403	DiskId.StatusNotSupported	The specified disk status is not supported.	The error message returned when the specified disk is in a state that does not support this operation.
404	InvalidDisk.InUse	The specified disk has been occupied.	The error message returned when the specified disk is already in use.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned when you are not authorized to use the specified disk.
400	InvalidOperation.InstanceTypeNotSupported	The instance type of the specified instance does not support hot attach disk.	The error message returned when the instance that the disk is attached to does not support the hot swapping of disks.

[View error codes](#)

9.5 DetachDisk

Detaches a Pay-As-You-Go disk from an instance. The disk types that support Pay-As-You-Go billing are basic disks, ultra disks, and SSDs.

Description

When you call this operation, note that:

- The Portable attribute of the disk must be set to true.
- The disk to be detached must be in the In_use state.

- The instance that the disk is attached to must be in the Running or Stopped state.
- The instance must not be locked by [security control](#). The OperationLocks parameter of the ECS instance must not be set to "LockReason": "security".
- After the disk is detached from an instance, its DeleteWithInstance attribute will be set to false. Because it is no longer attached to the instance, it can no longer be released together with the instance.
- The DetachDisk operation is asynchronous. After a response is returned, it will take about a minute before the disk is detached.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
DiskId	String	Yes	d-diskid1	The ID of the disk to be detached.
InstanceId	String	Yes	i-instanceid1	The ID of the ECS instance from which the disk is to be detached.
Action	String	No	DetachDisk	The operation that you want to perform. Set the value to DetachDisk.

Response parameters

Name	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 - diskid1
& InstanceId = i - instanceid 1
&< Common request parameters >
```

Successful response examples

XML format

```
< DetachDisk Response >
  < RequestId > 473469C7 - AA6F - 4DC5 - B3DB - A3DC0DE3C8 3E </
    RequestId >
</ DetachDisk Response >
```

JSON format

```
{
  "RequestId ":" 473469C7 - AA6F - 4DC5 - B3DB - A3DC0DE3C8 3E "
```

Error codes

HTTP status code	Error code	Error message	Description
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned when the specified instance is locked for security reasons and the operation cannot be completed.
400	InvalidOperation.InstanceTypeNotSupport	The instance type of the specified instance does not support hot detach disk.	The error message returned when the instance that the disk is attached to does not support the hot swapping of disks.

[View error codes](#)

9.6 ModifyDiskChargeType

Modifies the billing method for up to 16 disks that are attached to an instance.

Description

After you change the billing method, automatic payment is enabled by default. Make sure that your account has sufficient balance. Otherwise, your order becomes invalid

and you have to cancel this order. If your account balance is insufficient, you can set the `AutoPay` parameter to `false` to generate a normal order. Then, you can log on to the [ECS console](#) to pay for the order.

When you call this operation, note that:

- Changing the billing method from Subscription to Pay-As-You-Go is suitable for Subscription-based disks that are attached to a Subscription-based instance.
- Changing the billing method from Pay-As-You-Go to Subscription is suitable for Pay-As-You-Go data disks that are attached to a Subscription-based or Pay-As-You-Go instance.
- The instances cannot be in the Stopped state due to overdue payments.
- You can modify the billing method for each disk three times at most. The refunding of price difference cannot exceed three times.
- The price difference is refunded to the payment account you used. Price difference of coupon purchases are not refunded.
- The billing method of a disk cannot be modified for at least five minutes after it has been modified.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
DiskIds	String	Yes	["d-xxxxxxxx", "d-yyyyyyyy", ... "d-zzzzzzzzz"]	The list of disk IDs. The parameter is a JSON-formatted array. You can specify a maximum of 16 IDs. Separate multiple IDs with commas (,).
InstanceId	String	Yes	i-instanceid1	The ID of the instance that the disk is attached to.

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the instance belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	ModifyDiskChargeType	The operation that you want to perform. Set the value to ModifyDiskChargeType.
AutoPay	Boolean	No	true	Indicates whether automatic payment is enabled. Valid values: · true (default): Automatic payment is enabled. Make sure that your account has sufficient balance. Otherwise, your order becomes invalid and you have to cancel this order. · false: No payment is made and only an order is generated. If your account has insufficient funds, the system generates a normal unpaid order. You can log on to the ECS console to complete the payment.

Name	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. It can contain a maximum of 64 ASCII characters. For more information, see How to ensure idempotency.
DiskChargeType	String	No	PostPaid	The billing method for disks. Valid values: - PrePaid (default): 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

Name	Type	Example	Description
OrderId	String	1111111111 111111111111110	The ID of a 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-diskid1"]
&InstanceId=i-instanceid-1
&RegionId=cn-hangzhou
&AutoPay=true
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&DiskChargeType=PostPaid
```

&< Common request parameters >

Successful response examples

XML format

```
< ModifyDisk ChargeType >
  < RequestId > 04F0F334 - 1335 - 436C - A1D7 - 6C044FE733 68 </
    RequestId >
  < Order > 1011111111 111111 </ Order >
</ ModifyDisk ChargeType >
```

JSON format

```
{
  " RequestId ":" 04F0F334 - 1335 - 436C - A1D7 - 6C044FE733 68 ",
  " Order ": 1011111111 111111
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The RegionId provided does not exist.	The error message returned when the specified region ID does not exist.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType is not supported.	The error message returned when you are not authorized to use the specified instance type.
400	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned when the billing method of the instance does not support this operation.
400	InvalidInstance.PurchaseNotFound	The specified Instance has no purchase.	The error message returned when 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 when the specified instance has outstanding orders. You must pay for the orders before proceeding.
400	Account.Arrearage	Your account has been in arrears.	The error message returned when your account balance is insufficient. You must top up your account before proceeding.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not Supported.	The error message returned when the specified instance type does not support this operation.
400	OrderCreationFailed	Create Order failed, please check your parameters and try it later.	The error message returned when the order failed to be created. Check your parameters and try again later.
400	Throttling	Request was denied due to request throttling, please try again after 5 minutes.	The error message returned when the request is denied due to throttling.
404	PaymentMethodNotFound	No billing method has been registered on the account.	The error message returned when you have not selected a billing method.
404	InvalidRamRole.NotFound	The specified parameter RAMRoleName does not exist.	The error message returned when the specified RAM role name does not exist.

HTTP status code	Error code	Error message	Description
400	InstanceDowngrade. QuotaExceed	Quota of instance downgrade is exceed.	The error message returned when the instance has been downgraded the allowed times.
404	InvalidDiskIds. NotFound	Some of the specified data disks do not exist.	The error message returned when the specified data disk does not exist.
404	InvalidDiskIds. NotPortable	The specified DiskId is not portable.	The error message returned when the specified disk does not support the Portable attribute.
403	InvalidAccountStatus. NotEnoughBalance	Your account does not have enough balance.	The error message returned when your account balance is insufficient. You must top up your account before proceeding.
403	InvalidInstanceChargeType.NotFound	The chargeType of the instance does not support this operation.	The error message returned when the billing method of the instance does not support this operation.

[View error codes](#)

9.7 ModifyDiskAttribute

Modifies the attributes of a disk.

Description

If an instance is locked for security reasons (the OperationLocks parameter is "LockReason": "security"), the DeleteWithInstance attribute will be ignored and the disk will be released together with the instance.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
DiskId	String	Yes	d-diskid1	The ID of the disk to be modified.
Action	String	No	ModifyDiskAttribute	The operation that you want to perform. Set the value to ModifyDiskAttribute.
DeleteAutoSnapshot	Boolean	No	false	Indicates whether the automatic snapshot is deleted when the disk is released. Default value: null, indicating that the parameter value remains unchanged.
DeleteWithInstance	Boolean	No	false	Indicates whether the disk is released together with the instance: Default value: null, indicating that the parameter value remains unchanged. An error will be returned if you set the DeleteWithInstance attribute to false in the following cases: • When the Category attribute of a disk is set to ephemeral. • When the Category attribute of a disk is set to cloud and the Portable attribute is set to false.

Name	Type	Required	Example	Description
Description	String	No	FinanceDeptJoshua	The description of the disk. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
DiskName	String	No	FinanceJoshua	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 (-).
EnableAutoSnapshot	Boolean	No	true	Indicates whether to apply a created automatic snapshot policy to the disk. Default value: null, indicating that the parameter value remains unchanged.

Response parameters

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

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyDiskAttribute
&DiskId=d-23jbf2v5m
&DiskName=MyDiskName
&<Common request parameters>
```

Successful response examples

XML format

```
< ModifyDisk  AttributeR  esponse >
  < RequestId > 473469C7 - AA6F - 4DC5 - B3DB - A3DC0DE3C8  3E </
    RequestId >
</ ModifyDisk  AttributeR  esponse >
```

JSON format

```
{
  " RequestId ":" 473469C7 - AA6F - 4DC5 - B3DB - A3DC0DE3C8  3E "
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDescription. Malformed	The specified description is wrongly formed.	The error message returned when the specified description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
403	QuotaExceed. Snapshot	The snapshot quota exceeds.	The error message returned when the snapshot quota has been exhausted. To store new snapshots, you can delete existing snapshots without affecting your business.
400	Incomplete Paramter	Some fields can not be null in this request.	The error message returned when a required parameter is not specified .

[View error codes](#)

9.8 ReplaceSystemDisk

Replaces the system disk or operating system of an ECS instance.

Description

When you call this operation, note that:

- You cannot change the category of the system disk for your ECS instance.
- This operation changes the ID of the system disk but does not change its billing method. The original system disk is released when the operation is completed.
- The instance to which the specified disk is attached must be in the Stopped state. You must disable No Fees for Stopped Instances (VPC-Connected) when you stop the instance. This prevents the instance from being unable to be restarted because of insufficient ECS resources after the system disk is replaced. For more information, see [StopInstance](#).
- The instance must not be locked by [security control](#) (the OperationLocks parameter is "LockReason": "security").
- The instance cannot have overdue payments.
- You can specify a new capacity by setting the SystemDisk.Size parameter for the system disk. The parameter value must be at least 20 GiB and greater than or equal to the disk capacity before replacement. Extra fees are charged for the size that exceeds $\max\{20, \text{the disk capacity before replacement}\}$.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-instanceid1	The ID of the instance.
Action	String	No	ReplaceSystemDisk	The operation that you want to perform. Set the value to ReplaceSystemDisk.

Name	Type	Required	Example	Description
Architecture	String	No	i386	The system architecture. Valid values: i386 x86_64.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The ClientToken parameter must be no more than 64 ASCII characters in length. For more information, see How to ensure idempotency .
ImageId	String	No	m-imageid1	The ID of the image used to replace the system disk.
KeyPairName	String	No	JoshuaCentOS	The name of the key pair. - For a Windows ECS instance, this parameter is ignored. This parameter is not specified by default. The Password parameter is still effective even when the KeyPairName parameter is specified. - For a Linux ECS instance, the username and password authentication method is disabled by default.

Name	Type	Required	Example	Description
Password	String	No	EcsV587!	The password of the instance.  Note: If the Password parameter is specified, use HTTPS to call the operation to avoid password leakage. The password must be 8 to 30 characters in length and must contain uppercase or lowercase letters, digits, and special characters. The password of a Windows instance cannot start with a forward slash (/). The password can contain any of the following special characters: <pre>() ` ~ ! @ # \$ % ^ & * - _ + = { }</pre> <pre>[] : ; ' < > , . ? /</pre>
PasswordInherit	Boolean	No	false	Indicates whether to use the pre-configured password of the specified image. When the PasswordInherit parameter is specified, the Password parameter must be null. For secure access, make sure that the selected image has password configured. Default value: false.
Platform	String	No	CentOS	The release version of the operating system. Valid values: CentOS Ubuntu.

Name	Type	Required	Example	Description
SecurityEnhancementsStrategy	String	No	Active	Indicates whether to enable security hardening and install Alibaba Cloud Security on the system disk. Valid values: • Active: enables security hardening and installs Alibaba Cloud Security for free. This value is applicable to only public images. • Deactive: disables security hardening and does not install Alibaba Cloud Security. This value is applicable to all images.
SystemDisk. Size	Integer	No	80	The capacity of the new system disk. Unit: GiB. Valid values: Max{20, the size of the specified image} to 500. Default value: Max{40, the size of the specified image}.
UseAdditionalService	Boolean	No	true	Indicates whether to use the VM system configuration provided by Alibaba Cloud. Windows: NTP and KMS. Linux : NTP and YUM.  Note: You can specify this parameter when you attach a system disk (device is /dev/xvda).

Response parameters

Name	Type	Example	Description
DiskId	String	d-j6cam2z21u4ks3dj6flb	The ID of the new system disk.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ReplaceSys_temDisk
&InstanceId=i-instanceid_1
&ImageId=m-imageid1
&SystemDisk.Size=80
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&Password=EcsV587!
&PasswordInherit=false
&KeyPairName=JoshuaCentOS
&SecurityEnhancementStrategy=Active
&<Common request parameters>
```

Successful response examples

XML format

```
<ReplaceSys_temDiskResponse>
  <DiskId>d-23jbf2v5m</DiskId>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ReplaceSys_temDiskResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE",
  "DiskId": "d-j6cam2z21u4ks3dj6flb"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidSystemDiskSize.ValueNotSupported	The specified parameter SystemDisk.Size is invalid.	The error message returned when the specified value of the SystemDisk.Size parameter is invalid.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned when the specified image does not exist under this account. Check whether the image ID is correct.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned when the specified resource is in a state that does not support the current operation.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned when the specified instance is locked for security reasons and the operation cannot be completed.
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 including exact the same product code has been removed.	The error message returned when the specified image from Marketplace is unavailable.

HTTP status code	Error code	Error message	Description
500	OperationDenied	Internal Error.	The error message returned when an unknown internal error occurs.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned when the subscription of the instance has expired. You must renew the subscription before proceeding.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned when 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 when a snapshot of the specified disk is being created.
403	QuotaExceeded.BuyImage	The specified image is from the image market ,You have not bought it or your quota has been exceeded.	The error message returned when you are not authorized to use the specified image from Marketplace.
404	InvalidSystemDiskSize.LessThanImageSize	The specified parameter SystemDisk.Size is less than the image size.	The error message returned when the specified system disk size is smaller than the size of the image.
404	NoSuchResource	The specified resource is not found.	The error message returned when the specified resource does not exist.
403	INST_HAS_UNPAID_ORDER	The instance has unpaid order.	The error message returned when the instance has overdue payments.

HTTP status code	Error code	Error message	Description
400	InvalidSystemDiskSize.ValueNotSupported	The specified parameter SystemDisk.Size is invalid	The error message returned when the specified value of the SystemDisk.Size parameter is invalid.
400	InvalidPasswordParam.Mismatch	The input password should be null when passwdInherit is true.	The error message returned when the PasswdInherit parameter is specified but the Password parameter is not left null.
400	OperationDenied	The specified image contains the snapshot of the data disk, does not support this operation.	The error message returned when the specified image contains the snapshot of the data disk and cannot be exported.
400	InvalidDiskCategory.ValueNotSupported	The specified parameter DiskCategory is not valid.	The error message returned when the specified value of the DiskCategory parameter is invalid.
400	InvalidParameter.Conflict	%s	The error message returned when a specified parameter conflicts with another parameter.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned when a specified parameter is not supported.
403	InvalidParameter.NotMatch	%s	The error message returned when a specified parameter conflicts with another parameter.

HTTP status code	Error code	Error message	Description
400	MissingParameter.Architecture	Architecture should not be null.	The error message returned when a required parameter is not specified .
400	InvalidArchitecture.Malformed	Architecture is not valid.	The error message returned when the value of a specified parameter is invalid.
400	MissingParameter.Platform	Platform should not be null.	The error message returned when a required parameter is not specified .
400	InvalidPlatform.Malformed	Platform is not valid.	The error message returned when the specified value of the Platform parameter is invalid.
400	InvalidParameter.AllEmpty	%s	The error message returned when a required parameter is not specified .
400	InvalidDiskId.NotFound	The specified disk do not exist.	The error message returned when the specified disk does not exist.
400	InvalidDatadisk.DiskStatusViolation	The operation is not permitted due to status of the Datadisk.	The error message returned when the specified data disk type does not support this operation.
400	InvalidDatadisk.DiskCategoryViolation	The operation is not permitted due to category of the Datadisk.	The error message returned when the specified data disk type does not support this operation.

HTTP status code	Error code	Error message	Description
400	InvalidSystemDiskSize.ValueNotSupported	The specified SystemDiskSize is not valid.	The error message returned when the specified value of the SystemDisk.Size parameter is invalid.
403	ImageNotSupportedInstanceType	The specified instanceType is not supported by instance with marketplace image.	The error message returned when the specified image from Marketplace does not support the instance type.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned when an unknown error occurs.

[View error codes](#)

9.9 ReInitDisk

Resets a disk to its initial state .

Description

When you call this operation, note that:

- The operation can be performed only when the disk is in the In_use state and the instance that the disk is attached to is in the Stopped state.
- If the instance has not been activated for the first time after creation, the disks attached to it cannot be reinitialized.
- A system disk will be initialized to the initial status of the image. If the source image used to create the disk is deleted, the disk cannot be initialized.
- A user-created data disk will be initialized to the state of an empty data disk.
- A data disk that was created from a snapshot will be initialized to the state of the snapshot. If the source snapshot used to create the disk is deleted, the disk cannot be initialized and an error will be returned.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
DiskId	String	Yes	d-diskid1	The ID of the disk.
Action	String	No	ReInitDisk	The operation that you want to perform. Set the value to ReInitDisk.
AutoStartInstance	Boolean	No	true	Indicates whether to start the instance after the disk is reinitialized.
KeyPairName	String	No	JoshuaCentOS	The name of the key pair.

Name	Type	Required	Example	Description
Password	String	No	EcsV587!	The new password of the instance.  Note: If the Password parameter is specified, use HTTPS to call the operation to avoid password leakage. The password must be 8 to 30 characters in length and must contain uppercase or lowercase letters, digits, and special characters. The password of a Windows instance cannot start with a forward slash (/). The password can contain any of the following special characters: <pre>() ` ~ ! @ # \$ % ^ & * - _ + = { } [] : ; ' < > , . ? /</pre>
SecurityEnhancementsStrategy	String	No	Active	Indicates whether to enable security hardening and install Alibaba Cloud Security on the system disk. Valid values: • Active: enables security hardening and installs Alibaba Cloud Security for free. This value is applicable to only public images. • Deactive: disables security hardening and does not install Alibaba Cloud Security. This value is applicable to all images.

Response parameters

Name	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-diskid1
&Password=EcsV587!
&KeyPairName=JoshuaCentOS
&AutoStartInstance=true
&SecurityEnhancementStrategy=Active
&<Common request parameters>
```

Successful response examples

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
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned when the specified resource is in a state that does not support the current operation.

HTTP status code	Error code	Error message	Description
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned when the specified instance is locked for security reasons and the operation cannot be completed.
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 when the specified snapshot is created on or before July 15, 2013.
403	OperationDenied	The snapshot which is used to create the specified disk has been deleted.	The error message returned when 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 when the subscription of the instance has expired. You must renew the subscription before proceeding.
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is not completed yet.	The error message returned when 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 when the snapshot used to create the specified disk has been deleted.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned when the specified image does not exist under this account. Check whether the image ID is correct.

HTTP status code	Error code	Error message	Description
404	InvalidDiskId .OperationNotSupported	The operation is not supported due to image not exist.	The error message returned when the specified image does not exist.

[View error codes](#)

9.10 ResetDisk

Rolls back a disk to the specific disk status by using one of its snapshots.

Description

When you call this operation, note that:

- The operation can be performed only when the disk is in the In_use state.
- The instance that the specified disk is attached to must be in the Stopped state.
- The specified snapshot must be created from the disk specified by the DiskId parameter.
- The instance must not be locked by [security control](#) (the OperationLocks parameter is "LockReason": "security").

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
DiskId	String	Yes	d-diskid1	The ID of the disk.
SnapshotId	String	Yes	s-snapshotid1	The ID of the snapshot that is used to roll back the disk to a specific state.

Name	Type	Required	Example	Description
Action	String	No	ResetDisk	The operation that you want to perform. Set the value to ResetDisk.

Response parameters

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

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ResetDisk
&DiskId=d-diskid1
&SnapshotId=s-snapshotid_1
&<Common request parameters>
```

Successful response examples

XML format

```
<ResetDiskResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673-DE</RequestId>
</ResetDiskResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673-DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	Disk.NotFound	The specified disk does not exist.	The error message returned when the specified disk does not exist. Check whether the disk ID is correct.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned when the specified resource is in a state that does not support the current operation.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned when the specified instance is locked for security reasons and the operation cannot be completed.
403	InvalidParameter.Mismatch	The specified snapshot is not created from the specified disk.	The error message returned when the specified snapshot was not created from the specified 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 when the specified snapshot was created on or before July 15, 2013.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned when the subscription of the instance has expired. You must renew the subscription before proceeding.

HTTP status code	Error code	Error message	Description
403	OperationDenied	The specified snapshot does not support ResetDisk.	The error message returned when the specified snapshot does not support the ResetDisk operation.
403	InvalidSnapshotId. NotReady	The specified snapshot has not completed yet.	The error message returned when the specified snapshot is being created.
403	InvalidAccountStatus. NotEnoughBalance	Your account does not have enough balance.	The error message returned when your account balance is insufficient. You must top up your account before proceeding.
403	Operation. Conflict	The operation may conflicts with others.	The error message returned when the specified operation conflicts with other operations.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned when you are not authorized to use the specified disk.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned when an unknown error occurred.

[View error codes](#)

9.11 ResizeDisk

You can call this operation to resize a cloud disk. You can resize both system disks and data disks.

Description



Note:

Before calling this operation, you must check the partition format of the cloud disk. If an existing partition of the cloud disk is created by using MBR, you cannot resize the cloud disk to greater than or equal to 2 TiB. Otherwise, data may be lost. If the MBR partition format is used, we recommend that you create and attach another data disk. Format a GPT partition and copy the data in the MBR partition to the GPT partition. For more information, see [Resize cloud disks offline](#).

- You can resize the following cloud disk types: basic disks (cloud), ultra disks (cloud_efficiency), SSD disks (cloud_ssd), and ESSD disks (cloud_essd).
- You cannot resize a cloud disk when a snapshot is being created for it.
- The instance to which the disk is attached must be in the running or stopped state.
- After resizing a cloud disk, you must [restart the instance](#) in the console or call the [RebootInstance](#) operation to validate the operation.
- After you resize a cloud disk, its partitions and file systems will not change. You can allocate the storage space after resizing.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
DiskId	String	Yes	d-diskid	The ID of the cloud disk to be resized.

Parameter	Type	Required	Example	Description
NewSize	Integer	Yes	1900	The new disk capacity that you want to specify. Unit: GiB. Valid values: - Basic disk (cloud): 5 to 2,000 - Ultra disk (cloud_efficiency): 20 to 6,144 - SSD disk (cloud_ssd): 20 to 6,144 - ESSD disk (cloud_essd): 20 to 32,768 The new disk capacity must be larger than the original disk capacity. If the original capacity of a cloud disk is less than 6 TiB, you cannot resize it to more than 6 TiB.
Action	String	No	ResizeDisk	The operation that you want to perform. Set the value to ResizeDisk.
Type	String	No	offline	The method that you use to resize the cloud disk. Valid values: offline: In this method, you need to restart the instance to validate the operation. This is the default value. online: In this method, you do not need to restart the instance. This method can only be used on data disk, and only ultra disks and SSD disks are supported.

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 this value, but you must ensure that it is unique among different requests. The ClientToken parameter 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	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ResizeDisk
&DiskId=d-diskid
&NewSize=1900
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

XML format

```
<ResizeDiskResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ResizeDiskResponse>
```

JSON format

```
{
  "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 maximum size of the specified data disk is reached.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the DiskId parameter is correct.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
403	OperationDenied	The type of the disk does not support the operation.	The error message returned because the operation is not supported by the specified data disk type.
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.

HTTP status code	Error code	Error message	Description
403	InvalidDiskSize. TooLarge	Specified new disk size is beyond the permitted range.	The error message returned because the specified new disk capacity is greater than the maximum capacity.
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	DiskError	IncorrectDiskStatus	The error message returned because the specified DiskStatus parameter is invalid.
403	DiskInArrears	The specified operation is denied as your disk owing fee.	The error message returned because the disk has an overdue payment.
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 problem 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 parameter is not supported.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.Conflict	%s	The error message returned because the parameter is conflicting with another parameter.
400	InvalidDataDiskSize.ValueNotSupported	%s	The error message returned because the parameter is not supported.
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 cannot be null in this request.	The error message returned because a required parameter is not specified.
403	Operation.Conflict	The operation may conflict with others.	The error message returned because the operation is conflicting with another operation.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the resource is locked to ensure security.
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. Ensure that the disk is available and has no overdue payments.

HTTP status code	Error code	Error message	Description
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not authorized to use the specified disk.
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 type is not supported.
400	InvalidParam.Type	The specified type is not supported.	The error message returned because the specified parameter is invalid.
403	InvalidRegion.NotSupport	The specified region does not support resize online.	The error message returned because online resizing is not available in the specified region.
403	InvalidDiskCategory.NotSupported	The specified disk category does not support resize online.	The error message returned because online resizing is not supported by the specified disk type.
403	IncorrectInstanceState	The current status of the resource does not support resize online.	The error message returned because the operation is not supported while the resource is in the current state.
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.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.InstanceTypeNotSupport	The instance type of the specified instance does not support resize online.	The error message returned because online resizing is not supported by the instance to which the disk is attached.

[View error codes](#)

9.12 ModifyDiskSpec

You can call this operation to upgrade the performance level of an ESSD.

Description

To upgrade the performance level of an ESSD, make sure that:

- The ESSD is in the In Use or Available state.
- If the ESSD is attached to an ECS instance, the ECS instance is in the Running or Stopped state.
- The new performance level of the ESSD takes effect immediately after you call this operation. The ESSD is then billed based on the unit price specific to the new performance level.
- If you cannot upgrade the performance level of the ESSD due to its capacity limit, resize the ESSD by calling the [ResizeDisk](#) operation and then perform the upgrade again. For more information, see [ESSD](#).

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
DiskId	String	Yes	d-bp131n0q38u3a4zi*****	The ID of the ESSD.

Parameter	Type	Required	Example	Description
PerformanceLevel	String	Yes	PL2	The performance level you want to upgrade the ESSD to. Default value: PL1. Valid values : • PL1: indicates that a single ESSD delivers up to 50,000 random read/write IOPS. • PL2: indicates that a single ESSD delivers up to 100,000 random read/write IOPS. • PL3: indicates that a single ESSD delivers up to 1,000,000 random read/write IOPS.  Note: The new performance level cannot be lower than the original one.
Action	String	No	ModifyDiskSpec	The operation that you want to perform. For API requests using the HTTP and HTTPS methods, <code>Action</code> is required. Set this parameter to <code>ModifyDiskSpec</code> .

Response parameters

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

Examples

Sample request

```
https://ecs.aliyuncs.com/?Action=ModifyDiskSpec&PerformanceLevel=PL2
```

&< Common request parameters >

Sample success response

XML format

```
< ModifyDisk SpecResponse >
  < RequestId > 473469C7 - AA6F - 4DC5 - B3DB - A3DC0DE3C8 3E </
    RequestId >
</ ModifyDisk SpecResponse >
```

JSON format

```
{
  "RequestId ":" 473469C7 - AA6F - 4DC5 - B3DB - A3DC0DE3C8 3E "
}
```

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.
403	DiskInArrears	The specified operation is denied as your disk owing fee.	The error message returned because the specified disk has overdue payments.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter 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.

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. Ensure that the disk is available and has no overdue payments.
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 operation is not supported by the specified data disk type.

[View error codes](#)

10 Reserved Instances

10.1 PurchaseReservedInstancesOffering

After you purchase Pay-As-You-Go instances, you can use `PurchaseReservedInstancesOffering` to purchase Reserved Instances (RIs) so that you can benefit from billing discounts.

Description

Before you purchase RIs, you can call [DescribeAvailableResource](#) to query available instance resources.

We recommend that you read [Reserved Instance billing methods](#) before you purchase RIs to learn more about the billing methods applied.

Request parameters

Name	Type	Required	Description
Action	String	Yes	A parameter required by the system. Value: <code>PurchaseReservedInstancesOffering</code> .
RegionId	String	Yes	ID of the region to which the RI belongs. You can call DescribeRegions to view the latest region list.
Scope	String	Yes	Scope of the RI. Optional values: - Region : region-level - Zone : zone-level Default value: Region .
ZoneId	String	No	ID of the zone to which the RI belongs. When <code>Scope</code> is set to <code>Zone</code> , this parameter is required. For information about the zone list, see DescribeZones .

Name	Type	Required	Description
ReservedInstanceName	String	No	Name of the RI. The name must be a string of 2 to 128 characters in length and can contain letters, numbers, colons (:), underscores (_), and hyphens. It must start with a letter. It cannot start with http:// or https://.
InstanceType	String	Yes	Instance type of the RI. For more information, see Instance type families .
InstanceAmount	Integer	Yes	Number of instances allocated to an RI (An RI is a coupon that includes one or more allocated instances.)
OfferingType	String	Yes	Payment type of the RI. Optional values: - No Upfront : No upfront payment is required. - Partial Upfront : A portion of upfront payment is required. - All Upfront : Full upfront payment is required.
Period	Integer	Yes	Term of the RI. Unit: years. Optional values: 1 and 3 .
PeriodUnit	String	Yes	Term unit. Optional value: Year .

Response parameters

Name	Type	Description
ReservedInstanceId	String	ID of the RI. The ID is the unique identity to access the RI.

Examples

Request example

```
https://ecs.aliyuncs.com/?Action=PurchaseReservedInstancesOffering
&RegionId=cn-hangzhou
&Scope=Zone
&ZoneId=cn-hangzhou-a
&ReservedInstanceName=test
&InstanceType=ecs.g5.2xlarge
&InstanceAmount=1
```

```
& OfferingType = All Upfront
& Period = 1
& PeriodUnit = Year
&< Common request parameters >
```

Response example

XML format

```
< PurchaseReservedInstancesOfferingResponse >
  < RequestId > 51AB7717 - 6E1A - 4D1D - A44D - 54CBxxxxxx xx </
  RequestId >
  < ReservedInstanceId > ri - instance </ InstanceId >
</ PurchaseReservedInstancesOfferingResponse >
```

JSON format

```
{
  "RequestId": " 51AB7717 - 6E1A - 4D1D - A44D - 54CBxxxxxx xx ",
  "ReservedInstanceId": " ri - instance "
}
```

10.2 DescribeReservedInstances

You can call `DescribeReservedInstances` to query the Reserved Instances (RIs) that you have purchased.

Request parameters

Name	Type	Required	Description
Action	String	Yes	A parameter required by the system. Value: <code>DescribeReservedInstances</code> .
RegionId	String	Yes	ID of the region to which the RI belongs. You can call DescribeRegions to view the latest region list.
Scope	String	No	Scope of the RI. Optional values: - Region : region-level - Zone : zone-level Default value: Region .
ZoneId	String	No	ID of the zone to which the RI belongs. When <code>Scope</code> is set to <code>Zone</code> , this parameter is required. For information about the zone list, see DescribeZones .

Name	Type	Required	Description
ReservedInstanceName	String	No	Name of the RI
ReservedInstanceId	List	No	ID of the RI
InstanceType	String	No	Instance type of the RI. For more information, see Instance type families .
InstanceTypeFamily	String	No	Instance type family of the RI. For more information, see Instance type families .
Status	List	No	Status of the RI
PageNumber	Integer	No	Page number of the RI list. The start value is 1. The default value is 1.
PageSize	Integer	No	Number of rows per page for queries per page. The maximum value is 100. The default value is 10.

Response parameters

Name	Type	Description
RequestId	String	Request ID
TotalCount	Integer	Total number of RIs
PageNumber	Integer	Page number of the RI list
PageSize	Integer	Number of rows per page contained in the returned result
ReservedInstances	List	Array of ReservedInstances , which contain instance information

The following table describes the parameters of the ReservedInstance data type.

Name	Type	Description
ReservedInstanceName	String	Name of the RI
RegionId	String	ID of the region to which the RI belongs

Name	Type	Description
ZoneId	String	ID of the zone to which the RI belongs
InstanceType	String	Instance type of the RI
Scope	String	Scope of the RI
OfferingType	String	Payment type of the RI
InstanceAmount	String	Number of instances allocated to an RI (An RI is a coupon that includes one or more allocated instances.)
Status	String	Status of the RI
CreationTime	String	Time when the RI is created
ExpiredTime	String	Expiration time of the RI
StartTime	String	Time when the RI takes effect

Examples

Request example

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

Response example

XML format

```
<DescribeReservedInstancesResponse>
  <ReservedInstance>
    <CreationTime>2018-12-10T12:07Z</CreationTime>
    <ExpiredTime>2019-12-10T16:00Z</ExpiredTime>
    <InstanceAmount>1</InstanceAmount>
    <ReservedInstanceId>ri-xxx</ReservedInstanceId>
    <InstanceType>ecs.g5.large</InstanceType>
    <OfferingType>All Upfront</OfferingType>
    <RegionId>cn-hangzhou</RegionId>
    <ReservedInstanceName>riZ0xzhex2ulpzf53xxx-xx</ReservedInstanceName>
    <Scope>region</Scope>
    <StartTime>2018-12-10T12:00Z</StartTime>
    <Status>active</Status>
  </ReservedInstance>
  <ReservedInstance>
    <CreationTime>2018-12-10T12:07Z</CreationTime>
    <ExpiredTime>2019-12-10T16:00Z</ExpiredTime>
    <InstanceAmount>1</InstanceAmount>
    <ReservedInstanceId>ri-xxxx</ReservedInstanceId>
    <InstanceType>ecs.g5.large</InstanceType>
    <OfferingType>All Upfront</OfferingType>
```

```
< RegionId > cn - hangzhou </ RegionId >
< ReservedIn stanceName > riZ0xzhex2 ulpzfxxxxx x </ ReservedIn
stanceName >
< Scope > region </ Scope >
< StartTime > 2018 - 12 - 10T12 : 00Z </ StartTime >
< Status > active </ Status >
  </ ReservedIn stance >
  < PageNumber > 1 </ PageNumber >
  < PageSize > 50 </ PageSize >
  < Total > 2 </ Total >
</ DescribeRe servedInst ancesRespo nse >
```

JSON format

```
{
  " code ":" 200 ",
  " data ":{
    " data ":[
      {
        " CreationTi me ":" 2018 - 12 - 10T12 : 07Z ",
        " ExpiredTim e ":" 2019 - 12 - 10T16 : 00Z ",
        " InstanceAm ount ":" 1 ",
        " ReservedIn stanceId ":" ri - 0xzhex2ulp  zf53rxme2j
",
        " InstanceTy pe ":" ecs . g5 . large ",
        " OfferingTy pe ":" All Upfront ",
        " RegionId ":" cn - hangzhou - test - 307 ",
        " ReservedIn stanceName ":" riZ0xzhex2 ulpzf53rxm
e2jZ ",
        " Scope ":" region ",
        " StartTime ":" 2018 - 12 - 10T12 : 00Z ",
        " Status ":" active "
      }
    ],
    " PageNumber ":" 1 ",
    " PageSize ":" 50 ",
    " Total ":" 1
  },
  " httpStatus Code ":" 200 ",
  " message ":" successful ",
  " requestId ":" E572643C - 6A29 - 49D6 - 9D4E - 6CFA4E063A 3E ",
  " success ":" true
}
```

10.3 ModifyReservedInstances

You can call `ModifyReservedInstances` to modify Reserved Instances (RIs).

Precautions

Before you change RIs, note the following:

- The region of an RI cannot be changed. You can only change the zone of an RI, change region-level RIs to zone-level RIs, or change zone-level RIs to region-level RIs.

- The instance type family of an RI cannot be modified. Only the size of an RI can be modified.
- If the RIs to be merged are region-level RIs, they must be in the same region. If the RIs to be merged are zone-level RIs, they must be in the same zone.
- The RIs to be merged must have the same expiration date.
- After an RI is split or multiple RIs are merged, the initial RI or RIs will expire immediately.

Request parameters

Name	Type	Required	Description
Action	String	Yes	A parameter required by the system. Value: <code>ModifyReservedInstances</code> .
RegionId	String	Yes	ID of the region to which the RI belongs. You can call DescribeRegions to view the latest region list.
ReservedInstanceId.N	String	Yes	ID of the RI. N is an integer from 1 to 20.
Configuration.N	Configuration	Yes	Configuration attribute of the target RI
DryRun	Boolean	No	Specifies whether to check this request only. • <code>true</code> : A check request is sent, but no instance is created. The system checks whether the required parameters are set, and also checks the request format, service limits, and available ECS instances. If the request does not pass the check, an error is returned. If the request passes the check, the error code <code>DryRunOperation</code> is returned. • <code>false</code> : A check request is sent, and an instance is created after the request passes the check. Default value: <code>false</code> .

The following table describes the parameters of the Configuration data type.

Name	Type	Required	Description
ReservedInstanceName	String	No	Name of the RI. The name must be a string of 2 to 128 characters in length and can contain letters, numbers, colons (:), underscores (_), and hyphens. It must start with a letter. It cannot start with http:// or https://.
InstanceType	String	Yes	Instance type of the RI. For more information, see Instance type families .
Scope	String	Yes	Scope of the RI. Optional values: • Region : region-level • Zone : zone-level Default value: Region .
ZoneId	String	No	ID of the zone to which the RI belongs. When Scope is set to Zone , this parameter is required. For information about the zone list, see DescribeZones .
InstanceAmount	Integer	Yes	Number of instances allocated to an RI (An RI is a coupon that includes one or more allocated instances.)

Response parameters

Name	Type	Description
RequestId	String	Request ID
ReservedInstanceIdSets	List	List of RI IDs. The IDs in the list are the unique identities to access the RIs.

11 Images

11.1 CreateImage

Creates a custom image. You can then use a custom image to create ECS instances (RunInstances) or change the system disk for an existing instance (ReplaceSystemDisk).

Description

When you call this interface, note the following:

- You can use a custom image only when its status is `Available`.
- If the specified ECS instance is `locked`, the `OperationLocks` of the ECS instance cannot indicate "LockReason": "security".

You can create a custom image using one of three methods according to your requirements. When you create a custom image, the priority of request parameters is InstanceId, then DiskDeviceMapping, then SnapshotId. If your request contains more than one of the preceding parameters, the parameter with a higher priority is used for creating the custom image by default.

- Method 1: If you want to create a template from an ECS instance, you can specify the instance ID (InstanceId) to create a custom image. You must make sure that the status of the specified instance is Running or Stopped. After a successful invocation, each disk of the specified instance has a new snapshot created.
- Method 2: If you want to create a custom image based on the system disk of your ECS instance, you can specify one of the system disk snapshots (SnapshotId) to create a custom image. However, the specified snapshot cannot be created on or before July 15, 2013.
- Method 3: If you want to combine snapshots of multiple disks into an image template, you can specify DiskDeviceMapping to create a custom image.

If you use method 3 (specify DiskDeviceMapping) you must note the following:

- You can only specify 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 allocated sequentially from /dev/xvdb to /dev/xvdz, without duplicates.
- SnapshotId is not required. If you do not specify the SnapshotId, an empty disk of the specified size is created. However, if you specify SnapshotId, the corresponding snapshot cannot have been created on or before July 15, 2013.

Debug

Use [API Explorer](#) to perform debug operations and generate SDK code examples.

Request parameters

Name	Type	Required?	Example value	Description
Action	String	No	CreateImage	The name of this action. Value: CreateImage.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the image belongs. For more information, call DescribeRegions to obtain the latest region list.
Architecture	String	No	x86_64	Specifies the architecture of the system disk after you specify a data disk snapshot as the data source of the system disk for creating an image. Valid values: • i386 • x86_64 (default value)

Name	Type	Required?	Example value	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	Guarantees the idempotence of the request. The value is generated by your client and must be globally unique. Only ASCII characters are allowed. It can contain a maximum of 64 ASCII characters. For more information, see How to ensure idempotence .
Description	String	No	FinanceDeptjoshua	The description of the image. It must be 2 to 256 characters in length and must not start with http:// or https://. Default value : null.
DiskDeviceMapping.N.Device	String	No	/dev/xvda	Specifies the name of a disk in the combined custom image. Value range: /dev/xvda to /dev/xvdz.
DiskDeviceMapping.N.DiskType	String	No	system	Specifies the type of a disk in the combined custom image. If you specify this parameter, you can use a data disk snapshot as the data source of a system disk for creating an image. If it is not specified, the disk type is determined by the corresponding snapshot. Valid values: · system · data

Name	Type	Required?	Example value	Description
DiskDeviceMapping.N.Size	Integer	No	2000	Specifies the size of a disk in the combined custom image, in GiB. Value range: 5 to 2000. • If the disk size is not specified, it is equal to the snapshot size (DiskDeviceMapping.N.SnapshotId) by default. • If the snapshot (DiskDeviceMapping.N.SnapshotId) is not specified, the disk size is 5 GiB by default. • If the disk size is specified, it must be at least the size of the corresponding snapshot (DiskDeviceMapping.N.SnapshotId).
DiskDeviceMapping.N.SnapshotId	String	No	s-snapshotid1	Specifies a snapshot that is used to create a combined custom image.
ImageName	String	No	FinanceDeptJoshuaCentOS	The image name. It must be 2 to 128 characters in length, and must begin with a letter or Chinese character (beginning with http:// or https:// is not allowed). It can contain digits, colons (:), underscores (_), or hyphens (-). Default value: null.
InstanceId	String	No	i-instanceid	The instance ID.

Name	Type	Required?	Example value	Description
Platform	String	No	CentOS	Specifies the operating system platform of the system disk after you specify a data disk snapshot as the data source of the system disk for creating an image. Valid values: • CentOS • Ubuntu • SUSE • OpenSUSE • RedHat • Debian • CoreOS • Aliyun Linux • Windows Server 2003 • Windows Server 2008 • Windows Server 2012 • Windows 7 • Others Linux (default value) • Customized Linux
ResourceGroupId	String	No	rg-resourcegroupid1	The ID of the enterprise resource group to which a custom image belongs
SnapshotId	String	No	s-snapshotid	Specifies a snapshot that is used to create a custom image.

Name	Type	Required?	Example value	Description
Tag . N . Key	String	No	FinanceDept	The tag key of an image. The value of N ranges from 1 to 20. You cannot specify a null string for this parameter. It can contain a maximum of 64 characters, and must not start with aliyun or acs:. It must not contain http:// or https://.
Tag . N . Value	String	No	FinanceDeptJoshua	The tag value of an image. The value of N ranges from 1 to 20. You cannot specify a null string for this parameter. It can contain a maximum of 128 characters, and must not start with aliyun or acs:. It must not contain http:// or https://.
Tag . N . key	String	No	FinanceDept	The tag key of an image.  Note: This parameter will be obsolete soon. We recommend that you use Tag.N.Key for better compatibility.
Tag . N . value	String	No	FinanceDeptJoshua	The tag value of an image.  Note: This parameter will be obsolete soon. We recommend that you use Tag.N.Value for better compatibility.

Response parameters

Name	Type	Example value	Description
ImageId	String	m-63DFD5FB2	The image ID.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID.

Examples**Request example**

```
https://ecs.aliyuncs.com/?Action=CreateImage
&RegionId=cn-hangzhou
&DiskDeviceMapping.1.Size=2000
&DiskDeviceMapping.1.SnapshotId=s-snapshotid-1
&DiskDeviceMapping.1.DiskType=system
&SnapshotId=s-snapshotid
&InstanceId=i-instanceid
&ImageName=FinanceDeptJoshuaCentOS
&ImageVersion=2017011017
&Description=FinanceDeptJoshua
&Platform=CentOS
&Architecture=x86_64
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&Tag.1.value=FinanceDeptJoshua
&Tag.1.key=FinanceDept
&Tag.1.Key=FinanceDept
&Tag.1.Value=FinanceDeptJoshua
&<CommonRequestParameters>
```

Response example**XML format**

```
<CreateImageResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</
  RequestId>
  <ImageId>m-63DFD5FB2</ImageId>
</CreateImageResponse>
```

JSON format

```
{
  "ImageId": "m-63DFD5FB2",
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9"
}
```

Error codes

HTTP status code	Error code	Message	Description
404	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The specified snapshot does not exist.
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The specified image name is invalid. It should be 2 to 128 characters in length, and start with a letter or Chinese character. It can contain digits, periods (.), underscores (_), or hyphens (-). It must not start with http:// or https://.
400	InvalidImageName.Duplicated	The specified Image name has already been used.	The specified image name already exists.
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The specified description is invalid. It should be 2 to 256 characters in length. It must not start with http:// or https://.
400	InvalidImageVersion.Malformed	The specified ImageVersion is wrongly formed.	The specified image version is invalid, or you are not permitted to use this snapshot.
403	InvalidSnapshotId.NotReady	The current status of the DiskDeviceMapping.n.SnapshotId or SnapshotId does not support this operation.	The current status of the specified snapshot does not support this operation.
403	InvalidSnapshot.TooOld	This operation is denied because the specified snapshot by DiskDeviceMapping.n.SnapshotId or SnapshotId is created before 2013-07-15.	This operation is denied because the snapshot specified by DiskDeviceMapping.n.SnapshotId or SnapshotId was created before 2013-07-15.

HTTP status code	Error code	Message	Description
403	OperationDenied	The specified snapshot is not allowed to create image.	The specified snapshot cannot be used for creating an image.
403	QuotaExceed. Image	The Image Quota exceeds.	The quota of custom images is exceeded.
403	OperationDenied	The specified snapshot is not from system disk.	The specified snapshot is not a system disk snapshot .
403	InvalidParamter. Conflict	The specified same token is trying to make requests with different parameters.	The specified token is requesting the handling of two different parameters.
404	InvalidInstanceId. NotFound	The specified InstanceId does not exist.	The specified instance does not exist. Please check your instance ID.
400	IncorrectInstanceStatus	The current status of the instance does not support this operation.	The current status of the specified instance does not support this operation .
400	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The specified operation is denied because your instance is locked for security reasons.
400	InvalidDevice. Malformed	The specified parameter DiskDeviceMapping.n. Device is not valid.	The specified value of the parameter DiskDevice Mapping.n.Device is invalid.
400	MissingParameter	The input parameter SnapshotId or InstanceId or DiskDeviceMapping that is mandatory for processing this request is not supplied.	The specified values of the parameters SnapshotId, InstanceId, and DiskDeviceMapping cannot be null.
400	InvalidSize. ValueNotSupported	The specified parameter DiskDeviceMapping.n. Size beyond the permitted range.	The specified value of the parameter DiskDevice Mapping.n.Size is outside the valid range.

HTTP status code	Error code	Message	Description
400	InvalidDevice.InUse	The specified parameter DiskDeviceMapping.n.Device has been occupied.	The specified parameter DiskDeviceMapping.n.Device is already being used.
400	OperationDenied	The specified parameter DiskDeviceMapping.n.SnapshotId does not contain system disk snapshot.	The specified value of the parameter DiskDeviceMapping.n.SnapshotId does not contain a system disk snapshot.
400	OperationDenied	The specified parameter DiskDeviceMapping.n.SnapshotId contains two or more system disk snapshots.	The specified value of the parameter DiskDeviceMapping.n.SnapshotId already contains a system disk snapshot.
400	InvalidDiskCategory.CreateImage	The specified diskCategory is not allowed to create image.	The specified disk category is not allowed for creating an image.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	Your account balance is insufficient for the operation.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The operation is denied because the snapshot service is not enabled.
403	UserNotInTheWhiteList	The user is not in the white list of create image by data disk snapshot.	You do not have the permission to create an image from data disk snapshots.
400	InvalidArchitecture.Malformed	The specified Architecture is wrongly formed.	The specified value of the parameter Architecture is invalid.
400	InvalidPlatform.Malformed	The specified Platform is wrongly formed.	The specified operating system platform is invalid.

HTTP status code	Error code	Message	Description
400	OperationDenied	Not support creating system image from an encrypted snapshot/disk.	An encrypted snapshot or disk cannot be used for creating a custom image.
400	InvalidParameter.AllEmpty	%s	The required parameter is missing.
403	IncorrectDiskStatus.Invalid	Device status is invalid, please restart instance and try again.	The device status is invalid. Please restart your instance and try again.
403	OperationDenied.InvalidSnapshotCategory	%s	The snapshot type is invalid.
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The snapshot quota is exceeded. Please delete old snapshots as needed before you store new ones .
403	IncorrectDiskStatus.Transferring	The specified device is transferring, you can retry after the process is finished.	The specified disk is being migrated. Please try again after the process is finished.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The current status of the specified disk does not support this operation. Please make sure the disk is in a normal status and whether you have overdue payments.
403	InvalidSystemSnapshot.Missing	%s	The source snapshot for creating this system disk has been deleted.
403	IncorrectDiskStatus.CreatingSnapshot	A previous snapshot creation is in process.	A snapshot is being created for the current disk. Please try again after the creation is finished.

HTTP status code	Error code	Message	Description
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The specified resource group does not exist.
500	InternalError	The process of creating snapshot has failed due to some unknown error.	Unknown errors occurred .

For a list of error codes, visit the [API Error Center](#).

11.2 ImportImage

Imports an on-premises image to Alibaba Cloud ECS and use it as a custom image within its region.

Methods

You can use the imported image to create an ECS instance (RunInstances) or replace the system disk of an instance (ReplaceSystemDisk). When you call this operation, note that:

- You must [upload the image file to OSS](#) before you can import the image.
- You can only import an image to the same region as the OSS bucket that the image file is uploaded to.
- Valid values of `n` in the `DiskDeviceMapping.n` parameter: 1 to 17. When `n` is 1, the disk is a system disk. When `n` is 2 to 17, the disk is a data disk.
- You cannot delete an image that is being imported. However, you can call [CancelTask](#) to cancel the image import task.
- To use [RAM](#) to allow ECS to access OSS for your Alibaba Cloud account, follow these steps:

1. Create a role named `AliyunECSImageImportDefaultRole`. You must use this exact name or else the image will fail to be imported. Refer to the following code to set the policy for the role:

```
{
  "Statement": [
    {
```

```

    " Action ": " sts : AssumeRole ",
    " Effect ": " Allow ",
    " Principal ": {
      " Service ": [
        " ecs . aliyuncs . com "
      ]
    }
  ],
  " Version ": " 1 "
}

```

2. Attach the permission policy `AliyunECSI mageImport RolePolicy` to the role. This policy is the default policy for ECS image import. For more information, see [RAM](#). You can also create your custom policies with the following permissions:

```

{
  " Version ": " 1 ",
  " Statement ": [
    {
      " Action ": [
        " oss : GetObject ",
        " oss : GetBucketL ocation ",
        " oss : GetBucketI nfo "
      ],
      " Resource ": "*",
      " Effect ": " Allow "
    }
  ]
}

```

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the source custom image belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.

Name	Type	Required	Example	Description
Action	String	No	ImportImage	The operation that you want to perform. Set the value to ImportImage.
Architecture	String	No	x86_64	The system architecture. Valid values: - i386 - x86_64 (default)
Description	String	No	FinanceDeptJoshua	The description of the image. The description must be 2 to 256 characters in length and cannot start with http:// or https://. Default value: null.
DiskDeviceMapping.N.Device	String	No	/dev/xvda	The name of disk N in the custom image. Valid values: /dev/xvda to /dev/xvdz.
DiskDeviceMapping.N.DiskImageSize	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 compatibility.

Name	Type	Required	Example	Description
DiskDevice Mapping . N . DiskImageSize	Integer	No	80	The size of the image. The space of the system disk must be greater than or equal to the actual used space of file systems. Valid values: • 5 to 500 GiB when n is set to 1 • 5 to 1000 GiB when n is set to 2 to 17 When you import an image, the system automatically scans and checks the size of the image, and the checking result is used as the default value of this parameter.
DiskDevice Mapping . N . Format	String	No	qcow2	The format of the image. Valid values: • RAW • VHD • qcow2 When you import an image, the system automatically scans and checks the format of the image, and the checking result is used as the default value of this parameter.
DiskDevice Mapping . N . OSSBucket	String	No	ecsimageos	The OSS bucket where the image file is stored.

Name	Type	Required	Example	Description
DiskDeviceMapping . N . OSSObject	String	No	CentOS_5.4_32.raw	The key of the OSS bucket where the image file is to be stored.
ImageName	String	No	FinanceJoshua	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 (-). Default value: null.
OSType	String	No	linux	The type of the operating system. Valid values: · windows · linux (default)
Platform	String	No	Other Linux	The release version of the operating system. Valid values: · CentOS · Ubuntu · SUSE · OpenSUSE · Debian · CoreOS · Aliyun · Windows Server 2003 · Windows Server 2008 · Windows Server 2012 · Others Linux (default) · Customized Linux

Response parameters

Name	Type	Example	Description
ImageId	String	m-imageid2	The ID of the image.
RegionId	String	cn-hangzhou	The ID of the region.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TaskId	String	123-345-2332-22323	The ID of an image import task.

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=FinanceJoshua
&Description=FinanceDepartmentJoshua
&Architecture=x86_64
&OSType=linux
&Platform=OtherLinux
&<Common request parameters>
```

Successful response examples

XML format

```
<ImportImageResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <ImageId>Img-231234567</ImageId>
  <ImportTaskId>123-345-2332-22323</ImportTaskId>
</ImportImageResponse>
```

JSON format

```
{
  "ImageId": "Img-231234567",
  "ImportTaskId": "123-345-2332-22323",
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9"
}
```


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 when the required RegionId parameter is not specified .
400	InvalidImageSize	The specified DiskDevice Mapping.n.DiskImageSize beyond the permitted range.	The error message returned when the specified image does not exist.
400	InvalidImageFormat.Malformed	The specified Image Format is wrongly formed.	The error message returned when the format of the AssociateInstanceType parameter is incorrect.
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned when the specified Region ID does not exist. Check whether the service is available in this region.
400	InvalidRegion.NotSupport	The specified region does not support image import or export.	The error message returned when the specified region does not support this operation.
403	ImageIsImporting	The specified Image is importing.	The error message returned when the specified image is being imported and cannot be operated.
403	QuotaExceed.Image	The Image Quota exceeds.	The error message returned when the custom image quota has been exhausted.

HTTP status code	Error code	Error message	Description
403	ImportImageFailed	Importing image is failed , Please contact the administrator.	The error message returned when the image failed to be imported . Contact a system administrator.
403	InvalidParameter.Malformed	The specified parameter DiskDeviceMapping.n.Device is not valid.	The error message returned when the specified value of the DiskDeviceMapping.n.Device parameter is invalid.
400	InvalidOSSObject.NotFound	The specified OSS object does not exist in this region.	The error message returned when the specified OSS object does not exist.
400	InvalidOSSObject.NotFound	The specified OSS object cannot be retrieved.	The error message returned when the specified OSS object information cannot be read.

[View error codes](#)

11.3 CopyImage

Copies a custom image from one region to another. You can use copied images to perform operations in the target region, such as creating instances (RunInstances) and replacing system disks (ReplaceSystemDisk).

Description

When you call this operation, note that:

- You can only copy the custom image when it is in the Available state.
- You can only copy the image belonging to your Alibaba Cloud account. Images cannot be copied from one account to another.

- If the copying is not completed, you cannot call [DeleteImage](#) to delete the image but you can call [CancelCopyImage](#) to cancel the copying.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
ImageId	String	Yes	m-imageid1	The ID of the source custom image.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the source custom image belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	CopyImage	The operation that you want to perform. Set the value to CopyImage.
DestinationDescription	String	No	FinanceDept	The description of the destination custom image. The description must be 2 to 256 characters in length and cannot start with http:// or https://. Default value: null.

Name	Type	Required	Example	Description
DestinationImageName	String	No	FinanceJoshua	The name of the destination custom 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 (-). Default value: null.
DestinationRegionId	String	No	cn-shanghai	The ID of the region to which the destination custom image belongs.
Encrypted	Boolean	No	false	Indicates whether to encrypt the image.
Tag . N . Key	String	No	FinanceJoshua	The tag key of the custom image.
Tag . N . Value	String	No	FinanceDept	The tag value of the custom image.

Response parameters

Name	Type	Example	Description
ImageId	String	m-imageid2	The ID of the destination custom image.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CopyImage
&ImageId=m-imageid1
```

```
& RegionId = cn - hangzhou
& DestinationImageName = FinanceJos_hua
& DestinationDescription = FinanceDept
& DestinationRegionId = cn - shanghai
& Encrypted = false
&< Common request parameters >
```

Successful response examples

XML format

```
< CopyImageResponse >
  < RequestId > C8B26B44 - 0189 - 443E - 9816 - D951F59623_A9 </
  RequestId >
  < ImageId > Img - 231234567 </ ImageId >
</ CopyImageResponse >
```

JSON format

```
{
  "ImageId ":" Img - 231234567 ",
  "RequestId ":" C8B26B44 - 0189 - 443E - 9816 - D951F59623_A9 "
}
```

Error codes

HTTP status code	Error code	Error message	Description
401	InvalidAliUid. IsNull	The aliUid must not be null	The error message returned when the required AliUid parameter is not specified.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned when you are not authorized to access the specified resource.
400	InvalidDescription. Malformed	The specified destination description is wrongly formed.	The error message returned when the specified description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.

HTTP status code	Error code	Error message	Description
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned when the specified description 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 when the specified image does not exist under this account. Check whether the image ID is correct.
400	IncorrectImageStatus	The image not available.	The error message returned when the specified image is unavailable.
403	QuotaExceed.Image	The Image Quota exceeds.	The error message returned when the custom image quota has been exhausted.
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The error message returned when the snapshot quota has been exhausted. To store new snapshots, you can delete existing snapshots without affecting your business.
403	OperationDenied	The specified snapshot is not allowed to create image.	The error message returned when the specified snapshot cannot be used to create images.

HTTP status code	Error code	Error message	Description
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 when the specified image size has reached the upper limit. If the problem persists, please submit a ticket to contact Alibaba Cloud technical support personnel.
403	OperationDeined .EncryptedS napshot	The image contains encrypted snapshots, which do not support copying.	The error message returned when the specified image contains encrypted snapshots and cannot be copied.
403	OperationDenied .SameRegion Only	The image shared from others can not be copied to another region directly.	The error message returned when the specified image is shared by other accounts and cannot be copied.

[View error codes](#)

11.4 CancelCopyImage

Cancels an image copy task.

Description

When you call this operation, note that:

- After you cancel the task, the destination image created in the target region is deleted, and the source image remains unchanged.
- If the image copy process is completed, the CancelCopyImage operation fails and an error will be returned.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
ImageId	String	Yes	m-imageid1	The ID of the image being copied.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the image belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	CancelCopyImage	The operation that you want to perform. Set the value to CancelCopyImage.

Response parameters

Name	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-imageid1
&RegionId=cn-hangzhou
&<Common request parameters>
```

Successful response examples

XML format

```
<CancelCopyImageResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
```



```
</ CancelCopy ImageResponse >
```

JSON format

```
{
  "RequestId ":" C8B26B44 - 0189 - 443E - 9816 - D951F59623 A9 "
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned when the specified Region ID does not exist. Check whether the service is available in this region.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned when the specified image does not exist under this account. Check whether the image ID is correct.
400	IncorrectImageStatus	The image is copied finished.	The error message returned when the specified image has been copied and the copy task cannot be canceled.
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned when 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 when the specified snapshot is not being copied.

HTTP status code	Error code	Error message	Description
400	IncorrectImageStatus	The specified image is not coping.	The error message returned when the specified image is not being copied.
400	IncorrectImageStatus	The image has completed copy.	The error message returned when the specified image has been copied and the copy task cannot be canceled.
400	IncorrectImageStatus	The Image copy has been failed.	The error message returned when the specified image failed to be copied.
400	CancelNotSupported	The specified image copying can not be cancelled.	The error message returned when the specified copy task cannot be canceled.

[View error codes](#)

11.5 ExportImage

Exports a custom image to an OSS bucket in the same region as the custom image.

Description

- This operation cannot export custom images that were created from the system disk snapshots of images available in Marketplace.
- A custom disk cannot be exported if it contains more than four data disk snapshots or if any of the data disks exceed 500 GB in size.
- You must use RAM to authorize a RAM role for ECS to write data to OSS. Refer to the following section to create and authorize the RAM role:
 1. Create a role named `AliyunECSImageExportDefaultRole`. Any other role names are invalid. Refer to the following code to configure the policy for the role:

```
{
  "Statement": [
    {
      "Action": "sts : AssumeRole ",
      "Effect": "Allow ",
      "Principal": {
        "Service": [
          "ecs . aliyuncs . com "
        ]
      }
    }
  ],
  "Version": " 1 "
}
```

2. In the role `AliyunECSI mageExport DefaultRole`, add the following default system permission policy: `AliyunECSI mageExport RolePolicy`. This policy is the default policy for ECS to export images. For more information, see [RAM](#). You can also create your custom policies with the following permissions:

```
{
  "Version": " 1 ",
  "Statement": [
    {
      "Action": [
        "oss : GetObject ",
        "oss : PutObject ",
        "oss : DeleteObject ",
        "oss : GetBucketLocation ",
        "oss : GetBucketInfo ",
        "oss : AbortMulti partUpload ",
        "oss : ListMulti partUploads ",
        "oss : ListParts "
      ],
      "Resource": "*",
      "Effect": "Allow "
    }
  ]
}
```

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
ImageId	String	Yes	m-imageid1	The ID of the custom image.

Name	Type	Required	Example	Description
OSSBucket	String	Yes	testexport Image	The OSS bucket to which the image is to be exported.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the custom image belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	ExportImage	The operation that you want to perform. Set the value to ExportImage.
OSSPrefix	String	No	EcsExport	The prefix of your OSS object. It must be 1 to 30 characters in length and can contain digits and letters.

Response parameters

Name	Type	Example	Description
RegionId	String	cn-hangzhou	The ID of the region.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TaskId	String	tsk-231234567	The ID of the image export task.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ExportImage  
&ImageId=m-imageid1  
&OSSBucket=testexport-Image  
&RegionId=cn-hangzhou  
&OSSPrefix=EcsExport
```

&< Common request parameters >

Successful response examples

XML format

```
< ExportImageResponse >
  < RequestId > C8B26B44 - 0189 - 443E - 9816 - D951F59623 A9 </
  RequestId >
  < ExportTask Id > tsk - 231234567 </ ExportTask Id >
  < RegionId > cn - hangzhou </ RegionId >
</ ExportImageResponse >
```

JSON format

```
{
  " RegionId ":" cn - hangzhou ",
  " RequestId ":" C8B26B44 - 0189 - 443E - 9816 - D951F59623 A9 ",
  " ExportTask Id ":" tsk - 231234567 "
}
```

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 when the required 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 when the required ImageId parameter is not specified.
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned when the specified Region ID does not exist. Check whether the service is available in this region.
400	InvalidRegion.NotSupport	The specified region does not support image import or export.	The error message returned when the specified region does not support this operation.

HTTP status code	Error code	Error message	Description
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned when the specified image does not exist under this account. Check whether the image ID is correct.
400	IncorrectImageStatus	The specified Image is not available.	The error message returned when the specified source image is in a state that does not support the current operation.
403	ImageNotSupported	The specified image from the image market, do not support export image.	The error message returned when you are trying to export images from Marketplace.
400	InvalidImageFormat.Malformed	The specified Image Format is wrongly formed.	The error message returned when the format of the AssociateInstanceType parameter is incorrect.
403	ExportImageFailed	Exporting image is failed , Please contact the administrator.	The error message returned when the image failed to be exported . Contact a system administrator.
400	InvalidImage.DiskAmountOrSize	The diskSize or diskAmount of the image exceeds the limitation.	The error message returned when the disk size or number of disks has reached the upper limit for image export.
400	ImageNotSupported	The specified Image contains encrypted snapshots, do not support export.	The error message returned when the specified image contains encrypted snapshots and cannot be exported.

HTTP status code	Error code	Error message	Description
400	ImageNotSupported	Image from image market does not support exporting.	The error message returned when you are trying to export images from Marketplace.

[View error codes](#)

11.6 DescribeImages

Queries available images.

Description

- You can query your own custom images, public images provided by Alibaba Cloud , available images from Marketplace, and shared images from other Alibaba Cloud users.
- This operation supports paged query. The response contains the total number of available images and the images on the current page. Ten entries are displayed on each page by default.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the instance belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.

Name	Type	Required	Example	Description
Action	String	No	DescribeImages	The operation that you want to perform. Set the value to DescribeImages.
ActionType	String	No	*	The operations that the image is used for. Valid values: · * · CreateEcs · ChangeOS
Architecture	String	No	i386	The image architecture. Valid values: · i386 · x86_64
DryRun	Boolean	No	false	Indicates whether the system performs a permission check only. · true: Sends a permission check request, without querying resource status. The system checks whether your AccessKey is valid, whether RAM users are authorized, and whether the required parameters are set. For a failed check, corresponding error message is returned. For a successful check, the DryRunOperation error code is returned. · false: Sends a normal request, returns the 2XX HTTP status code after the check, and queries the resource status directly. Default value: false.

Name	Type	Required	Example	Description
Filter . N . Key	String	No	CreationStartTime	The key of the filtering condition.
Filter . N . Value	String	No	2017-12-05T22:40:00Z	The value of the filtering condition.
ImageId	String	No	m-imageid1	The ID of the image.
ImageName	String	No	FinanceJoshua	The name of the image.
ImageOwnerAlias	String	No	Self	The source of the image. Valid values: • system: public images provided by Alibaba Cloud. • self: your custom images. • others: shared images from other Alibaba Cloud users. • marketplace: available images from Marketplace. If images from Marketplace are returned in the result, you can directly use these images without prior subscription. You must pay attention to the billing details of images from Marketplace. Default value: null, indicating that the results matching system, self, and others are returned.
InstanceType	String	No	ecs.g5.large	The instance type of the images to be queried.
IsSupportCloudInit	Boolean	No	true	Indicates whether queried images supports cloud-init.

Name	Type	Required	Example	Description
IsSupportIoOptimized	Boolean	No	true	Indicates whether queried images can be used for I/O optimized instances.
OSType	String	No	linux	The operating system type of images to be queried. Valid values: · windows · linux
OwnerAccount	String	No	155780923770	The logon name of a RAM user.
PageNumber	Integer	No	1	The page number that you query in the image list. Starting value: 1. Default value: 1.
PageSize	Integer	No	10	The number of entries per page. Maximum value: 100. Default value: 10.
ResourceGroupId	String	No	rg-resourcegroupid1	The ID of the resource group to which the queried custom images belong.
ShowExpired	Boolean	No	false	Indicates whether the subscription of a image has expired.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.

Name	Type	Required	Example	Description
SnapshotId	String	No	s-snapshotid1	The ID of the snapshot used to create the images to be queried.
Status	String	No	Available	The status of the image to be queried. Valid values: · Creating: The image is being created. · Waiting: Multiple images are waiting to be processed. · Available (default): The image is available. · UnAvailable: The image is unavailable. · CreateFailed: The image failed to be created. Separate multiple parameter values with commas (,).
Tag . N . Key	String	No	FinanceJoshua	The tag key of the image. Valid values of N: 1 to 20. It cannot be a null string. It can be a maximum of 64 characters in length. It cannot start with aliyun, acs:, http://, or https://.
Tag . N . Value	String	No	FinanceDept	The tag value of the image. Valid values of N: 1 to 20. It can be a null string. It can be a maximum of 128 characters in length. It cannot start with aliyun, acs:, http://, or https://.

Name	Type	Required	Example	Description
Tag . N . key	String	No	FinanceJoshua	The tag key of the image.  Note: This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure compatibility.
Tag . N . value	String	No	FinanceDept	The tag value of the image.  Note: This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure compatibility.
Usage	String	No	instance	Queries whether the specified image is running on an ECS instance or not. Valid values: · instance: The image is running on an ECS instance. · none: The image is not in use.

Response parameters

Name	Type	Example	Description
Images			The image information. It is a set of ImageType data.
└Architecture	String	x86_64	The system architecture. Valid values: · i386 · x86_64

Name	Type	Example	Description
<code>CreationTime</code>	String	2018-01-10T01:01:10Z	The creation time of the image.
<code>Description</code>	String	FinanceDept	The description of the image.
<code>DiskDeviceMappings</code>			The description of disks and snapshots related to the image.
<code>Device</code>	String	/dev/xvdb	The device information of the created disk, such as /dev/xvdb.
<code>Format</code>	String	qcow2	The format of the image.
<code>ImportOSSBucket</code>	String	testEcsImport	The OSS bucket where an imported image is stored.
<code>ImportOSSObject</code>	String	imageImport	The OSS object corresponding to an imported image file.
<code>Progress</code>	String	32%	The progress of an image copy task.
<code>RemainTime</code>	Integer	213	The remaining time in seconds for an image copy task.
<code>Size</code>	String	80	The size of the created disk.
<code>SnapshotId</code>	String	s-snapshotid1	The ID of the snapshot.
<code>Type</code>	String	custom	The type of the image.
<code>ImageId</code>	String	m-imageid1	The ID of the image.
<code>ImageName</code>	String	Joshua-Finance	The name of the image.

Name	Type	Example	Description
[⌞] ImageOwnerAlias	String	self	The source of the image. Valid values: · system: public images provided by Alibaba Cloud. · self: your own custom images. · others: shared images from other Alibaba Cloud users. · marketplace: available images from Marketplace.
[⌞] 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 is shared to other Alibaba Cloud accounts.
[⌞] IsSubscribed	Boolean	false	Indicates whether the user has subscribed to the image corresponding to the ProductCode. Valid values: · true: The user has subscribed to the image. · false: The user has not subscribed to the image.
[⌞] IsSupportCloudinit	Boolean	true	Indicates whether the image supports cloud-init.
[⌞] IsSupportIoOptimized	Boolean	true	Indicates whether the image can be used for I/O optimized instances.
[⌞] OSName	String	Aliyun Linux 17.1	The name of the operating system.

Name	Type	Example	Description
└OSType	String	Linux	The type of the operating system. Valid values: · windows · linux
└Platform	String	Aliyun Linux	The release version of the operating system.
└ProductCode	String	jxsc000204	The product code of the image from Marketplace.
└Progress	String	100	The progress of image creation. Unit: percent (%).
└ResourceGroupId	String	rg-resourcegroup-id1	The ID of the resource group to which the image belongs.
└Size	Integer	80	The size of the image.
└Status	String	Available	The status of the image. Valid values: · UnAvailable · Available · Creating · CreateFailed
└Tags			The tag pair information of the image.
└TagKey	String	FinanceDept	The tag key of the image.
└TagValue	String	FinanceJoshua	The tag value of the image.
└Usage	String	none	The referenced resource type. Valid values: · instance · none

Name	Type	Example	Description
PageNumber	Integer	1	The current page number.
PageSize	Integer	10	The number of entries on the current page.
RegionId	String	cn-hangzhou	The ID of the region to which the image belongs.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	24	The total number of available images.

Examples

Sample requests

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

Successful response examples

XML format

```
<DescribeImagesResponse>
  <Images>
    <Image>
      <Architecture>i386</Architecture>
      <CreationTime>2014-07-22T09:53:44Z</CreationTime>
      <Description/>
      <DiskDeviceMappings>
        <DiskDeviceMapping>
          <Device>/dev/xvda</Device>
          <Size>20</Size>
          <SnapshotId/>
        </DiskDeviceMapping>
      </DiskDeviceMappings>
      <ImageId>suse11sp3_64_20G_ali_aegis_2015_0428.vhd</ImageId>
      <ImageName>suse11sp3_64_20G_ali_aegis_2015_0428.vhd</ImageName>
      <ImageOwnerAlias>system</ImageOwnerAlias>
      <ImageVersion>1.0</ImageVersion>
      <IsCopied>>false</IsCopied>
      <IsSubscribed>>false</IsSubscribed>
    </Image>
  </Images>
</DescribeImagesResponse>
```



```

    < OSName > SUSE    Linux    Enterprise    Server    11    SP3    64 -
bit </ OSName >
    < ProductCode />
    < OSType > linux </ OSType >
    < Platform > SUSE </ Platform >
    < Progress > 100 </ Progress >
    < Size > 20 </ Size >
    < Status > Available </ Status >
    < Usage > instance </ Usage >
  </ Image >
</ Images >
< PageNumber > 1 </ PageNumber >
< PageSize > 2 </ PageSize >
< RegionId > cn - hangzhou </ RegionId >
< TotalCount > 24 </ TotalCount >
< RequestId > 7871BB26 - 3002 - 4950 - B2E6 - 98D333077E    A5 </
RequestId >
</ DescribeImagesResponse >

```

JSON format

```

{
  "PageNumber": 1,
  "TotalCount": 24,
  "PageSize": 1,
  "RequestId": "49CBCED4 - C9B9 - 4851 - BEB5 - 8FB5E5169E    30",
  "RegionId": "cn - hangzhou",
  "Images": {
    "Image": [
      {
        "ImageId": "suse11sp3_ 64_20G_ali aegis_2015 0428 . vhd",
        "OSType": "linux",
        "Architecture": "x86_64",
        "OSName": "SUSE    Linux    Enterprise    Server    11    SP3    64 -
bit",
        "DiskDeviceMappings": {
          "DiskDeviceMapping": [
            {
              "Device": "/dev/xvda",
              "Size": 20
            }
          ]
        },
        "ImageOwnerAlias": "system",
        "Progress": "100%",
        "Usage": "instance",
        "CreationTime": "2015 - 05 - 06T09 : 01 : 32Z",
        "Status": "Available",
        "ImageVersion": 1,
        "ImageName": "suse11sp3_ 64_20G_ali aegis_2015 0428 . vhd",
        "IsCopied": false,
        "IsSubscribed": false,
        "Platform": "SUSE",
        "Size": 20
      }
    ]
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidFilterKey.NotFound		The error message returned when the specified start time or end time is invalid.
404	InvalidFilterValue		The error message returned when the format of the specified time is invalid.
404	InvalidUsage	The specified Usage is not valid	The error message returned when the specified referenced resource type (image, disk, image_disk, or none) is invalid.
400	InvalidTagMismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned when the specified Tag.n.Key parameter does not correspond to the specified Tag.n.Value parameter.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned when the number of specified tags has reached the upper limit.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned when the specified instance type is not supported
404	InvalidOSType	The specified OSType is not valid	The error message returned when the specified operating system is not supported.

[View error codes](#)

11.7 DeleteImage

Deletes a custom image.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
ImageId	String	Yes	m-imageid1	The ID of the custom image. If the specified custom image does not exist, the request will be ignored.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the custom image belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DeleteImage	The operation that you want to perform. Set the value to DeleteImage.

Name	Type	Required	Example	Description
Force	Boolean	No	false	Indicates whether to force delete the custom image. Valid values: · true: Force deletes the custom image, regardless of whether the image is currently being used by other instances. · false: Verifies that the image is not currently in use by any other instances before deleting the image.

Response parameters

Name	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-imageid1
&RegionId=cn-hangzhou
&Force=false
&<Common request parameters>
```

Successful response examples

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 when the specified image is currently in use by other instances and cannot be deleted.
403	ImageIsCreating	The specified image is being created.	The error message returned when the specified image is being created.
403	ImageIsImporting	The specified Image is importing.	The error message returned when the specified image is being imported and cannot be deleted.

[View error codes](#)

11.8 DescribeImageSharePermission

Queries the accounts to which a custom image is shared. The response can be displayed over several pages. Ten entries are displayed on each page by default.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
ImageId	String	Yes	m-imageid1	The ID of the custom image.

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the custom image belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DescribeImageSharePermission	The operation that you want to perform. Set the value to DescribeImageSharePermission.
PageNumber	Integer	No	1	The page number that you query in the account list. Starting value: 1. Default value : 1.
PageSize	Integer	No	10	The number of entries on each page. Maximum value: 50. Default value: 10.

Response parameters

Name	Type	Example	Description
Accounts			The type of an Alibaba Cloud account.
[Ⓐ] AliyunId	String	155780923770	The ID of an Alibaba Cloud account .
ImageId	String	m-imageid2	The ID of the custom image.
PageNumber	Integer	1	The page number that you query in the account list.

Name	Type	Example	Description
PageSize	Integer	10	The number of entries on each page.
RegionId	String	cn-hangzhou	The ID of the region to which the image belongs.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request. This parameter is returned regardless of whether the operation is successful.
ShareGroups			The type of the shared group.
└─Group	String	all	The shared group.
TotalCount	Integer	1	The total number of entries.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeImageSharePermission
&ImageId=m-282dzntc7
&RegionId=cn-qingdao
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeImageSharePermissionResponse>
  <ImageId>m-282dzntc7</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 > 1557809237 70 </ AliyunId >
  </ Account >
</ Accounts >
</ DescribeImageSharePermissionsResponse >

```

JSON format

```

{
  "Accounts":{
    "Account":[
      {
        "AliyunId":"1557809237 70 "
      }
    ]
  },
  "PageNumber":1,
  "ImageId":"m-282dzntc7",
  "TotalCount":1,
  "PageSize":10,
  "RequestId":"9AD96F49-0BE5-4868-A66A-224352549CEC",
  "RegionId":"cn-qingdao",
  "ShareGroups":{
    "ShareGroup":[
      {
        "Group":"all"
      }
    ]
  }
}

```

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 when 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 when the required ImageId parameter is not specified.

HTTP status code	Error code	Error message	Description
404	InvalidImageId.NotFound	The specified image does not exist.	The error message returned when the specified image does not exist under this account. Check whether the image ID is correct.

[View error codes](#)

11.9 ModifyImageAttribute

Modifies the name and description of a custom image.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
ImageId	String	Yes	m-imageid1	The ID of the custom image.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the custom image belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	ModifyImageAttribute	The operation that you want to perform. Set the value to <code>ModifyImageAttribute</code> .

Name	Type	Required	Example	Description
Description	String	No	FinanceDept	The description of the custom image. • The description must be 0 to 256 characters in length. • It cannot start with http:// or https://. • If not specified, this parameter is null. Default value: null.
ImageName	String	No	FinanceJoshua	The name of the custom image. • The name must be 2 to 128 characters in length. • It must start with a letter and can contain letters, digits, colons (:), underscores (_), and hyphens (-). • It cannot start with http:// or https://.

Response parameters

Name	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-imageid1
&RegionId=cn-hangzhou
&ImageName=FinanceJoshua
&Description=FinanceDept
&<Common request parameters>
```

Successful response examples

XML format

```
<ModifyImageAttributeResponse>
```

```
< RequestId > C8B26B44 - 0189 - 443E - 9816 - D951F59623 A9 </
  RequestId >
</ ModifyImageAttribute Response >
```

JSON format

```
{
  "RequestId ":" C8B26B44 - 0189 - 443E - 9816 - D951F59623 A9 "
}
```

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 when the required RegionId parameter is not specified .
400	InvalidImageName. Duplicated	The specified Image name has already been used.	The error message returned when the specified image name is already in use.
400	InvalidDescription. Malformed	The specified description is wrongly formed.	The error message returned when the specified description 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 when the specified image does not exist under this account. Check whether the image ID is correct.

[View error codes](#)

11.10 ModifyImageSharePermission

Manages which accounts a custom image is shared to. After you share a custom image to other Alibaba Cloud accounts, these accounts can use the shared image to create ECS instances ([RunInstances](#)) and replace system disks ([ReplaceSystemDisk](#)).

Description

When you call this operation, note that:

- You can share only your own custom images to other Alibaba Cloud accounts.
- A single request can contain a maximum of 10 accounts to share a custom image to. You can specify a maximum of 10 values for the `AddAccount.n` or `RemoveAccount.n` parameter at a time. If you specify more than 10 values, the parameter will be ignored.
- One image can be shared to a maximum of 50 Alibaba Cloud accounts. You can [submit a ticket](#) to increase the number of users that you can share an image with.
- If an instance is created ([RunInstances](#)) by using a shared image, after the image owner stops sharing or deletes the custom image ([DeleteImage](#)), the specified instance cannot be reinitialized ([ReInitDisk](#)).

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
ImageId	String	Yes	m-imageid1	The ID of the custom image to be shared.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the custom image belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.

Name	Type	Required	Example	Description
Action	String	No	ModifyImageSharePermission	The operation that you want to perform. Set the value to ModifyImageSharePermission.
AddAccount . N	RepeatList	No	155780923771	The IDs of the Alibaba Cloud accounts to which the image is shared. Valid values of N: 1 to 10. If the value of N is greater than 10, this parameter will be ignored.
RemoveAccount . N	RepeatList	No	155780923772	The IDs of the Alibaba Cloud accounts to which the image is no longer to be shared. Valid values of N: 1 to 10. If the value of N is greater than 10, this parameter will be ignored.

Response parameters

Name	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-imageid1
&RegionId=cn-hangzhou
&AddAccount.1=155780923771
&RemoveAccount.1=155780923772
&<Common request parameters>
```

Successful response examples

XML format

```
< ModifyImageSharePermissionResponse >
  < RequestId > C8B26B44 - 0189 - 443E - 9816 - D951F59623 A9 </
    RequestId >
</ ModifyImageSharePermissionResponse >
```

JSON format

```
{
  "RequestId": "C8B26B44 - 0189 - 443E - 9816 - D951F59623 A9"
}
```

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 when the required RegionId parameter is not specified.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned when the specified image does not exist under this account. Check whether the image ID is correct.
404	InvalidAccount.Forbidden	The specified Account does not exist.	The error message returned when you are trying to share the image to your own account.
403	QuotaExceed.ShareImageUser	The shared Image user Quota exceeds.	The error message returned when the number of accounts to which one image can be shared has reached the upper limit.
400	InvalidGroup.Malformed	The specified Group is wrongly formed.	The error message returned when the specified group does not exist.

HTTP status code	Error code	Error message	Description
403	OperationDenied.EncryptedSnapshot	The image contains encrypted snapshots, which do not support share.	The error message returned when the specified image contains encrypted snapshots.

[View error codes](#)

11.11 DescribeImageSupportInstanceTypes

Queries the instance types supported by the specified image.

Debug

Use [OpenAPI Explorer](#) to perform debug operations and generate SDK code examples.

Request parameters

Name	Type	Required?	Example value	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the instance belongs. To view the latest list of Alibaba Cloud regions, call DescribeRegions .
Action	String	No	DescribeImageSupportInstanceTypes	The name of this action. Value: DescribeImageSupportInstanceTypes

Name	Type	Required ?	Example value	Description
ActionType	String	No	*	The scenario where the instance type is used. Valid values: • CreateEcs (default): creates an instance. • Upgrade: upgrades an instance type. • Downgrade: downgrades an instance type. • RenewDowngrade: renews and downgrades an instance type.
Filter . N . Key	String	No	CreationStartTime	Specifies the filtering condition Key.
Filter . N . Value	String	No	2017-12-05T22:40:00Z	Specifies the filtering condition Value.
ImageId	String	No	m-imageid1	The image ID.

Response parameters

Name	Type	Example value	Description
ImageId	String	m-imageid2	The ID of the image to be queried.
InstanceTypes	-	-	The instance type set that consists of InstanceItemType.
└ CpuCoreCount	Integer	1	The number of vCPU kernels of the instance type.
└ InstanceTypeFamily	String	ecs.t1	The instance type family.
└ InstanceTypeId	String	ecs.t1.xsmall	The ID of the instance type supported by the image.
└ MemorySize	Float	1024	The memory size of the instance type. Unit: GiB

Name	Type	Example value	Description
RegionId	String	cn-hangzhou	The ID of the region to which the image belongs.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID.

Example

Request example

```
https://ecs.aliyuncs.com/?Action=DescribeImageSupport
InstanceType=pe
&RegionId=cn-hangzhou
&ImageId=m-imageid1
&<CommonRequestParameters>
```

Response example

XML format

```
<DescribeImageSupportInstanceTypepesResponse>
  <RequestId>CF661E2D-4AFE-4BCD-959A-A65E14416B44</RequestId>
  <RegionId>cn-hangzhou</RegionId>
  <ImageId>ubuntu_16_0402_64_20_G_alibase_20180409.vhd</ImageId>
  <InstanceTypepes>
    <InstanceTypepe>
      <InstanceTypepeId>ecs.t1.xsmall</InstanceTypepeId>
      <CpuCoreCount>1</CpuCoreCount>
      <MemorySize>0.5</MemorySize>
      <InstanceTypepeFamily>ecs.t1</InstanceTypepeFamily>
    </InstanceTypepe>
    <InstanceTypepe>
      <InstanceTypepeId>ecs.t1.small</InstanceTypepeId>
      <CpuCoreCount>1</CpuCoreCount>
      <MemorySize>1</MemorySize>
      <InstanceTypepeFamily>ecs.t1</InstanceTypepeFamily>
    </InstanceTypepe>
  </InstanceTypepes>
</DescribeImageSupportInstanceTypepesResponse>
```

JSON format

```
{
  "ImageId": "ubuntu_16_0402_64_20_G_alibase_20180409.vhd",
  "InstanceTypepes": {
    "InstanceTypepe": [
      {
```

```

    " CpuCoreCou  nt ": 1 ,
    " InstanceTy peFamily ":" ecs . t1 ",
    " InstanceTy peId ":" ecs . t1 . xsmall ",
    " MemorySize ": 0 . 5
  },
  {
    " CpuCoreCou  nt ": 1 ,
    " InstanceTy peFamily ":" ecs . t1 ",
    " InstanceTy peId ":" ecs . t1 . small ",
    " MemorySize ": 1
  }
]
},
" RegionId ":" cn - hangzhou ",
" RequestId ":" CF661E2D - 4AFE - 4BCD - 959A - A65E14416B 44 "
}

```

Errors

HTTP status code	Error code	Error message	Meaning
400	InvalidParamter	Invalid Parameter	The specified parameter is invalid.
404	InvalidUsage	The specified Usage is not valid	The specified resource type (image, disk, image_disk, or none) that is referenced is invalid.
400	InvalidInstanceType. ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The specified instance type is not supported.

For a list of error codes, visit the [API Error Center](#).

12 Snapshots

12.1 CreateSnapshot

You can call this operation to create a snapshot for a disk.

Description

- A maximum of 256 snapshots can be created for a single disk.
- The instance to which the disk is attached must be in the stopped (`Stopped`) or running (`Running`) state. Otherwise, the snapshot cannot be created.
- The disk for which you want to create a snapshot must be attached to an instance.
- If the instance to which a specified disk is attached has never been started, the snapshot cannot be created.
- If an ECS instance is locked for [security control](#) (the `OperationLocks` parameter is " `LockReason` " : " `security` "), no snapshots can be created for its attached disks.
- If you have called the [RunInstances](#), [ReplaceSystemDisk](#), or [CreateDisk](#) operation and data has not yet been loaded to the disk, no snapshots can be created. You can create a snapshot about one hour after you create an ECS instance or replace the system disk. The time to wait after you add a data disk before you can create a snapshot depends on the size of the disk data.
- If a snapshot is still being created, you cannot create another snapshot for the same disk.
- If a snapshot is still being created, this snapshot cannot be used to create a custom image ([CreateImage](#)).
- It is allowed to create snapshots for an expired (`Expired`) subscription cloud disk. Note that if you are creating snapshots while the cloud disk is being deleted, the snapshots that are in the creating (`Creating`) state are also deleted.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
DiskId	String	Yes	d-diskid1	The ID of the cloud disk for which a snapshot is to be created.
Action	String	No	CreateSnapshot	The operation that you want to perform. Set the value to CreateSnapshot. If the request HTTP or HTTPS URL contains different parameters, <code>Action</code> is required.
SnapshotName	String	No	FinanceJoshua	The name of the snapshot to be created. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code>. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). It cannot start with <code>auto</code>, because snapshot names starting with <code>auto</code> are recognized as automatic snapshots.
Description	String	No	FinanceDepet	The description of the snapshot to be created. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code>. Default value: null

Parameter	Type	Required	Example	Description
RetentionDays	Integer	No	30	The retention period of the snapshot to be created. Valid values: 1 to 65,536. Unit: day. The snapshot will be automatically released when the retention period expires. Default value: null, indicating that the snapshot will not be released automatically.
Tag.N.Value	String	No	FinanceDept. Joshua	The tag value of the snapshot to be created.  Note: This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure compatibility.
Tag.N.Key	String	No	FinanceDept	The tag key of the snapshot to be created.  Note: This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure compatibility.

Parameter	Type	Required	Example	Description
Tag . N . Key	String	No	FinanceDept	The tag key of the snapshot to be created. Valid values of N: 1 to 20. It cannot be an empty string. It can be up to 64 characters in length and cannot start with aliyun or acs :. It cannot contain http:// or https://.
Tag . N . Value	String	No	FinanceDept. Joshua	The tag value of the snapshot to be created. 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 aliyun or acs :. It cannot contain 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 this value, but you must ensure that it is unique among different requests. The ClientToken parameter 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	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SnapshotId	String	s-snapshotid1	The ID of the snapshot created.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateSnapshot
&DiskId=d-diskid1
&SnapshotName=FinanceJoshua
&Description=FinanceDepartment
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&Tag.1.Key=FinanceDepartment
&Tag.1.Value=FinanceDepartment.Joshua
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateSnapshotResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <SnapshotId>s-923FE2B**</SnapshotId>
</CreateSnapshotResponse>
```

JSON format

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
  "SnapshotId": "s-923FE2B**"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The specified DiskId does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the DiskId parameter is correct.
400	InvalidSnapshotName.Malformed	The specified SnapshotName is wrongly formed.	The error message returned because the format of the specified SnapshotName parameter is invalid. The name must be 2 to 128 characters in length. It 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 format of the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	IncorrectInstanceState	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.

HTTP status code	Error code	Error message	Description
403	IncorrectDiskStatus. CreatingSnapshot	A previous snapshot creation is in process.	The error message returned because another snapshot is being created. 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 to ensure security.
403	IncorrectDiskStatus. NeverAttached	The specified disk has never been attached to any instance.	The error message returned because the specified disk has not been attached to any instances and its content remains unchanged.
403	QuotaExceeded. Snapshot	The snapshot quota exceeds.	The error message returned because the maximum number of snapshots is reached. To create new snapshots, delete any unnecessary snapshots without affecting your business.
403	IncorrectDiskStatus. NeverUsed	The specified disk has never been used after creating.	The error message returned because the disk has not been used after being created and its content remains unchanged.
403	CreateSnapshot. Failed	The process of creating snapshot is failed.	The error message returned because the snapshot has failed 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 payment.

HTTP status code	Error code	Error message	Description
500	InternalServerError	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	DiskId.ValueNotSupported	The specified parameter diskid is not supported.	The error message returned because the operation is not supported by the current disk type.
400	DiskCategory.OperationNotSupported	The operation is not supported to the specified disk due to its disk category	The error message returned because the operation is not supported by the specified disk type.
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. Ensure that the disk is available and has no overdue payments.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Top up 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 enabled.
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
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.
404	InvalidVolumeId.NotFound	The specified volume does not exist.	The error message returned because the specified VolumeId parameter does not exist.
403	IdempotentParameterMismatch	The specified clientToken is used.	The error message returned because the specified token is in use.
403	IncorrectDiskStatus.Invalid	The specified device status invalid, restart instance and try again.	The error message returned because the specified disk status is invalid. Restart the instance and try again.
403	IncorrectDiskType.NotSupport	The specified device type is not supported.	The error message returned because the operation is not supported by the specified disk type.
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.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	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred.

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 is not 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	Idempotent Processing	The previous idempotent request(s) is still processing.	The error message returned because the previous idempotence request is being processed .

[View error codes](#)

12.2 DeleteSnapshot

Deletes a snapshot. Snapshots that are currently being created can also be deleted by calling this operation.

Description

When you call this operation, note that:

- If the specified snapshot does not exist, the request will be ignored.
- A snapshot that has already been used to create custom images cannot be deleted. A snapshot can be deleted only after the created custom images have been deleted ([DeleteImage](#)).

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
SnapshotId	String	Yes	s-snapshotid1	The ID of the snapshot.
Action	String	No	DeleteSnapshot	The operation that you want to perform. Set the value to DeleteSnapshot.
Force	Boolean	No	false	Indicates whether to force delete snapshots associated with the disk.  Note: A disk cannot be reinitialized after its associated snapshots are deleted.

Response parameters

Name	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-snapshotid1
&<Common request parameters>
```

Successful response examples

XML format

```
<DeleteSnapshotResponse>
```

```
< RequestId > CEF72CEB - 54B6 - 4AE8 - B225 - F876FF7BA9 84 </
RequestId >
</ DeleteSnapshotResponse >
```

JSON format

```
{
  "RequestId": "CEF72CEB - 54B6 - 4AE8 - B225 - F876FF7BA9 84"
}
```

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 when the specified snapshot has been used to create custom images. You must delete the associated images before deleting the snapshot. If you force delete the snapshot, the images associated with the snapshot will become unavailable.
403	SnapshotCreatedDisk	The snapshot has been used to create disk(s).	The error message returned when the specified snapshot has been used to create disks.
400	MissingParameter	The input parameter SnapshotId that is mandatory for processing this request is not supplied.	The error message returned when the required SnapshotId parameter is not specified.
404	InvalidSnapshotId.NotFound	The specified snapshot is not found	The error message returned when the specified snapshot does not exist.

HTTP status code	Error code	Error message	Description
403	Operation.Conflict	The operation may conflicts with others, please retry later.	The error message returned when the current operation conflicts with other operations.

[View error codes](#)

12.3 DescribeSnapshots

Queries all the snapshots of an ECS instance or a disk. Request parameters such as InstanceId, DiskId, and SnapshotIds act as filtering conditions and have a Boolean AND relationship.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the disk belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DescribeSnapshots	The operation that you want to perform. Set the value to DescribeSnapshots.
DiskId	String	No	d-diskid1	The ID of the disk.

Name	Type	Required	Example	Description
DryRun	Boolean	No	false	Indicates whether the system performs a permission check only. · true: Sends a permission check request, without querying resource status. The system checks whether your AccessKey is valid, whether RAM users are authorized, and whether the required parameters are set. For a failed check, the corresponding error message is returned. For a successful check, the DryRunOperation error code is returned. · False (default): Sends a normal request, returns the 2XX HTTP status code after the check and queries the resource status directly.
Encrypted	Boolean	No	false	Indicates whether to filter an encrypted snapshot. Default value: false.
Filter . 1 . Key	String	No	CreationStartTime	The filter key used to query resources. The parameter value must be the start time when the resource was created (CreationStartTime).  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.

Name	Type	Required	Example	Description
Filter . 1 . Value	String	No	2017-12-05T22:40:00Z	The filter value used to query resources. The parameter value must be the start time when the resource was created (CreationStartTime).  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
Filter . 2 . Key	String	No	CreationEndTime	The filter key used to query resources. The parameter value must be the end time when the resource was created (CreationEndTime).  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
Filter . 2 . Value	String	No	2017-12-06T22:40:00Z	The filter value used to query resources. The parameter value must be the end time when the resource was created (CreationEndTime).  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.

Name	Type	Required	Example	Description
InstanceId	String	No	i-instanceid1	The ID of the instance.
KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d3fb40826X	The ID of the KMS key corresponding to the data disk.
PageNumber	Integer	No	1	The page number that you query in the snapshot list. Starting value: 1. Default value: 1.
PageSize	Integer	No	10	The number of entries per page. Maximum value: 100. Default value: 10.
ResourceGroupId	String	No	rg-resourcegroup	The ID of the resource group.
SnapshotIds	String	No	["s-xxxxxxxx", "s-yyyyyyyy", ... "s-zzzzzzzz"]	The IDs of the snapshots. The parameter value is an array of snapshot IDs separated with commas (.). You can specify a maximum of 100 IDs.
SnapshotLinkId	String	No	d-25okbh2pj	The ID of the snapshot chain.
SnapshotName	String	No	FinanceJoshua	The name of the snapshot.
SnapshotType	String	No	all	The type of the snapshot. Valid values: · auto: automatic snapshot · user: manually created snapshot · all (default): all snapshot types

Name	Type	Required	Example	Description
SourceDisk Type	String	No	Data	The type of the source disk. Valid values: • System: The snapshot is created for a system disk. • Data: The snapshot is created for a data disk.
Status	String	No	all	The status of the snapshot. Valid values: • progressing: The snapshot is being created. • accomplished: The snapshot is created. • failed: The snapshot failed to be created. • all (default): all snapshot statuses
Tag . N . Key	String	No	FinanceDept	The tag key of the snapshot. Valid values of N: 1 to 20. It cannot be a null string. It can be a maximum of 64 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https://.
Tag . N . Value	String	No	FinanceDep tJoshua	The tag value of the snapshot . Valid values of N: 1 to 20. It can be a null string. It can be a maximum of 128 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https://.

Name	Type	Required	Example	Description
Tag . N . key	String	No	FinanceDept	The tag key of the snapshot.  Note: This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure compatibility.
Tag . N . value	String	No	FinanceDeptJoshua	The tag value of the snapshot.  Note: This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure compatibility.
Usage	String	No	none	The referenced resource type. Valid values: · image: The snapshot is used to create custom images. · disk: The snapshot is used to create disks. · image_disk: The snapshot is used to create custom images and data disks. · none: The snapshot is not referenced by any other resources.

Response parameters

Name	Type	Example	Description
PageNumber	Integer	1	The page number that you query in the snapshot list.
PageSize	Integer	10	The number of entries per page.

Name	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Snapshots			The snapshot details.
└ CreationTime	String	2014-07-24T13:00:52Z	The creation time of the snapshot. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddThh:mmZ.
└ Description	String	FinanceDept	The description of the snapshot.
└ Encrypted	Boolean	false	Indicates whether the snapshot is encrypted.
└ KMSKeyId	String	0e478b7a-4262-4802-b8cb-00d3fb40826X	The ID of the KMS key corresponding to the data disk.
└ ProductCode	String	jxsc000204	The product code in the image marketplace.
└ Progress	String	100	The progress of snapshot creation. Unit: percent (%).
└ RemainTime	Integer	38	The time remaining for a snapshot creation task before it is completed. Unit: second.
└ ResourceGroupId	String	rg-resourcegroup	The ID of the resource group.
└ RetentionDays	Integer	30	The number of days that an automatic snapshot retains in the console for your instance.
└ SnapshotId	String	s-snapshotid1	The ID of the snapshot.

Name	Type	Example	Description
↳ SnapshotName	String	FinanceJoshua	The name of the snapshot. This parameter is returned only if a snapshot name was specified during creation.
↳ SourceDiskId	String	d-diskid1	The ID of the source disk. It is retained after the source disk of the snapshot is deleted.
↳ SourceDiskSize	String	2000	The size of the source disk. Unit: GB.
↳ SourceDiskType	String	Data	The type of the source disk. Valid values: System Data.
↳ SourceStorageType	String	disk	The type of the source disk.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
↳ Status	String	accomplished	The status of the snapshot. Valid values: · progressing · accomplished · failed
↳ Tags			The tags.
↳ TagKey	String	test	The tag key of the snapshot.
↳ TagValue	String	api	The tag value of the snapshot.

Name	Type	Example	Description
└ Usage	String	none	The referenced resource type. Valid values: - image - disk - image_disk - none
TotalCount	Integer	36	The total number of snapshots

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSnapshots
&RegionId=cn-hangzhou
&InstanceId=i-instanceid-1
&DiskId=d-diskid1
&SnapshotIds=["s-xxxxxxxx", "s-yyyyyyyy", ... "s-zzzzzzzz"]
&PageNumber=1
&PageSize=10
&SnapshotName=FinanceJoshua
&Status=all
&SnapshotType=all
&Usage=none
&SourceDiskType=Data
&Tag.1.Key=FinanceDept
&Tag.1.Value=FinanceDeptJoshua
&Encrypted=false
&DryRun=false
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeSnapshotsResponse>
  <Snapshots>
    <Snapshot>
      <CreationTime>2014-07-24T13:00:52Z</CreationTime>
      <Description/>
      <SourceDiskId>d-23x0r79qy</SourceDiskId>
      <SourceDiskType>DATA</SourceDiskType>
      <ProductCode/>
      <SnapshotName>auto_20140724_2</SnapshotName>
      <Progress>100%</Progress>
      <SourceDiskSize>50</SourceDiskSize>
      <Status>accomplished</Status>
      <SnapshotId>s-23f2i9s4t</SnapshotId>
      <Usage>none</Usage>
    </Snapshot>
```

```

    < Snapshot >
      < CreationTime > 2014 - 07 - 24T13 : 00 : 42Z </ CreationTime >
    </ Snapshot >
  </ Snapshots >
  < PageNumber > 1 </ PageNumber >
  < PageSize > 2 </ PageSize >
  < TotalCount > 36 </ TotalCount >
  < RequestId > 2F409D67 - 329A - 4405 - B924 - 2FC28566B3 66 </
  RequestId >
</ DescribeSnapshotsResponse >

```

JSON format

```

{
  "PageNumber": 1,
  "TotalCount": 36,
  "PageSize": 2,
  "RequestId": "659F91C6 - 1949 - 43B0 - 90C4 - B6342CA757 D5",
  "Snapshots": [
    {
      "CreationTime": "2015 - 07 - 30T05 : 00 : 14Z",
      "Status": "accomplished",
      "SnapshotName": "auto_20150730_3",
      "SourceDiskType": "system",
      "SourceDiskId": "d-944qyqjfa",
      "SnapshotId": "s-943ypfgic",
      "SourceDiskSize": 20,
      "Progress": "100%",
      "Usage": "none"
    },
    {
      "CreationTime": "2015 - 07 - 30T05 : 00 : 14Z",
      "Status": "accomplished",
      "SnapshotName": "auto_20150730_3",
      "SourceDiskType": "system",
      "SourceDiskId": "d-94j355jsq",
      "SnapshotId": "s-94osg320e",
      "SourceDiskSize": 20,
      "Progress": "100%",
      "Usage": "none"
    }
  ]
}

```


Error codes

HTTP status code	Error code	Error message	Description
403	InvalidSnapshotIds.Malformed	The amount of specified snapshot Ids exceeds the limit.	The error message returned when the specified value of the SnapshotIds parameter is invalid.
404	InvalidFilterKey.NotFound		The error message returned when the specified start time or end time is incorrect.
404	InvalidFilterValue		The error message returned when the format of the specified time is invalid.
404	InvalidUsage	The specified Usage is not valid	The error message returned when the specified referenced resource type (image, disk , image_disk, or none) is invalid.
404	InvalidStatus.NotFound	The specified Status is not found	The error message returned when the specified resource status does not exist.
404	InvalidSnapshotType.NotFound	The specified SnapshotType is not found	The error message returned when the specified snapshot type does not exist.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned when the specified Tag.n.Key parameter does not correspond to the specified Tag.n.Value parameter.

HTTP status code	Error code	Error message	Description
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned when the number of specified tags has reached the upper limit.
404	InvalidSnapshotLinkId.NotFound	The specified snapshot link is not found.	The error message returned when the specified snapshot chain does not exist.

[View error codes](#)

12.4 DescribeSnapshotsUsage

Queries the number of snapshots stored in a region as well as their total size. If you want to view the snapshot usage information for each disk in a region, we recommend that you call the DescribeSnapshotLinks operation to query snapshot chain information.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the snapshot belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.

Name	Type	Required	Example	Description
Action	String	No	DescribeSnapshotsUsage	The operation that you want to perform. Set the value to DescribeSnapshotsUsage.

Response parameters

Name	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>
```

Successful response examples

XML format

```
<DescribeSnapshotsUsageResponse>
  <SnapshotCount>5</SnapshotCount>
  <SnapshotSize>122</SnapshotSize>
  <RequestId>ED5CF6DD-71CA-462C-9C94-A61A78A01479</RequestId>
</DescribeSnapshotsUsageResponse>
```

JSON format

```
{
  "SnapshotSize": 122,
  "RequestId": "ACD9BBB0-A9D1-46D7-9630-B7A69889E110",
  "SnapshotCount": 5
}
```

```
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidParam.RegionId	The specified region does not exist.	The error message returned when the specified region does not exist.

[View error codes](#)

12.5 DescribeSnapshotLinks

Queries the snapshot chains of one or more disks. A snapshot chain is a chain of all the snapshots of a disk, and a disk corresponds to a chain of snapshots, so the snapshot chain ID is the disk ID.

Description

When you call this operation, note that:

- Request parameters such as RegionId, DiskIds, and InstanceId act as filtering conditions and have a Boolean AND relationship.
- If no parameters are specified, no filtering conditions are applied. If the DiskIds and SnapshotLinkIds parameters are empty JSON arrays ([]), the filtering conditions are regarded as effective and a blank result will be returned.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the disk belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DescribeSnapshotLinks	The operation that you want to perform. Set the value to DescribeSnapshotLinks.
DiskIds	String	No	["d-xxxxxxxxx", "d-yyyyyyyyy", ... "d-zzzzzzzzz"]	The IDs of the disks to be queried. You can specify a maximum of 100 disk IDs at a time. The parameter value is an array of disk IDs separated with commas (,).
InstanceId	String	No	i-instanceid1	The ID of the instance.
PageNumber	Integer	No	1	The page number that you query in the disk status list. Starting value: 1. Default value: 1.
PageSize	Integer	No	10	The number of entries per page. . Valid values: 1 to 50. Default value: 10.

Name	Type	Required	Example	Description
SnapshotLinks	String	No	["p-xxxxxxxxx", "p-yyyyyyyyy", ... "p-zzzzzzzzz"]	The IDs of the snapshot chains to be queried. You can specify a maximum of 100 snapshot chain IDs at a time. The parameter value is an array of snapshot chain IDs separated with commas (,).

Response parameters

Name	Type	Example	Description
PageNumber	Integer	1	The page number that you query in the snapshot chain list.
PageSize	Integer	10	The number of entries per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SnapshotLinks			A set of snapshot chains.
└ InstanceId	String	i-instanceid1	The ID of the instance.
└ InstanceName	String	FinanceJoshua	The name of the instance.
└ RegionId	String	cn-hangzhou	The ID of the region to which the source disk of the snapshot chain belongs.
└ SnapshotLinkId	String	p-2ze0y1jwzpb1geqxxkroq	The ID of the snapshot chain.

Name	Type	Example	Description
└ SourceDiskId	String	d-diskid1	The ID of the source disk. This parameter is retained even after the source disk of the snapshot is deleted.
└ SourceDiskName	String	FinanceJoshua	The name of the source disk.
└ SourceDiskSize	Integer	40	The size of the source disk. Unit: GiB.
└ SourceDiskType	String	cloud_ssd	The type of the source disk. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: SSD - ephemeral_ssd: local SSD - cloud_essd: ESSD
└ TotalCount	Integer	1	The total number of snapshots.
└ TotalSize	Integer	2097152	The size of all snapshots in a snapshot chain. Unit: Byte.
TotalCount	Integer	9	The total number of snapshot chains.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSnapshots
&RegionId=cn-hangzhou
&InstanceId=i-instanceid-1
&DiskIds=["d-xxxxxxxx", "d-yyyyyyyy", ... "d-zzzzzzzz"]
&SnapshotLinkIds=["p-xxxxxxxx", "p-yyyyyyyy", ... "p-zzzzzzzz"]
&PageNumber=1
&PageSize=10
<Common request parameters>
```

Successful response examples

XML format

```
< DescribeSnapshotsResponse >
  < Snapshots >
    < Snapshot >
      < SnapshotId > d-25okbh2pj </ SnapshotId >
      < SourceDiskId > d-25okbh2pj </ SourceDiskId >
      < SourceDiskType > data </ SourceDiskType >
      < SourceDiskSize > 20 </ SourceDiskSize >
      < RegionId > cn-beijing-btc-a01 </ RegionId >
      < TotalCount > 1 </ TotalCount >
      < TotalSize > 2097152 </ TotalSize >
    </ Snapshot >
    < Snapshot >
      < SnapshotId > d-2ze0y1jwzp-blgeqzkroq </ SnapshotId >
      < SourceDiskId > d-2ze0y1jwzp-blgeqzkroq </ SourceDiskId >
      < SourceDiskType > system </ SourceDiskType >
      < SourceDiskSize > 40 </ SourceDiskSize >
      < RegionId > cn-beijing-btc-a01 </ RegionId >
      < TotalCount > 1 </ TotalCount >
      < TotalSize > 2097152 </ TotalSize >
    </ Snapshot >
  </ Snapshots >
  < PageNumber > 1 </ PageNumber >
  < PageSize > 2 </ PageSize >
  < TotalCount > 9 </ TotalCount >
  < RequestId > ED5CF6DD-71CA-462C-9C94-A61A78A01479 </ RequestId >
</ DescribeSnapshotsResponse >
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 9,
  "PageSize": 2,
  "RequestId": "ED5CF6DD-71CA-462C-9C94-A61A78A01479",
  "Snapshots": {
    "Snapshots": [
      {
        "TotalCount": 1,
        "SourceDiskType": "data",
        "SourceDiskId": "d-25okbh2pj",
        "RegionId": "cn-beijing-btc-a01",
        "SourceDiskSize": 20,
        "SnapshotId": "d-25okbh2pj",
        "TotalSize": 2097152
      },
      {
        "TotalCount": 1,
        "SourceDiskType": "system",
        "SourceDiskId": "d-2ze0y1jwzp-blgeqzkroq",
        "RegionId": "cn-beijing-btc-a01",
        "SourceDiskSize": 40,
        "SnapshotId": "d-2ze0y1jwzp-blgeqzkroq",
        "TotalSize": 2097152
      }
    ]
  }
}
```



```
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidDiskIds	The specified diskIds is invalid.	The error message returned when the specified value of the DiskIds parameter is invalid.

[View error codes](#)

12.6 ModifySnapshotAttribute

You can call the ModifySnapshotAttribute operation to modify the name or description of a snapshot.

Debugging

[Alibaba Cloud provides OpenAPI Explorer to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.](#)

Request parameters

Parameter	Type	Required	Example	Description
SnapshotId	String	Yes	s-923FE2B**	The ID of the snapshot to be modified.
Action	String	No	ModifySnapshotAttribute	The operation that you want to perform. For API requests using the HTTP and HTTPS methods, <code>Action</code> is required. Set this parameter to <code>ModifySnapshotAttribute</code> .

Parameter	Type	Required	Example	Description
Description	String	No	NewSnapshotDescription-EcsGuideTest	The description of the snapshot . It must be 2 to 256 characters in length and cannot start with http:// or https://.
SnapshotName	String	No	NewSnapshotName-EcsGuideTest	The name of the snapshot. It 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 (-). It cannot start with auto because a name that starts with auto may conflict with the name of an automatic snapshot .

Response parameters

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

Examples

Sample request

```
https :// ecs . aliyuncs . com /? Action = ModifySnapshotAttribute
& SnapshotName = NewSnapshotName - EcsGuideTest
& Description = NewSnapshotDescription - EcsGuideTest
&< Common request parameters >
```

Sample success response

XML format

```
< ModifySnap  shotAttrib  uteRespons  e >
  < RequestId > C8B26B44 - 0189 - 443E - 9816 - D951F59623
  A9 </ RequestId >
</ ModifySnap  shotAttrib  uteRespons  e >
```

JSON format

```
{
  " RequestId ":" C8B26B44 - 0189 - 443E - 9816 - D951F59623  A9 "
}
```

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 resource 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 snapshot name is invalid. The name must be 2 to 128 characters in length and contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter but 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 snapshot are modified.

HTTP status code	Error code	Error message	Description
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.

For more information, see [Error codes](#).

12.7 CreateAutoSnapshotPolicy

Creates an automatic snapshot policy. After you create an automatic snapshot policy, you can call `ApplyAutoSnapshotPolicy` to apply it to any disks. You can call `ModifyAutoSnapshotPolicyEx` to modify a created automatic snapshot policy as required.

Description

When you call this operation, note that:

- You can create up to 100 automatic snapshot policies in each region.
- If a disk contains a large volume of data, the amount of time it takes to create a snapshot can take longer than the interval between scheduled automatic snapshots. In these cases, the second scheduled snapshot will not be taken. Assume that you set the automatic snapshot time points at 09:00, 10:00, 11:00, and 12:00. If the first automatic snapshot taken at 09:00 took 80 minutes to complete and ended at 10:20, the task scheduled for 10:00 will be skipped. A snapshot for 11:00 will be taken as scheduled.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
regionId	String	Yes	cn-hangzhou	The ID of the region to which the automatic snapshot policy belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
repeatWeekdays	String	Yes	"1"	The repeat date for the automatic snapshot. This parameter specifies on which day of the week that the automatic snapshot is created. Valid values: 1 to 7, corresponding to the days of a week, where 1 indicates Monday. To schedule multiple automatic snapshot tasks for a disk in a week, you can set the RepeatWeekdays parameter to an array. • You can specify a maximum of seven dates. • You must specify the parameter in a JSON-formatted array: ["1", "2", ... "7"]. Separate multiple values with commas (,).

Name	Type	Required	Example	Description
retentionDays	Integer	Yes	30	The retention period of the automatic snapshot. Unit: day. Valid values: · -1: The automatic snapshot is retained permanently. · 1-65536: The automatic snapshot is retained for the specified number of days. Default value: -1.
timePoints	String	Yes	["0", "1", ... "23"]	The point in time at which the automatic snapshot is created. Unit: hour. Valid values: 0 to 23, corresponding to the 24 hours within the range of 00:00 to 23:00. For example, 1 indicates 01:00. To schedule multiple automatic snapshot tasks for a disk in a day, you can set the TimePoints parameter to an array. You can specify a maximum of 24 points in time.
Action	String	No	CreateAutoSnapshotPolicy	The operation that you want to perform. Set the value to CreateAutoSnapshotPolicy.

Name	Type	Required	Example	Description
autoSnapshotPolicyName	String	No	FinanceJoshua	The name of the automatic snapshot policy. • The name must be 2 to 128 characters in length. • It must start with a letter and can contain letters, digits, colons (:), underscores (_), and hyphens (-). • It cannot start with http:// or https://. Default value: null.

Response parameters

Name	Type	Example	Description
AutoSnapshotPolicyId	String	p-233e6ylv0	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=FinanceJoshua
&<Common request parameters>
```

Successful response examples

XML format

```
<CreateAutoSnapshotPolicyResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
  <AutoSnapshotPolicyId>p-233e6ylv0</AutoSnapshotPolicyId>
```

```
</ CreateAuto SnapshotPolicyResponse >
```

JSON format

```
{
  "RequestId ":" F3CD6886 - D8D0 - 4FEE - B93E - 1B73239673 DE ",
  "AutoSnapshotPolicyId ":" p - 233e6ylv0 "
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned when the specified value of the RegionId parameter is invalid.
403	ParameterInvalid	The specified RepeatWeekDays parameter is invalid.	The error message returned when the specified value of the RepeatWeekDays parameter is invalid.
403	ParameterInvalid	The specified TimePoints parameter is invalid.	The error message returned when the specified value of the TimePoints parameter is invalid.
403	ParameterInvalid	The specified RetentionDays parameter is invalid.	The error message returned when the specified value of the RetentionDays parameter is invalid.
403	InvalidAccountStatus. NotEnoughBalance	Your account does not have enough balance.	The error message returned when your account balance is insufficient. You must top up your account before proceeding.

[View error codes](#)

12.8 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 will take effect on the disk and replace the original policy.

Description

When you call this operation, note that:

- A disk can have only one automatic snapshot policy.
- A single automatic snapshot policy can be applied to multiple disks.
- If many automatic snapshot tasks are in progress at the same point in time, the tasks are queued for zero to three minutes for execution. These tasks may not be executed concurrently.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
autoSnapshotPolicyId	String	Yes	p-233e6ylv0	The ID of the automatic snapshot policy.
diskIds	String	Yes	"d-233e6ylv0", "d-23vbpbi03", "d-23vasz3ds"	The IDs of the disks. To apply an automatic snapshot policy to multiple disks, you can set this parameter to an array of disk IDs separated with commas (,).

Name	Type	Required	Example	Description
regionId	String	Yes	cn-hangzhou	The ID of the region to which the automatic snapshot policy and the disk belong. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	ApplyAutoSnapshotPolicy	The operation that you want to perform. Set the value to ApplyAutoSnapshotPolicy.

Response parameters

Name	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=p-233e6ylv0
&diskIds=["d-233e6ylv0","d-23vbpbi03","d-23vasz3ds"]
&regionId=cn-hangzhou
&<Common request parameters>
```

Successful response examples

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 when the specified automatic snapshot policy does not exist. Check whether the policy is correct.
404	ParameterInvalid	The specified automatic snapshot policy does not exist in the	The error message returned when the specified automatic snapshot policy does not exist. Check whether the policy is correct.
404	InvalidDiskId.NotFound	The specified disk does not exist in the region.	The error message returned when the specified disk does not exist in the current region .
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned when the specified value of the RegionId parameter is invalid.
403	ParameterInvalid	The specified AutoSnapshotPolicyId parameter is invalid.	The error message returned when the specified value of the AutoSnapshotPolicyId parameter is invalid.
403	ParameterInvalid	The specified DiskIds are invalid.	The error message returned when the specified value of the DiskIds parameter is invalid.

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 when some of the specified disks does not support this operation .
403	InvalidAccountStatus. NotEnoughBalance	Your account does not have enough balance.	The error message returned when your account balance is insufficient. You must top up your account before proceeding.

[View error codes](#)

12.9 CancelAutoSnapshotPolicy

Cancels the automatic snapshot policies of one or more disks.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
diskIds	String	Yes	["d-233e6ylv0", "d-23vbpbi03", "d-23vasz3ds"]	The IDs of the disks. To cancel the automatic snapshot policy for multiple disks, you can set this parameter to a JSON-formatted array: ["dxxxxxxxx", "dyyyyyyyyy", ... "dzzzzzzzzz"]. Separate multiple IDs with commas (,).

Name	Type	Required	Example	Description
regionId	String	Yes	cn-hangzhou	The ID of the region to which the automatic snapshot policies and the disks belong. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	CancelAutoSnapshotPolicy	The operation that you want to perform. Set the value to CancelAutoSnapshotPolicy.

Response parameters

Name	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-233e6ylv0","d-23vbpbi03","d-23vasz3ds"]&regionId=cn-hangzhou&<Common request parameters>
```

Successful response examples

XML format

```
<CancelAutoSnapshotPolicyResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673-DE</RequestId>
</CancelAutoSnapshotPolicyResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673-DE"
```

```
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned when the specified value of the RegionId parameter is invalid.
403	ParameterInvalid	The specified DiskIds are invalid.	The error message returned when the specified value of the DiskIds parameter is invalid.
404	InvalidDiskId.NotFound	The specified DiskIds are not found.	The error message returned when the specified disk IDs do not exist.

[View error codes](#)

12.10 DeleteAutoSnapshotPolicy

Deletes 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

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
autoSnapshotPolicyId	String	Yes	p-233e6ylv0	The ID of the automatic snapshot policy. You can call DescribeAutoSnapshotPolicyEx to view the available automatic snapshot policies.
regionId	String	Yes	cn-hangzhou	The ID of the region to which the automatic snapshot belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DeleteAutoSnapshotPolicy	The operation that you want to perform. Set the value to DeleteAutoSnapshotPolicy.

Response parameters

Name	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=p-233e6ylv0
&regionId=cn-hangzhou
&<Common request parameters>
```

Successful response examples

XML format

```
<DeleteAutoSnapshotPolicyResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
```

```
</ DeleteAuto SnapshotPo licyRespon se >
```

JSON format

```
{  
  " RequestId ":" F3CD6886 - D8D0 - 4FEE - B93E - 1B73239673 DE "  
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	ParameterInvalid	The specified automatic snapshot policy does not exist.	The error message returned when the specified automatic snapshot policy 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 when the specified automatic snapshot policy does not exist. Check whether the policy ID is correct.

[View error codes](#)

12.11 DescribeAutoSnapshotPolicyEX

Queries available automatic snapshot policies.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
Action	String	No	DescribeAutoSnapshotPolicyEx	The operation that you want to perform. Set the value to DescribeAutoSnapshotPolicyEx.
AutoSnapshotPolicyId	String	No	p-233e6ylv0	The ID of the automatic snapshot policy.
PageNumber	Integer	No	1	The page number that you query in the automatic snapshot policy list. Starting value: 1. Default value: 1.
PageSize	Integer	No	10	The number of entries per page. Maximum Value: 50 Default value: 10.
RegionId	String	No	cn-hangzhou	The ID of the region to which the automatic snapshot policies belong. You can call DescribeRegions to view the latest regions of Alibaba Cloud.

Response parameters

Name	Type	Example	Description
AutoSnapshotPolicies			The automatic snapshot policy details. It is a set of AutoSnapshotPolicyType data.
AutoSnapshotPolicyId	String	FinanceJoshua	The ID of the automatic snapshot policy.

Name	Type	Example	Description
└ AutoSnapshotPolicyName	String	p-23f2i9s4t	The name of the automatic snapshot policy.
└ CreationTime	String	2014-04-21T12:08:52Z	The creation time of the automatic snapshot policy. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ.
└ DiskNums	Integer	2	The number of disks to which the automatic snapshot policy is applied.
└ RegionId	String	cn-hangzhou	The ID of the region to which the automatic snapshot policy belongs.
└ RepeatWeekdays	String	["6"]	The repeat date for the automatic snapshot. This parameter specifies which days of the week that automatic snapshots are created on. Valid values: 1 to 7, corresponding to the days of a week, where 1 indicates Monday. You can specify multiple dates.
Specified RetentionDays	Integer	30	The retention period of the automatic snapshot. Unit: day. -1: The automatic snapshot is retained permanently. 1-65536: The automatic snapshot is retained for the specified number of days.

Name	Type	Example	Description
└─Status	String	Available	The status of the automatic snapshot policy. Valid values: · Creating · Available
└─TimePoints	String	["4", "19"]	The point in time at which the automatic snapshot is created. The smallest interval that snapshots can be taken at is one hour. Valid values: 0 to 23, corresponding to 24 hours in the range of 00:00 to 23:00. You can specify multiple points in time. The parameter is a JSON-formatted array: ["0", "1", ... "23"]. You can specify a maximum of 24 points in time. Separate multiple points in time with commas (,).
└─VolumeNums	Integer	2	The number of disks on which this policy is enabled.
PageNumber	Integer	1	The page number that you query in the automatic snapshot policy list.
PageSize	Integer	10	The number of entries per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of automatic snapshot policies.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeAutoSnapshotPolicyEx
```

```
& RegionId = cn - hangzhou
& AutoSnapsh otPolicyId = p - 233e6ylv0
& PageNumber = 1
& PageSize = 10
&< Common request parameters >
```

Successful response examples

XML format

```
< DescribeAutoSnapshot PolicyResponse >
  < AutoSnapshot Policies >
    < AutoSnapshot Policy >
      < CreationTime > 2014 - 04 - 21T12 : 08 : 52Z </ CreationTime >
      < AutoSnapshot PolicyId > p - 23f2i9s4t </ AutoSnapshot PolicyId >
      < SettingTimePoints >[" 2 ", " 9 "]</ SettingTimePoints >
      < SettingRepeatWeekdays >[" 3 ", " 4 ", " 5 ", " 7 "]</ SettingRepeatWeekdays >
      < RetentionDays >- 1 </ RetentionDays >
    </ AutoSnapshot Policy >
    < AutoSnapshot Policy >
      < CreationTime > 2014 - 07 - 24T13 : 00 : 52Z </ CreationTime >
      < AutoSnapshot PolicyId > p - 23f2i9s4t </ AutoSnapshot PolicyId >
      < SettingTimePoints >[" 0 ", " 1 "]</ SettingTimePoints >
      < SettingRepeatWeekdays >[" 1 ", " 7 "]</ SettingRepeatWeekdays >
      < RetentionDays > 30 </ RetentionDays >
    </ AutoSnapshot Policy >
  </ AutoSnapshot Policies >
  < PageNumber > 1 </ PageNumber >
  < PageSize > 2 </ PageSize >
  < TotalCount > 2 </ TotalCount >
  < RequestId > F3CD6886 - D8D0 - 4FEE - B93E - 1B73239673 DE </ RequestId >
</ DescribeAutoSnapshot PolicyResponse >
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 2,
  "AutoSnapshotPolicies": [
    {
      "AutoSnapshotPolicy": {
        "CreationTime": "2014 - 07 - 24T13 : 00 : 52Z",
        "SettingRepeatWeekdays": [" 1 ", " 7 "],
        "RetentionDays": 30,
        "AutoSnapshotPolicyId": "p - 23f2i9s4t",
        "SettingTimePoints": [" 0 ", " 1 "]
      }
    },
    {
      "CreationTime": "2014 - 04 - 21T12 : 08 : 52Z",
      "SettingRepeatWeekdays": [" 3 ", " 4 ", " 5 ", " 7 "],
      "RetentionDays": - 1,
      "AutoSnapshotPolicyId": "p - a1fd3g5s1",
      "SettingTimePoints": [" 2 ", " 9 "]
    }
  ]
}
```

```
]
},
" PageSize ": 2 ,
" RequestId ":" 659F91C6 - 1949 - 43B0 - 90C4 - B6342CA757 D5 "
}
```

Error codes

[View error codes](#)

12.12 ModifyAutoSnapshotPolicyEx

Modifies an automatic snapshot policy. After you modify an automatic snapshot policy, the new policy takes effect immediately on the disks that have applied the policy.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
autoSnapshotPolicyId	String	Yes	p-autopolicyid1	The ID of the automatic snapshot policy to be modified. You can call DescribeAutoSnapshotPolicyEx to view available automatic snapshot policies.
regionId	String	Yes	cn-hangzhou	The ID of the region to which the automatic snapshot policy belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	ModifyAutoSnapshotPolicyEx	The operation that you want to perform. Set the value to ModifyAutoSnapshotPolicyEx.

Name	Type	Required	Example	Description
autoSnapshotPolicyName	String	No	FinanceJoshua	The name of the automatic snapshot policy. If this parameter is not specified, the policy name is not modified.
repeatWeekdays	String	No	["1", "7"]	The repeat date for the automatic snapshot. This parameter specifies which day of the week that the automatic snapshot is created on. Valid values: 1 to 7, corresponding to the days of a week, where 1 indicates Monday. To schedule multiple automatic snapshot tasks for a disk in a week, you can set the RepeatWeekdays parameter to an array. • You can specify a maximum of seven dates. • You must specify the parameter in a JSON-formatted array: ["1", "2", ... "7"]. Separate multiple values with commas (,).
retentionDays	Integer	No	30	The retention period of the automatic snapshot. Unit: days. . Valid values: • -1 (default): The automatic snapshot is retained permanently. • 1-65536: The automatic snapshot is retained for the specified number of days.

Name	Type	Required	Example	Description
timePoints	String	No	["0", "1"]	The point in time at which automatic snapshots are created. Valid values: 0 to 23, corresponding to the 24 hours within the range of 00:00 to 23:00. For example, 1 indicates 01:00. To schedule multiple automatic snapshot tasks for a disk in a day, you can set the TimePoints parameter to an array. • You can specify a maximum of 24 points in time. • You must specify the parameter in a JSON-formatted array: ["0", "1", ... "23"]. Separate multiple values with commas (,).

Response parameters

Name	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=p-autopolicy-id1
&regionId=cn-hangzhou
&<Common request parameters>
```

Successful response examples

XML format

```
<ModifyAutoSnapshotPolicyResponse>
```

```
< RequestId > F3CD6886 - D8D0 - 4FEE - B93E - 1B73239673 DE </
RequestId >
</ ModifyAuto SnapshotPo licyRespon se >
```

JSON format

```
{
  "RequestId ":" F3CD6886 - D8D0 - 4FEE - B93E - 1B73239673 DE "
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	ParameterInvalid	The specified automatic snapshot policy does not exist.	The error message returned when the specified automatic snapshot policy 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 when the specified automatic snapshot policy does not exist. Check whether the policy ID is correct.
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned when the specified value of the RegionId parameter is invalid.
403	ParameterInvalid	The specified RepeatWeekDays parameter is invalid.	The error message returned when the specified value of the RepeatWeekDays parameter is invalid.
403	ParameterInvalid	The specified TimePoints parameter is invalid.	The error message returned when the specified value of the TimePoints parameter is invalid.

HTTP status code	Error code	Error message	Description
403	ParameterInvalid	The specified AutoSnapshotPolicyId is invalid.	The error message returned when the specified value of the AutoSnapshotPolicyId parameter is invalid.
403	ParameterInvalid	The specified RetentionDays parameter is invalid.	The error message returned when the specified value of the RetentionDays parameter is invalid.

[View error codes](#)

13 Security groups

13.1 CreateSecurityGroup

You can call the `CreateSecurityGroup` action to create a security group. Only instances within the security group are granted access permissions by default. If you want to allow requests from the Internet or requests from instances in other security groups, you can call `AuthorizeSecurityGroup` to grant access permissions to these instances or groups.

Description

When you call this operation, note that:

- You can create up to 100 security groups in a region.
- `VpcId` must be specified when you create a VPC-type security group.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou-b	The region ID of the security group. You can call the DescribeRegions operation to query the latest region list.
Action	String	No	CreateSecurityGroup	The operation that you want to perform. Set this value to <code>CreateSecurityGroup</code> .

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 this value, but you must ensure that it is unique among different requests. ClientToken can contain only ASCII characters, and cannot exceed 64 characters in length. For more information, see How to ensure idempotence .
Description	String	No	FinanceDept	The description of the security group. It must be 2 to 256 characters in length and cannot start with http:// or https://. Default value: null
ResourceGroupId	String	No	rg-resourcegroup-id	The ID of the resource group to which the security group belongs.
SecurityGroupName	String	No	FinanceJoshua	The name of the security group. It 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 (-). Default value: null

Parameter	Type	Required	Example	Description
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 group overview .
Tag.N.Key	String	No	FinanceDept	The tag key of the security group. 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 aliyun or acs:.. It cannot contain http:// or https://.
Tag.N.Value	String	No	FinanceDeptJoshua	The tag value 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 aliyun or acs:.. It cannot contain http:// or https://.
Tag.N.Key	String	No	FinanceDept	The tag key of the security group.  Note: This parameter will be removed in the future. We recommend that you use Tag.N.Key to ensure future compatibility.

Parameter	Type	Required	Example	Description
Tag . N . value	String	No	FinanceDeptJoshua	The tag value of the security group.  Note: This parameter will be removed in the future. We recommend that you use Tag.N.Value to ensure future compatibility.
VpcId	String	No	vpc-vpcid1	The ID of the VPC to which the security group belongs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SecurityGroupId	String	sg-F876FF7BA	The ID of the security group.

Examples

Sample requests

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

Sample success responses

XML format

```
<CreateSecurityGroupResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
  <SecurityGroupId>sg-securitygroupid</SecurityGroupId>
</CreateSecurityGroupResponse>
```

JSON format

```
{
```

```

" SecurityGroupId ":" sg - securitygroupid ",
" RequestId ":" CEF72CEB - 54B6 - 4AE8 - B225 - F876FF7BA9 84 "
}

```

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 is invalid. It must be 2 to 256 characters in length and cannot start with http:// or https://.
403	QuotaExceed.SecurityGroup	The maximum number of security groups is reached .	The error message returned because the maximum number of security groups is reached . Submit a ticket to apply for a whitelist.
404	InvalidVpcId.NotFound	Specified VPC does not exist.	The error message returned because the specified VPC ID does not exist.
400	InvalidSecurityGroupName.Malformed	Specified security group name is not valid.	The error message returned because the specified security group name is invalid. The name is displayed in the console . By default, no name is specified for a security group. The name must be 2 to 128 characters in length. It must start with a letter and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It cannot start with http:// or https://.

HTTP status code	Error code	Error message	Description
400	InvalidSecurityGroupDiscription.Malformed	Specified security group description is not valid.	The error message returned because the specified description 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	InvalidVpcId.NotFound	vpc id must not empty when only support vpc vm .	The error message returned because the specified VPC ID is empty.
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 key is not valid.	The error message returned because the specified tag key is invalid .
400	InvalidTagValue.Malformed	Specified end time is not valid.	The error message returned because the specified tag value is invalid.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the resource group does not exist in the records.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key is repeated.

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.Value is invalid.
400	InvalidTagValue.Malformed	The specified Tag.N.Value is not valid.	The error message returned because the specified Tag.N.Value is invalid.
403	Idempotent Processing	The previous idempotent request(s) is still processing.	The error message returned because the previous idempotence request is being processed .

[View error codes](#)

13.2 AuthorizeSecurityGroup

Sets an inbound rule for a security group. This operation permits or declines the inbound traffic from other devices to instances in the security group.

Description

Inbound traffic describes the traffic received at the destination security group sent from some other source security group.

When you call this operation, note that:

- A maximum of 100 inbound rules can be configured for one security group.
- You can set the security group rule to either accept or drop.
- The priority of a security group rule ranges from 1 to 100. A smaller value indicates a higher priority.
- When two or more security group rules have the same priority, drop rules will take precedence over accept rules.
- The source device can belong to a specified range of IP addresses (SourceCidrIp) or another security group (SourceGroupId).

- You can determine an inbound rule by specifying one of the following sets of parameters. You cannot determine a security group rule by specifying only one parameter. The AuthorizeSecurityGroup operation fails if the rule being created matches an existing rule.
- Grant access permissions to a specified range of IP addresses For a security group of the classic network type, you can set the NicType parameter to Internet or intranet. For a security group of the VPC type, you can only set the NicType parameter to intranet. You can specify the following set of parameters: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp, and SourceCidrIp (optional).

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroup
&SecurityGroupId=sg-F876FF7BA
&SourceCidrIp=0.0.0.0/0
&IpProtocol=tcp
&PortRange=1/65535
&NicType=intranet
&Policy=allow
&<Common request parameters>
```

- Grants access permissions to other security groups within the same region. In this case, you must set the NicType parameter to intranet. For mutual access between security groups of the classic network type, you can set the permission for another security group in the same region to access your security group. The security group granted access can belong to your own Alibaba Cloud account, or can belong to another Alibaba Cloud account specified by the SourceGroupOwnerAccount parameter. For mutual access between security groups of the VPC type, you can set the permission for another security group in the same VPC to access your security group. You can specify the following set of parameters: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), SourceGroupOwnerAccount, and SourceGroupId.

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroup
&SecurityGroupId=sg-F876FF7BA
&SourceGroupId=sg-1651FBB64
&SourceGroupOwnerAccount=test@aliyun.com
&IpProtocol=tcp
&PortRange=1/65535
&NicType=intranet
&Policy=Drop
```

&< Common request parameters >

- For more information about how to set a security group rule, see [Scenarios](#), [Typical use cases](#), and [Quintet rules](#).

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
IpProtocol	String	Yes	all	The transport layer protocol . This parameter is case-sensitive. Valid values: · tcp · udp · icmp · gre · all: All protocols are supported.

Name	Type	Required	Example	Description
PortRange	String	Yes	1/200	The range of destination port numbers relevant to the transport layer protocol. Valid values: - When IpProtocol is set to tcp or udp, the port number range is 1 to 65535. Separate the starting port and the ending port with a forward slash (/). Correct example: 1/200. Incorrect example: 200/1. - When IpProtocol is set to icmp, the port number range is -1/-1, indicating that all values are valid. - When IpProtocol is set to gre, the port number range is -1/-1, indicating that all values are valid. - When IpProtocol is set to all, the port number range is -1/-1, indicating that all values are valid.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the source security group belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
SecurityGroupId	String	Yes	sg-securitygroupid1	The ID of the destination security group.
Action	String	No	AuthorizeSecurityGroup	The operation that you want to perform. Set the value to AuthorizeSecurityGroup.

Name	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The ClientToken parameter must be no more than 64 ASCII characters in length. For more information, see How to ensure idempotency .
Description	String	No	FinanceJoshua	The description of the security group rule. The description can be up to 1 to 512 characters in length.
DestCidrIp	String	No	0.0.0.0/0	The destination CIDR block or IPv4 address. Default value: null.
Ipv6DestCidrIp	String	No	2001:db8:1234:1a00::XXX	The destination CIDR block or IPv6 address.  Note: Only IP addresses of the VPC type can be specified. Default value: null.

Name	Type	Required	Example	Description
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00::XXX	The source CIDR block or IPv6 address.  Note: Only IP addresses of the VPC type can be specified. Default value: null.
NicType	String	No	intranet	The NIC type. Valid values: · internet: Internet NIC · intranet: intranet NIC This parameter must be set to intranet for mutual security group access where the SourceGroupId parameter is specified and the SourceCidrIp parameter is not. Default value : internet.
Policy	String	No	accept	The access control policy. Valid values: · accept (default): grants access. · drop: denies access without returning a rejection response.
Priority	String	No	1	The priority of the security group rule. Valid values: 1 to 100. Default value: 1.
SourceCidrIp	String	No	0.0.0.0/0	The source CIDR block or IPv4 address. Default value: null.

Name	Type	Required	Example	Description
SourceGroupId	String	No	sg-securitygroupid2	The ID of the source security group for which you want to set access permissions. Either the SourceGroupId parameter or the SourceCidrIp parameter must be specified. If the SourceGroupId parameter is specified, but the SourceCidrIp parameter is not, the NicType parameter must be set to intranet. If both the SourceGroupId and SourceCidrIp parameters are set, the SourceCidrIp parameter will take precedence.
SourceGroupOwnerAccount	String	No	test@aliyun.com	The Alibaba Cloud account of the source security group when you set security group rules for different accounts. · If neither the SourceGroupOwnerAccount parameter nor the SourceGroupOwnerId parameter is specified, the access permissions are granted to other security groups. · If the SourceCidrIp parameter is specified, the SourceGroupOwnerAccount parameter will be ignored.

Name	Type	Required	Example	Description
SourceGroupOwnerId	Long	No	155780923770	The ID of the Alibaba account that owns the source security group. This parameter is used to grant access for the current security group to receive traffic from other Alibaba Cloud accounts. · If neither the SourceGroupOwnerId parameter nor the SourceGroupOwnerAccount parameter is specified, the access permissions are granted to other security groups. · If the SourceCidrIp parameter is specified, the SourceGroupOwnerId parameter will be ignored.

Name	Type	Required	Example	Description
SourcePort Range	String	No	1/200	The range of source port numbers relevant to the transport layer protocol. Valid values: - When IpProtocol is set to tcp or udp, the port number range is 1 to 65535. Separate the starting port and the ending port with a forward slash (/). Correct example: 1/200. Incorrect example: 200/1. - When IpProtocol is set to icmp, the port number range is -1/-1, indicating that all values are valid. - When IpProtocol is set to gre, the port number range is -1/-1, indicating that all values are valid. - When IpProtocol is set to all, the port number range is -1/-1, indicating that all values are valid.

Response parameters

Name	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-F876FF7BA
&SourceCidrIp=0.0.0.0/0
&IpProtocol=tcp
&PortRange=1/65535
&NicType=intranet
```



```
& Policy = accept
&< Common request parameters >
```

Successful response examples

XML format

```
< AuthorizeSecurityGroupResponse >
  < RequestId > CEF72CEB - 54B6 - 4AE8 - B225 - F876FF7BA9 84 </
    RequestId >
</ AuthorizeSecurityGroupResponse >
```

JSON format

```
{
  "RequestId ":" CEF72CEB - 54B6 - 4AE8 - B225 - F876FF7BA9 84 "
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned when the specified security group does not exist under this account. Check whether the security group ID is correct.
400	OperationDenied	The specified IpProtocol does not exist or IpProtocol and PortRange do not match.	The error message returned when the specified IP protocol does not exist or does not match the port range.
400	InvalidIpProtocol.Malformed	The specified parameter PortRange is not valid.	The error message returned when the specified value of the IpProtocol parameter is invalid.

HTTP status code	Error code	Error message	Description
403	MissingParameter	The input parameter SourceGroupId or SourceCidrIp cannot be both blank.	The error message returned when neither the SourceGroupId parameter nor the SourceCidrIp parameter is specified.
400	InvalidPolicy.Malformed	The specified parameter Policy is not valid.	The error message returned when the specified value of the Policy parameter is invalid.
400	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned when the specified NIC type does not exist.
403	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned when the specified security group is the same as the source security group.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned when the specified value of the Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned when the specified value of the Priority parameter is invalid.
403	InvalidNetworkType.Conflict	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned when the network type of the specified security group is different from that of the source group.

HTTP status code	Error code	Error message	Description
400	InvalidSecurityGroupDiscription.Malformed	The specified security group rule description is not valid.	The error message returned when the description of the specified security group 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 when the network types of the source security group and the destination security group are different.
400	MissingParameter.Source	Either SourceCidrIp or SourceGroupId must be specified.	The error message returned when neither the SourceGroupId parameter nor the SourceCidrIp parameter is specified.
400	InvalidParam.PortRange	Please specify the PortRange or SourcePort Range in integer, less than 65535, and separate the range with ? /?.	The error message returned when the specified value of the PortRange or SourcePort Range parameter is invalid.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP , ICMP, GRE or All.	The error message returned when the IpProtocol parameter is not set to tcp, udp, icmp, gre, or all.
400	InvalidParam.SourceIp	%s	The error message returned when the specified source IP address is invalid.
400	InvalidParam.DestIp	%s	The error message returned when the specified destination IP address is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned when the destination IPv6 address is invalid.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned when the source IPv6 address is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned when IPv4 addresses conflict with IPv6 addresses.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned when IPv6 addresses conflict with IPv4 addresses.
400	ILLEGAL_IP_V6_CIDR	%s	The error message returned when the specified IPv6 CIDR block is invalid.

[View error codes](#)

13.3 AuthorizeSecurityGroupEgress

Sets an outbound rule for a security group. This operation allows or blocks the outbound traffic from the instances in the security group to other devices.

Description

Outbound traffic describes the traffic sent by a source security group to some other destination security group.

When you call this operation, note that:

- A maximum of 100 outbound rules can be configured for a single security group.
- You can set the security group rule to either accept or drop.
- The priority of a security group rule ranges from 1 to 100. A smaller value indicates a higher priority.

- When two or more security group rules have the same priority, drop rules will take precedence over accept rules.
- The destination device can belong to a specified range of IP addresses (DestCidrIp) or another security group (DestGroupId).
- You can determine an outbound rule by specifying one of the following sets of parameters. The AuthorizeSecurityGroupEgress operation fails if the rule being created matches an existing rule.
 - Grant access permissions to a specified range of IP addresses. For a security group of the classic network type, you can set the NicType parameter to either Internet or intranet. For a security group of the VPC type, you can set the NicType parameter only to intranet. You can specify the following set of parameters: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp, and SourceCidrIp (optional).

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroupEgress
&SecurityGroupId=sg-94n63e80l
&IpProtocol=icmp
&DestCidrIp=10.0.0.0/8
&PortRange=-1/-1
&NicType=intranet
&Policy=Allow
&<Common request parameters>
```

- Grants access permissions to other security groups in the same region. For this configuration, the NicType parameter must be set to intranet. To allow mutual access between classic network-type security groups, you can grant permission to one security group in the same region to access the other security group. The security group granted access can belong to your own Alibaba Cloud account, or can belong to another Alibaba Cloud account specified by the DestGroupOwnerAccount parameter. To allow mutual access between VPC-type security groups, you can grant permission to one security group in the same VPC to access the other security group. You can specify the following set of parameters: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), DestGroupOwnerAccount, and DestGroupId.

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroupEgress
&SecurityGroupId=sg-F876FF7BA
&DestGroupId=sg-1651FBB64
&DestGroupOwnerAccount=test@aliyun.com
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
```

```
& Policy = Drop
&< Common    request    parameters >
```

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
IpProtocol	String	Yes	all	The transport layer protocol . This parameter is case-sensitive. Valid values: · icmp · gre · tcp · udp · all: All protocols are supported.

Name	Type	Required	Example	Description
PortRange	String	Yes	1/200	The range of destination port numbers relevant to the transport layer protocol. Valid values: - When IpProtocol is set to tcp or udp, the port number range is 1 to 65535. Separate the starting port and the ending port with a forward slash (/). Correct example: 1/200. Incorrect example: 200/1. - When IpProtocol is set to icmp, the port number range is -1/-1, indicating that all values are valid. - When IpProtocol is set to gre, the port number range is -1/-1, indicating that all values are valid. - When IpProtocol is set to all, the port number range is -1/-1, indicating that all values are valid.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the source security group belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
SecurityGroupId	String	Yes	sg-securitygroupid1	The ID of the source security group.
Action	String	No	AuthorizeSecurityGroupEgress	The operation that you want to perform. Set the value to AuthorizeSecurityGroupEgress.

Name	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The ClientToken parameter must be no more than 64 ASCII characters in length. For more information, see How to ensure idempotency .
Description	String	No	FinanceJoshua	The description of the security group rule. The description can be up to 1 to 512 characters in length.
DestCidrIp	String	No	0.0.0.0/0	The destination CIDR block or IPv4 address. Default value: null.
DestGroupId	String	No	sg-securitygroupid2	The ID of the destination security group. Either the DestGroupId parameter or the DestCidrIp parameter must be specified. If the DestGroupId parameter is specified, but the DestCidrIp parameter is not, the NicType parameter must be set to intranet. If both the DestGroupId and DestCidrIp parameters are set, the DestCidrIp parameter will take precedence.

Name	Type	Required	Example	Description
DestGroupOwnerAccount	String	No	FinanceJoshua	The Alibaba Cloud account of the destination security group when you set security group rules for different accounts. · If neither the DestGroupOwnerAccount parameter nor the DestGroupOwnerId parameter is specified, the access permissions are granted to other security groups. · If the DestCidrIp parameter is specified, the DestGroupOwnerAccount parameter will be ignored.
DestGroupOwnerId	Long	No	155780923770	The ID of the Alibaba account that owns the destination security group. This parameter is used to grant access for the current security group to send traffic to other Alibaba Cloud accounts. · If neither the DestGroupOwnerAccount parameter nor the DestGroupOwnerId parameter is specified, access permissions are only granted to your own other security groups. · If the DestCidrIp parameter is specified, the DestGroupOwnerId parameter will be ignored.

Name	Type	Required	Example	Description
Ipv6DestCidrIp	String	No	2001:db8:1234:1a00::XXX	The destination CIDR block or IPv6 address. Default value: null.  Note: Only IP addresses of the VPC type can be specified.
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00::XXX	The source CIDR block or IPv6 address. Default value: null.  Note: Only IP addresses of the VPC type can be specified.
NicType	String	No	intranet	The NIC type. Valid values: · internet: Internet NIC · intranet: intranet NIC This parameter must be set to intranet for mutual security group access where the DestGroupId parameter is specified and the DestCidrIp parameter is not. Default value : internet.
Policy	String	No	accept	The access control policy. Valid values: · accept: grants access. · drop: denies access without returning a rejection response. Default value: accept.

Name	Type	Required	Example	Description
Priority	String	No	1	The priority of the security group rule. Valid values: 1 to 100. Default value: 1.
SourceCidrIp	String	No	0.0.0.0/0	The source CIDR block or IPv4 address. Default value: null.
SourcePortRange	String	No	80/80	The range of source port numbers relevant to the transport layer protocol. Valid values: - When IpProtocol is set to tcp or udp, the port number range is 1 to 65535. Separate the starting port and the ending port with a forward slash (/). Correct example: 1/200. Incorrect example: 200/1. - When IpProtocol is set to icmp, the port number range is -1/-1, indicating that all values are valid. - When IpProtocol is set to gre, the port number range is -1/-1, indicating that all values are valid. - When IpProtocol is set to all, the port number range is -1/-1, indicating that all values are valid.

Response parameters

Name	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-F876FF7BA
&DestGroupId=sg-1651FBB64
&DestGroupOwnerAccount=test@aliyun.com
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=Drop
&<Common request parameters>
```

Successful response examples

XML format

```
<AuthorizeSecurityGroupEgressResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</AuthorizeSecurityGroupEgressResponse>
```

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 when the specified security group does not exist under this account. Check whether the security group ID is correct.

HTTP status code	Error code	Error message	Description
404	InvalidDestGroupId.NotFound	The DestGroupId provided does not exist in our records.	The error message returned when the specified destination security group does not exist.
400	OperationDenied	The specified IpProtocol does not exist or IpProtocol and PortRange do not match.	The error message returned when the specified IP protocol does not exist or does not match the port range.
400	InvalidIpProtocol.Malformed	The specified parameter PortRange is not valid.	The error message returned when the specified value of the IpProtocol parameter is invalid.
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The error message returned when the specified value of the DestCidrIp parameter is invalid.
400	InvalidPolicy.Malformed	The specified parameter Policy is not valid.	The error message returned when the specified value of the Policy parameter is invalid.
400	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned when the specified NIC type does not exist.
403	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned when the specified security group is the same as the source security group.

HTTP status code	Error code	Error message	Description
400	InvalidDestGroup.NotFound	Specified destination security group does not exist.	The error message returned when the specified destination security group does not exist.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned when the specified value of the Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned when the specified value of the Priority parameter is invalid.
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The error message returned when the specified value of the DestCidrIp parameter is invalid.
403	InvalidNetworkType.Conflict	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned when the network type of the specified security group is different from that of the source group.
400	InvalidDestCidrIp.Malformed	The parameter DestCidrIp is not valid.	The error message returned when the specified value of the DestCidrIp parameter is invalid.
403	InvalidNetworkType.Conflict	The specified SecurityGroup network type should be same with	The error message returned when the network type of the specified security group is different from that of the source group.

HTTP status code	Error code	Error message	Description
400	InvalidNicType.ValueNotSupported	The parameter NicType is not valid.	The error message returned when the specified value of the NicType parameter is invalid.
400	InvalidSecurityGroupDiscription.Malformed	The specified security group rule description is not valid.	The error message returned when the description of the specified security group 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 when the network types of the source security group and the destination security group are different.
400	MissingParameter.Dest	Either DestCidrIp or DestGroupId must be specified.	The error message returned when neither the DestCidrIp parameter nor the DestGroupId parameter is specified.
400	InvalidParam.PortRange	Please specify the PortRange or SourcePort Range in integer, less than 65535, and separate the range with ? /?.	The error message returned when the specified value of the PortRange or SourcePort Range parameter is invalid.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP , ICMP, GRE or All.	The error message returned when the IpProtocol parameter is not set to tcp, udp, icmp, gre, or all.
400	InvalidParam.SourceIp	%s	The error message returned when the specified source IP address is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParam. DestIp	%s	The error message returned when the specified destination IP address is invalid.
400	InvalidParam. Ipv6DestCidrIp	%s	The error message returned when the destination IPv6 address is invalid.
400	InvalidParam .Ipv6Source CidrIp	%s	The error message returned when the source IPv6 address is invalid.
400	InvalidParam .Ipv4Protoc olConflict WithIpv6Address	%s	The error message returned when IPv4 addresses conflict with IPv6 addresses.
400	InvalidParam .Ipv6Protoc olConflict WithIpv4Address	%s	The error message returned when IPv6 addresses conflict with IPv4 addresses.
400	ILLEGAL_IP V6_CIDR	%s	The error message returned when the specified IPv6 CIDR block is invalid.

[View error codes](#)

13.4 RevokeSecurityGroup

You can call this operation to delete an inbound rule from a security group, revoking the inbound permissions specified by this rule.

Description

The source is where the packet is coming from and the destination is where the packet is going to.

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 revoke access permissions from specified IP address segments : IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp, and SourceCidrIp (optional).
- Parameters used to revoke access permissions from other security groups: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), DestGroupOwnerAccount, and DestGroupId.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
IpProtocol	String	Yes	all	The transport layer protocol . This parameter is 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 port numbers relevant 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 number and the end number with a forward slash (/). Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port number range is -1/-1, indicating that all values are valid. - When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating that all values are valid. - When the IpProtocol parameter is set to all, the port number range is -1/-1, indicating that all values are valid.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the destination security group resides. You can call the DescribeRegions operation to query the latest region list.
SecurityGroupId	String	Yes	sg-securitygroupid1	The ID of the destination security group.

Parameter	Type	Required	Example	Description
Action	String	No	RevokeSecurityGroup	The operation that you want to perform. For API requests using the HTTP and HTTPS methods, <code>Action</code> is required. Set the value to <code>RevokeSecurityGroup</code> .
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 this value, but you must ensure that it 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 .
Description	String	No	FinanceJoshuaTest	The description of the security group rule.
DestCidrIp	String	No	10.0.0.0/8	The range of destination IP addresses. CIDR blocks and IPv4 addresses are supported. Default value: 0.0.0.0/0.

Parameter	Type	Required	Example	Description
Ipv6DestCidrIp	String	No	2001:db8:1234:1a00::XXX	The destination IPv6 CIDR block. CIDR blocks and IPv6 addresses are supported.  Note: You can only specify the IP addresses of ECS instances in VPCs. Default value: null
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00::XXX	The source IPv6 CIDR block. CIDR blocks and IPv6 addresses are supported.  Note: You can only specify the IP addresses of ECS instances in VPCs. Default value: null
NicType	String	No	intranet	The type of the NIC. Valid values: · internet · intranet If SourceGroupId is specified and SourceCidrIp is not, the value of NicType can only be intranet. Default value: internet.

Parameter	Type	Required	Example	Description
Policy	String	No	accept	The access control policy. Valid values: · accept: grants 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
SourceCidrIp	String	No	10.0.0.0/8	The range of source IP addresses. CIDR blocks and IPv4 addresses are supported. Default value: 0.0.0.0/0.
SourceGroupId	String	No	sg-securitygroupid2	The ID of the source security group on which access permissions are to be revoked. Either SourceGroupId or SourceCidrIp must be specified · If SourceGroupId is specified and SourceCidrIp is not, the value of NicType can only be intranet. If both the SourceGroupId and SourceCidrIp parameters are specified, the SourceCidrIp parameter will take precedence.

Parameter	Type	Required	Example	Description
SourceGroupOwnerAccount	String	No	FinanceJoshua	The Alibaba Cloud account that manages the source security group. · If neither SourceGroupOwnerAccount nor SourceGroupOwnerId is specified, access permissions on your other security groups to the destination security group are revoked. · If SourceCidrIp is specified, the SourceGroupOwnerAccount parameter is ignored.
SourceGroupOwnerId	Long	No	155780923770	The ID of the Alibaba Cloud account that manages the source security group. · If neither SourceGroupOwnerId nor SourceGroupOwnerAccount is specified, access permissions on your other security groups to the destination security group are revoked. · If SourceCidrIp is specified, the SourceGroupOwnerId parameter is ignored.

Parameter	Type	Required	Example	Description
SourcePort Range	String	No	1/200	The range of source port numbers relevant 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 number and the end number with a forward slash (/). Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port number range is -1/-1, indicating that all values are valid. - When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating that all values are valid. - When the IpProtocol parameter is set to all, the port number range is -1/-1, indicating that all values are valid.

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=C0003E8B-B930-4F59-ADC0-0E209A9012B0
```

```
& SourceGroupOwnerId = sg - F876FF7BA
& SourceGroupOwnerAccount = test @ aliyun . com
& IpProtocol = tcp
& PortRange = 1 / 65535
& Priority = 1
&< Common request parameters >
```

Sample success responses

XML format

```
< RevokeSecurityGroupResponse >
  < RequestId > CEF72CEB - 54B6 - 4AE8 - B225 - F876FF7BA9 84 </
  RequestId >
</ RevokeSecurityGroupResponse >
```

JSON format

```
{
  "RequestId ":" CEF72CEB - 54B6 - 4AE8 - B225 - F876FF7BA9 84 "
}
```

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 under 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 security group ID 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 range of port numbers is wrong.

HTTP status code	Error code	Error message	Description
404	InvalidSourceGroupId.NotFound	The SourceGroupId provided does not exist in our records.	The error message returned because the specified inbound security group does not exist.
403	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type does not exist.
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 neither the SourceGroupId parameter nor the SourceCidrIp parameter is specified.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid. Check whether the parameter is correct.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist. Check whether the NicType parameter is correct.

HTTP status code	Error code	Error message	Description
400	InvalidSourceGroupId.Mismatch	Specified security group and source group are not in the same VPC.	The error message returned because the specified destination security group and source security group are not in 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 problem persists, submit a ticket.
400	MissingParameter.Source	Either SourceCidrIp or SourceGroupId must be specified.	The error message returned because neither the SourceGroupId parameter nor the SourceCidrIp parameter is specified.
400	InvalidParam.PortRange	Please specify the PortRange or SourcePort Range in integer, less than 65535, and separate the range with ? /?.	The error message returned because the range of destination or source port numbers is not specified. The port number must be smaller than 65,535. Use a forward slash (/) to separate the start number and end number of the port number range.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP , ICMP, GRE or All.	The error message returned because the protocol type is not tcp, udp, icmp, gre, or all.

HTTP status code	Error code	Error message	Description
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned because the rule priority is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the rule priority is invalid.
400	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the specified security group is the same as the source security group.
400	InvalidParam.SourceIp	%s	The error message returned because the source IP address is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the destination IP address is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the destination IP address is not in IPv6.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the source IP address is not in IPv6.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because IPv4 addresses has conflicted with IPv6 addresses.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because IPv4 addresses has conflicted with IPv6 addresses.

HTTP status code	Error code	Error message	Description
400	ILLEGAL_IP_V6_CIDR	%s	The error message returned because the specified IPv6 CIDR block is invalid.

[View error codes](#)

13.5 RevokeSecurityGroupEgress

Deletes an outbound rule from a security group and revoke outbound permissions of the security group.

Description

The source is where the packet is coming from and the destination is where the packet is going to.

- To revoke access permissions on specified IP address segments, you can specify the following request parameters: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp, and SourceCidrIp (optional).

```
https://ecs.aliyuncs.com/?Action=RevokeSecurityGroupEgress
&SecurityGroupId=sg-94n63e80l
&IpProtocol=all
&DestCidrIp=10.0.0.0/8
&PortRange=-1/-1
&NicType=intranet
&Policy=Allow
&<Common request parameters>
```

- To revoke access permissions on other security groups, you can specify the following request parameters: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), DestGroupOwnerAccount, and DestGroupId (optional).

```
https://ecs.aliyuncs.com/?Action=RevokeSecurityGroupEgress
&SecurityGroupId=sg-F876FF7BA
&DestGroupId=sg-1651FBB64
&DestGroupOwnerAccount=test@aliyun.com
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=Drop
```

< Common request parameters >

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
IpProtocol	String	Yes	icmp	The transport layer protocol . The parameter value is case insensitive. Valid values: · icmp · gre · tcp · udp · all: All protocols are supported.
PortRange	String	Yes	1/200	The range of destination ports relevant to the transport layer protocol. Valid values: · When IpProtocol is set to tcp or udp, the port number range is 1 to 65,535. Separate the starting port and the ending port with a forward slash (/). Correct example: 1 /200. Incorrect example: 200 /1. · ICMP: -1/-1. · GRE protocol: -1/-1. · All:-1/-1.

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where the source security group resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
SecurityGroupId	String	Yes	sg-securitygroupid1	The ID of the source security group.
Action	String	No	RevokeSecurityGroupEgress	The operation that you want to perform. Set the value to RevokeSecurityGroupEgress.
ClientToken	String	No	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The ClientToken parameter must be no more than 64 ASCII characters in length. For more information, see How to ensure idempotency .
Description	String	No	FinanceJoshuaTest	The description of the security group rule.
DestCidrIp	String	No	0.0.0.0/0	The range of destination IP addresses. CIDR blocks and IPv4 addresses are supported. Default value: null.

Name	Type	Required	Example	Description
DestGroupId	String	No	sg-securitygroupid2	The ID of the destination security group from which you want to revoke access permissions. You must specify either the DestGroupId parameter or the DestCidrIp parameter. If DestGroupId is specified and DestCidrIp is not, the value of NicType can only be intranet . If both the DestGroupId and DestCidrIp parameters are set, the DestCidrIp parameter will take precedence.
DestGroupOwnerAccount	String	No	FinanceJoshua	The Alibaba Cloud account that manages the destination security group. · If neither DestGroupOwnerAccount nor DestGroupOwnerId is specified, permissions of other security groups to access the instance are revoked. · If the DestCidrIp parameter is specified, the DestGroupOwnerAccount parameter will be ignored.

Name	Type	Required	Example	Description
DestGroupOwnerId	Long	No	155780923770	The Alibaba Cloud account that manages the destination security group. · If neither DestGroupOwnerId nor DestGroupOwnerAccount is specified , permissions of other security groups to access the instance are revoked. · If the DestCidrIp parameter is specified, the DestGroupOwnerId parameter will be ignored.
Ipv6DestCidrIp	String	No	2001:db8:1234:1a00::XXX	The destination IPv6 CIDR block. CIDR blocks and IPv6 addresses are supported. Default value: null.  Note: You can only specify IP addresses for VPC-connected instances.
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00::XXX	The source IPv6 CIDR block . CIDR blocks and IPv6 addresses are supported. Default value: null.  Note: You can only specify IP addresses for VPC-connected instances.

Name	Type	Required	Example	Description
NicType	String	No	intranet	The NIC type. Valid values: • internet • intranet If DestGroupId is specified and DestCidrIp is not, the value of NicType must be intranet. Default value: internet
Policy	String	No	accept	The access control policy. Valid values: • accept: grants access. • drop: denies access and returns no responses. Default value: accept
Priority	String	No	1	The priority of security group rules. Valid values: 1 to 100. Default value: 1.
SourceCidrIp	String	No	0.0.0.0/0	The range of source IP addresses. CIDR blocks and IPv4 addresses are supported. Default value: null.

Name	Type	Required	Example	Description
SourcePort Range	String	No	1/200	The range of source ports relevant to the transport layer protocol. Valid values: - When IpProtocol is set to tcp or udp, the port number range is 1 to 65535. Separate the starting port and the ending port with a forward slash (/). Correct example: 1 /200. Incorrect example: 200 /1. - When IpProtocol is set to icmp, the port number range is -1/-1, indicating that all values are valid. - When IpProtocol is set to gre , the port number range is -1 /-1, indicating that all values are valid. - When IpProtocol is set to all , the port number range is -1 /-1, indicating that all values are valid.

Response parameters

Name	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-94n63e80l
&IpProtocol=all
&DestCidrIp=10.0.0.0/8
&PortRange=-1/-1
&NicType=intranet
&Policy=Allow
```

&< Common request parameters >

Successful response examples

XML format

```
< RevokeSecurityGroupEgressResponse >
  < RequestId > CEF72CEB - 54B6 - 4AE8 - B225 - F876FF7BA9 84 </
    RequestId >
</ RevokeSecurityGroupEgressResponse >
```

JSON format

```
{
  "RequestId ":" CEF72CEB - 54B6 - 4AE8 - B225 - F876FF7BA9 84 "
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned when the specified security group does not exist under this account. Check whether the security group ID is correct.
400	InvalidIpProtocol.ValueNotSupported	The specified IpProtocol does not exist.	The error message returned when the specified value of the IpProtocol parameter is invalid.
404	InvalidDestinationGroupId.NotFound	The DestGroupId provided does not exist in our records.	The error message returned when the specified destination security group does not exist.
403	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned when the specified NIC type does not exist.

HTTP status code	Error code	Error message	Description
403	InvalidGroupAuthItem.NotFound	Specified group authorized item does not exist in our records.	The error message returned when the specified group authorization entry does not exist.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned when the specified parameter is invalid. Check whether the parameter is correct.
400	InvalidDestCidrIp.Malformed	The specified parameter "DestCidrIp" is not valid.	The error message returned when the value of DestCidrIp is invalid. Check whether the parameter is correct.
400	MissingParameter.Dest	Either DestCidrIp or DestGroupId must be specified.	The error message returned when values of both DestCidrIp and DestGroupId are not specified.
400	InvalidParameter.PortRange	Please specify the PortRange or SourcePort Range in integer, less than 65535, and separate the range with ? /?.	The error message returned when the range of destination or source port numbers is not specified. The port numbers must be smaller than 65,535. You must use a forward slash (/) to separate the source and destination ports.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or All.	The error message returned when the protocol type is not TCP, UDP, ICMP, GRE or All.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned when the rule priority is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidPriority .ValueNotSupported	The parameter Priority is invalid.	The error message returned when the rule priority is invalid.
400	InvalidParam. SourceIp	%s	The error message returned when the source IP is invalid.
400	InvalidParam. DestIp	%s	The error message returned when the destination IP is invalid.
400	InvalidParam. Ipv6DestCidrIp	%s	The error message returned when the destination IP is not in IPv6.
400	InvalidParam .Ipv6Source CidrIp	%s	The error message returned when the source IP is not in IPv6.
400	InvalidParam .Ipv4Protoc olConflict WithIpv6Address	%s	The error message returned when IPv4 addresses conflict with IPv6 addresses.
400	InvalidParam .Ipv6Protoc olConflict WithIpv4Address	%s	The error message returned when IPv4 addresses conflict with IPv6 addresses.
400	ILLEGAL_IP V6_CIDR	%s	The error message returned when the specified IPv6 CIDR block is invalid.

[View error codes](#)

13.6 JoinSecurityGroup

Adds an instance to a specified security group.

Description

When you call this operation, note that:

- Before you add an instance to a security group, the instance must be in the Stopped or Running state.
- An instance can belong to a maximum of five security groups.
- You can [submit a ticket](#) to add the instance to more security groups. An instance can belong to a maximum of 16 security groups.
- A security group can manage up to 1,000 instances.
- The specified security group and instance must belong to the same region.
- The specified security group and instance must have the same network type. If the network type is [VPC](#), the security group and the instance must be in the same VPC.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-instanceid1	The ID of an instance. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
SecurityGroupId	String	Yes	sg-securitygroupid1	The ID of the security group to which the instance belongs. You can call DescribeSecurityGroups to view the available security groups.

Name	Type	Required	Example	Description
Action	String	No	JoinSecurityGroup	The operation that you want to perform. Set the value to JoinSecurityGroup.

Response parameters

Name	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-instance1
&SecurityGroupId=F876FF7BA9-84
&<Common request parameters>
```

Successful response examples

XML format

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

JSON format

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

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned when the specified security group does not exist under 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 when the number of security groups for an instance reaches the upper limit.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned when this operation is not supported under the current instance state.
403	SecurityGroupInstanceLimitExceeded	The maximum number of instances in a security group is exceeded.	The error message returned when the number of instances in a security group reaches the upper limit.
403	InvalidInstanceId.AlreadyExists	The specified instance already exists in the specified security group.	The error message returned when the specified instance already exists in the security group.
403	SecurityGroupInstanceLimitExceeded	%s	The error message returned when the number of instances in a security group reaches the upper limit.
403	AclLimitExceed	%s	The error message returned when the value of AccessPoint exceeds the upper limit.

HTTP status code	Error code	Error message	Description
403	InstanceSecurityGroupLimitExceeded	%s	The error message returned when the number of security groups for an instance reaches the upper limit.

[View error codes](#)

13.7 LeaveSecurityGroup

Removes an instance from a specified security group.

Description

When you call this operation, note that:

- Before you remove an instance from a security group, the instance must be in the Stopped or Running state.
- An instance must belong to at least one security group. You cannot perform the LeaveSecurityGroup operation to remove an instance from the only security group it belongs to.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-instanceid1	The ID of an instance.
SecurityGroupId	String	Yes	sg-securitygroupid1	The ID of the security group to which the instance belongs.

Name	Type	Required	Example	Description
Action	String	No	LeaveSecurityGroup	The operation that you want to perform. Set the value to LeaveSecurityGroup.

Response parameters

Name	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-instance1
&SecurityGroupId=F876FF7BA9-84
&<Common request parameters>
```

Successful response examples

XML format

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

JSON format

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

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned when the specified security group does not exist under this account. Check whether the security group ID is correct.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned when this operation is not supported under the current instance state.
504	RequestTimeout	The request encounters an upstream server timeout.	The error message returned when the request encounters an upstream server timeout.

[View error codes](#)

13.8 DeleteSecurityGroup

Deletes a security group. Before deleting a security group, make sure that no instance exists in the security group and that the security group is not referenced by other security groups. Otherwise, the DeleteSecurityGroup request fails.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where a security group resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
SecurityGroupId	String	Yes	sg-securitygroupid1	The ID of the security group.
Action	String	No	DeleteSecurityGroup	The operation that you want to perform. Set the value to DeleteSecurityGroup.

Response parameters

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

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteSecurityGroup
&RegionId=cn-hangzhou
&SecurityGroupId=sg-F876FF7BA9
&<Common request parameters>
```

Successful response examples

XML format

```
<DeleteSecurityGroupResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</DeleteSecurityGroupResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
```

```
}
```

Error codes

[View error codes](#)

13.9 DescribeSecurityGroupAttribute

Views the details of a security group.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which a security group belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
SecurityGroupId	String	Yes	sg-securitygroupid1	The ID of the security group.
Action	String	No	DescribeSecurityGroupAttribute	The operation that you want to perform. Set the value to DescribeSecurityGroupAttribute.

Name	Type	Required	Example	Description
Direction	String	No	all	The direction in which a security group rule is applied. Valid values: · egress: Outbound traffic is allowed for the security group. · ingress: Inbound traffic is allowed for the security group. · all: Both inbound and outbound traffic is allowed for the security group. Default value: all.
NicType	String	No	intranet	The NIC type. Valid values: · internet · intranet Default value: internet.

Response parameters

Name	Type	Example	Description
Description	String	FinanceDept	The description of the security group.
InnerAccessPolicy	String	accept	The access control policy within a security group. Valid values: · accept: All instances within the security group can communicate with each other. · drop: All instances within the security group are isolated from each other.
Permissions			The permission rules of the security group.

Name	Type	Example	Description
<code>└─CreateTime</code>	String	2018-12-12T07:28:38Z	The creation time of the security group in UTC.
<code>└─Description</code>	String	FinanceDept	The description of the security group.
<code>└─DestCidrIp</code>	String	0.0.0.0/0	The destination IP address segment for outbound authorization.
<code>└─DestGroupId</code>	String	sg-securitygroupid1	The ID of the destination security group for outbound authorization.
<code>└─DestGroupName</code>	String	SecurityGuard	The name of the destination security group.
<code>└─DestGroupOwnerAccount</code>	String	SecurityGuard	The Alibaba Cloud account that manages the destination security group.
<code>└─Direction</code>	String	ingress	The allowed direction of traffic.
<code>└─IpProtocol</code>	String	TCP	The IP protocol that the security group applies to.
<code>└─Ipv6DestCidrIp</code>	String	2001:db8:1234:1a00::XXX	The destination IPv6 address segment.
<code>└─Ipv6SourceCidrIp</code>	String	2001:db8:1234:1a00::XXX	The source IPv6 address segment.
<code>└─NicType</code>	String	intranet	The network type.
<code>└─Policy</code>	String	Accept	The authorization policy.
<code>└─PortRange</code>	String	80/80	The port number range.
<code>└─Priority</code>	String	1	The rule priority.

Name	Type	Example	Description
SourceCidrIp	String	0.0.0.0/0	The source IP address segment for inbound authorization.
SourceGroupId	String	sg-securitygroupid2	The source security group for inbound authorization.
SourceGroupName	String	FinanceDeptJoshua	The name of the source security group.
SourceGroupOwnerAccount	String	FinanceJoshua	The Alibaba Cloud account that manages the source security group.
SourcePortRange	String	80/80	The range of the source port.
RegionId	String	cn-hangzhou	The ID of the region where the security group resides.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SecurityGroupId	String	sg-securityid1	The ID of the destination security group.
SecurityGroupName	String	FinanceJoshua	The name of the destination security group.
VpcId	String	v-vpcid1	The ID of the VPC to which the security group belongs. If a VPC ID is returned, the network type of the security group is VPC. Otherwise, the network type of the security group is classic.

Examples

Sample requests

```
http ( s ) : // ecs . aliyuncs . com / ? RegionId = cn - hangzhou
& SecurityGroupId = sg - securitygroupid1
& < Common request parameters >
```

Successful response examples

XML format

```
< DescribeSecurityGroupAttributeResponse >
  < SecurityGroupId > sg - bplgxw6bnzjjvhu3gtrz </ SecurityGroupId >
  < InnerAccessPolicy > Accept </ InnerAccessPolicy >
  < SecurityGroupName > FinanceJoshihua </ SecurityGroupName >
  < Description > FinanceDepartment </ Description >
  < RegionId > cn - hangzhou </ RegionId >
  < RequestId > A72322C1 - 47C0 - 491E - 8088 - 8B17E4EA859F </ RequestId >
  < Permissions >
    < Permission >
      < SourceCidrIp > 0 . 0 . 0 . 0 / 0 </ SourceCidrIp >
      < Description > />
      < DestCidrIp > />
      < NicType > intranet </ NicType >
      < DestGroupName > />
      < PortRange > 22 / 22 </ PortRange >
      < DestGroupId > />
      < Ipv6DestCidrIp > />
      < Direction > ingress </ Direction >
      < Priority > 1 </ Priority >
      < IpProtocol > TCP </ IpProtocol >
      < SourcePortRange > />
      < SourceGroupOwnerAccount > />
      < Policy > Accept </ Policy >
      < CreateTime > 2018 - 12 - 12T07 : 28 : 38Z </ CreateTime >
      < SourceGroupId > />
      < DestGroupOwnerAccount > />
      < Ipv6SourceCidrIp > />
      < SourceGroupName > />
    </ Permission >
    < Permission >
      < SourceCidrIp > 0 . 0 . 0 . 0 / 0 </ SourceCidrIp >
      < Description > />
      < DestCidrIp > />
      < NicType > intranet </ NicType >
      < DestGroupName > />
      < PortRange > 443 / 443 </ PortRange >
      < DestGroupId > />
      < Ipv6DestCidrIp > />
      < Direction > ingress </ Direction >
      < Priority > 1 </ Priority >
      < IpProtocol > TCP </ IpProtocol >
      < SourcePortRange > />
      < SourceGroupOwnerAccount > />
      < Policy > Accept </ Policy >
      < CreateTime > 2018 - 12 - 12T07 : 28 : 38Z </ CreateTime >
      < SourceGroupId > />
      < DestGroupOwnerAccount > />
```

```

    < Ipv6Source CidrIp />
    < SourceGroup pName />
  </ Permission >
  < Permission >
    < SourceCidr Ip > 0 . 0 . 0 . 0 / 0 </ SourceCidr Ip >
    < Description n />
    < DestCidrIp />
    < NicType > intranet </ NicType >
    < DestGroupName />
    < PortRange > 80 / 80 </ PortRange >
    < DestGroupId />
    < Ipv6DestCidrIp />
    < Direction > ingress </ Direction >
    < Priority > 1 </ Priority >
    < IpProtocol > TCP </ IpProtocol >
    < SourcePort Range />
    < SourceGroup pOwnerAccount />
    < Policy > Accept </ Policy >
    < CreateTime > 2018 - 12 - 12T07 : 28 : 38Z </ CreateTime >
    < SourceGroup pId />
    < DestGroupOwnerAccount />
    < Ipv6Source CidrIp />
    < SourceGroup pName />
  </ Permission >
  < Permission >
    < SourceCidr Ip > 0 . 0 . 0 . 0 / 0 </ SourceCidr Ip >
    < Description n />
    < DestCidrIp />
    < NicType > intranet </ NicType >
    < DestGroupName />
    < PortRange > - 1 / - 1 </ PortRange >
    < DestGroupId />
    < Ipv6DestCidrIp />
    < Direction > ingress </ Direction >
    < Priority > 1 </ Priority >
    < IpProtocol > ICMP </ IpProtocol >
    < SourcePort Range > - 1 / - 1 </ SourcePort Range >
    < SourceGroup pOwnerAccount />
    < Policy > Accept </ Policy >
    < CreateTime > 2018 - 12 - 12T07 : 28 : 38Z </ CreateTime >
    < SourceGroup pId />
    < DestGroupOwnerAccount />
    < Ipv6Source CidrIp />
    < SourceGroup pName />
  </ Permission >
</ Permission s >
< VpcId > vpc - bp1opxulzk hn00gzv26c Z </ VpcId >
</ DescribeSecurityGroupAttribute Response >

```

JSON format

```

{
  "SecurityGroupId ":" sg - bp1gxw6bzn jjvhu3gtrz ",
  "Description ":" FinanceDepartment ",
  "SecurityGroupName ":" FinanceJosephhua ",
  "InnerAccessPolicy ":" Accept ",
  "RequestId ":" A72322C1 - 47C0 - 491E - 8088 - 8B17E4EA85 9F ",
  "RegionId ":" cn - hangzhou ",
  "Permissions ":{
    "Permission ":[
      {
        "SourceCidrIp ":" 0 . 0 . 0 . 0 / 0 ",
        "Description ":"",

```

```

    " DestCidrIp ":",
    " NicType ":" intranet ",
    " DestGroupN   ame ":",
    " PortRange ":" 22 / 22 ",
    " DestGroupI   d ":",
    " Ipv6DestCi   drIp ":",
    " Direction ":" ingress ",
    " Priority ":" 1 ",
    " IpProtocol ":" TCP ",
    " SourcePort   Range ":",
    " SourceGrou   pOwnerAcco   unt ":",
    " Policy ":" Accept ",
    " CreateTime ":" 2018 - 12 - 12T07 : 28 : 38Z ",
    " SourceGrou   pId ":",
    " DestGroupO   wnerAccoun   t ":",
    " Ipv6Source   CidrIp ":",
    " SourceGrou   pName ":",
  },
  {
    " SourceCidr   Ip ":" 0 . 0 . 0 . 0 / 0 ",
    " Descriptio   n ":",
    " DestCidrIp ":" ",
    " NicType ":" intranet ",
    " DestGroupN   ame ":",
    " PortRange ":" 443 / 443 ",
    " DestGroupI   d ":",
    " Ipv6DestCi   drIp ":",
    " Direction ":" ingress ",
    " Priority ":" 1 ",
    " IpProtocol ":" TCP ",
    " SourcePort   Range ":",
    " SourceGrou   pOwnerAcco   unt ":",
    " Policy ":" Accept ",
    " CreateTime ":" 2018 - 12 - 12T07 : 28 : 38Z ",
    " SourceGrou   pId ":",
    " DestGroupO   wnerAccoun   t ":",
    " Ipv6Source   CidrIp ":",
    " SourceGrou   pName ":",
  },
  {
    " SourceCidr   Ip ":" 0 . 0 . 0 . 0 / 0 ",
    " Descriptio   n ":",
    " DestCidrIp ":" ",
    " NicType ":" intranet ",
    " DestGroupN   ame ":",
    " PortRange ":" 80 / 80 ",
    " DestGroupI   d ":",
    " Ipv6DestCi   drIp ":",
    " Direction ":" ingress ",
    " Priority ":" 1 ",
    " IpProtocol ":" TCP ",
    " SourcePort   Range ":",
    " SourceGrou   pOwnerAcco   unt ":",
    " Policy ":" Accept ",
    " CreateTime ":" 2018 - 12 - 12T07 : 28 : 38Z ",
    " SourceGrou   pId ":",
    " DestGroupO   wnerAccoun   t ":",
    " Ipv6Source   CidrIp ":",
    " SourceGrou   pName ":",
  },
  {
    " SourceCidr   Ip ":" 0 . 0 . 0 . 0 / 0 ",
    " Descriptio   n ":",
    " DestCidrIp ":" ",

```

```

    " NicType ":" intranet ",
    " DestGroupN  ame ":"",
    " PortRange ":"- 1 /- 1 ",
    " DestGroupI  d ":"",
    " Ipv6DestCi  drIp ":"",
    " Direction ":" ingress ",
    " Priority ":" 1 ",
    " IpProtocol ":" ICMP ",
    " SourcePort  Range ":"- 1 /- 1 ",
    " SourceGrou  pOwnerAcco  unt ":"",
    " Policy ":" Accept ",
    " CreateTime ":" 2018 - 12 - 12T07 : 28 : 38Z ",
    " SourceGrou  pId ":"",
    " DestGroupO  wnerAccoun  t ":"",
    " Ipv6Source  CidrIp ":"",
    " SourceGrou  pName ":""
  }
]
},
" VpcId ":" vpc - bp1opxu1zk  hn00gzv26c  Z "
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned when the specified region ID does not exist. Check whether the service is applicable in this region.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned when the specified security group does not exist under this account. Check whether the security group ID is correct.

[View error codes](#)

13.10 DescribeSecurityGroups

You can call the DescribeSecurityGroups action to query basic information about your security groups, such as the security group ID and description. Security groups are displayed in descending order of security group IDs.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

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 latest region list.
Action	String	No	DescribeSecurityGroups	The operation that you want to perform. Set this value to DescribeSecurityGroups.
DryRun	Boolean	No	false	Specifies whether to send a check request only. Default value: false. · true: Only a check request is sent and no query is performed. The system checks whether your AccessKey is valid, whether RAM users are authorized, and whether the required parameters are set. If the check fails, the corresponding error code is returned. If the check succeeds, the DryRunOperation error code is returned. · false: A request is sent. If the 2XX HTTP status code is returned, the query is performed. Default value: false

Parameter	Type	Required	Example	Description
NetworkType	String	No	vpc	The network type.
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
ResourceGroupId	String	No	rg-resourcegroupid	The ID of the resource group to which the security group belongs.
SecurityGroupId	String	No	sg-securitygroupid	The ID of the security group.
SecurityGroupIds	String	No	["sg-id1", "sg-id2", "sg-id2", ...]	A JSON array of security group IDs. A maximum of 100 security group IDs can be entered at a time. Separate multiple security group IDs with commas (,).
SecurityGroupName	String	No	test1	The name of the security group.

Parameter	Type	Required	Example	Description
Tag . N . Key	String	No	FinanceDept	The tag key of the security group. 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 aliyun or acs :. It cannot contain http:// or https://.
Tag . N . Value	String	No	FinanceJoshua	The tag value 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 aliyun or acs :. It cannot contain http:// or https://.
Tag . N . key	String	No	FinanceDept	The tag key of the security group.  Note: This parameter will be removed in the future. We recommend that you use Tag.N.Key to ensure future compatibility.

Parameter	Type	Required	Example	Description
Tag . N . value	String	No	FinanceJoshua	The tag value of the security group. Valid values of N: 1 to 20. It can be an empty string. It can be up to 128 characters in length. It cannot start with aliyun, acs:, http://, or https://.  Note: This parameter will be removed in the future. We recommend that you use Tag.N.Value to ensure future compatibility.
VpcId	String	No	vpc-vpcid1	The ID of the VPC to which the security group belongs.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The number of the page that was returned.
PageSize	Integer	10	The number of entries that were returned on each page.
RegionId	String	cn-hangzhou	The region ID of the security group.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SecurityGroups			The returned security group information. It is an array that consists of SecurityGroups data.

Parameter	Type	Example	Description
<code>CreationTime</code>	String	2017-12-05T22:40:00Z	The time when the security group was created. The time follows the ISO 8601 standard in the yyyy-MM-ddThh:mmZ format. The time is displayed in UTC.
<code>Description</code>	String	FinanceDept	The description of the security group.
<code>ResourceGroupId</code>	String	rg-resourcegroupid1	The ID of the resource group to which the security group belongs.
<code>SecurityGroupId</code>	String	sg-securitygroupid1	The ID of the security group.
<code>SecurityGroupName</code>	String	FinanceJoshua	The name of the security group.
<code>SecurityGroupType</code>	String	normal	The type of the security group. Valid values: - normal: basic security group - enterprise: advanced security group
<code>Tags</code>			The tag of the security group.
<code>TagKey</code>	String	FinanceDept	The tag value of the security group.
<code>TagValue</code>	String	FinanceJoshua	The tag key of the security group.
<code>VpcId</code>	String	vpc-vpcid1	The ID of the VPC to which the security group belongs.
<code>TotalCount</code>	Integer	4	The total number of security groups.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSecurityGroups
&RegionId=cn-hangzhou
&<CommonRequestParameters>
```

Sample success responses

XML format

```
<DescribeSecurityGroupsResponse>
  <RequestId>94D38899-626D-434A-891F-7E1F77A81525</RequestId>
  <TotalCount>4</TotalCount>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <RegionId>cn-hangzhou</RegionId>
  <SecurityGroups>
    <SecurityGroup>
      <SecurityGroupId>sg-securityGroupId1</SecurityGroupId>
      <Description>Test</Description>
    </SecurityGroup>
    <SecurityGroup>
      <SecurityGroupId>sg-securityGroupId2</SecurityGroupId>
      <Description>test00212</Description>
    </SecurityGroup>
    <SecurityGroup>
      <SecurityGroupId>sg-securityGroupId3</SecurityGroupId>
      <Description>cn-hangzhou test group</Description>
    </SecurityGroup>
    <SecurityGroup>
      <SecurityGroupId>sg-securityGroupId4</SecurityGroupId>
      <Description>cn-hangzhou test group</Description>
    </SecurityGroup>
  </SecurityGroups>
</DescribeSecurityGroupsResponse>
```

JSON format

```
{
  "PageNumber": "1",
  "TotalCount": 4,
  "PageSize": "10",
  "RegionId": "cn-hangzhou",
  "RequestId": "94D38899-626D-434A-891F-7E1F77A81525",
  "SecurityGroups": {
    "SecurityGroup": [
      {
        "SecurityGroupId": "sg-securityGroupId1",
        "Description": "TestByXcf"
      },
      {
        "SecurityGroupId": "sg-securityGroupId2",
        "Description": "test00212"
      },
      {
        "SecurityGroupId": "sg-securityGroupId3",
        "Description": "cn-hangzhou test group"
      },
      {
        "SecurityGroupId": "sg-securityGroupId4",
        "Description": "cn-hangzhou test group"
      }
    ]
  }
}
```

```

{
  "SecurityGroupIds": "sg - securityGroupIds",
  "Description": "test00212"
},
{
  "SecurityGroupIds": "sg - securityGroupIds3",
  "Description": "cn - hangzhou test group"
},
{
  "SecurityGroupIds": "sg - securityGroupIds4",
  "Description": "cn - hangzhou test group"
}
]
}
}

```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError	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.

[View error codes](#)

13.11 DescribeSecurityGroupReferences

Queries whether a specified security group has been authorized by other security groups.

Description

When you call this operation, note that:

- Security group authorization includes authorization for inbound and outbound traffic rules.
- Each query returns a maximum of 100 records.
- When you fail to delete a security group ([DeleteSecurityGroup](#)), you can call this operation to determine whether the specified security group has been authorized by other security groups. If the security group to be deleted is authorized by

another security group, you need to revoke its authorization before it can be deleted.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where the security group resides.
SecurityGroupId . N	RepeatList	Yes	sg-securitygroupid1	The ID of the security group that you want to query. Valid values of N: 1 to 10.
Action	String	No	DescribeSecurityGroupReferences	The operation that you want to perform. Set the value to DescribeSecurityGroupReferences.

Response parameters

Name	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SecurityGroupReferences			The information about references between security groups.
[⌞] ReferencingSecurityGroups			The information of other security groups referencing this security group.
[⌞] AliUid	String	155780923770	The ID of an Alibaba Cloud user to whom the security group belongs.

Name	Type	Example	Description
<code>SecurityGroupId</code>	String	sg-securitygroupid1	The ID of the security group.
<code>SecurityGroupId</code>	String	sg-securitygroupid2	The ID of the security group that you want to query.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSecurityGroups
&RegionId=cn-hangzhou
&SecurityGroupId.1=sg-1133aa
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeSecurityGroupsResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA9 84</RequestId>
  <SecurityGroups>
    <SecurityGroup>
      <SecurityGroupId>sg-1133aa</SecurityGroupId>
      <ReferencingSecurityGroups>
        <ReferencingSecurityGroup>
          <SecurityGroupId>sg-2255cc</SecurityGroupId>
          <AliUid>123</AliUid>
        </ReferencingSecurityGroup>
        <ReferencingSecurityGroup>
          <SecurityGroupId>sg-2255dd</SecurityGroupId>
          <AliUid>123</AliUid>
        </ReferencingSecurityGroup>
      </ReferencingSecurityGroups>
    </SecurityGroup>
  </SecurityGroups>
</DescribeSecurityGroupsResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA9 84",
  "SecurityGroups": [
    {
      "SecurityReferencingGroups": [
        {
          "SecurityGroupId": "sg-2255cc",
          "AliUid": 123
        },
        {
          "SecurityGroupId": "sg-2255dd",
          "AliUid": 123
        }
      ]
    }
  ]
}
```

```
}
],
"SecurityGroupId ":" sg - 1133aa "
}
]
```

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 when the security group ID is invalid.

[View error codes](#)

13.12 ModifySecurityGroupAttribute

Modifies the attributes of the specified security group, including the name and description of the security group.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where the security group resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
SecurityGroupId	String	Yes	sg-securitygroupid1	The ID of the security group.

Name	Type	Required	Example	Description
Action	String	No	ModifySecurityGroupAttribute	The operation that you want to perform. Set the value to ModifySecurityGroupAttribute.
Description	String	No	FinanceDept	The description of the security group. The description must be 2 to 256 characters in length and cannot start with http:// or https://. Default value: null.
SecurityGroupName	String	No	FinanceJoshua	The name of the security group. 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 (-). Default value: null.

Response parameters

Name	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-F876FF7BA
&RegionId=cn-hangzhou
&SecurityGroupName=NewName
<Common request parameters>
```

Successful response examples

XML format

```
< ModifySecurityGroupAttributeResponse >
  < RequestId > CEF72CEB - 54B6 - 4AE8 - B225 - F876FF7BA9 84 </
    RequestId >
</ ModifySecurityGroupAttributeResponse >
```

JSON format

```
{
  "RequestId": "CEF72CEB - 54B6 - 4AE8 - B225 - F876FF7BA9 84"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified security group does not exist.	The error message returned when the specified security group does not exist under this account. Check whether the security group ID is correct.

[View error codes](#)

13.13 ModifySecurityGroupEgressRule

Modifies the egress rule of a security group. If you have not created a security group rule, you can call `AuthorizeSecurityGroupEgress` to create one.

Description

According to your access authorization requirements, you can define an egress rule for a security group by using either of the following groups of parameters:

- If you need to authorize access to a specified CIDR block, use the following parameters: `IpProtocol`, `PortRange`, `SourcePortRange` (optional), `NicType`, `Policy`, `DestCidrIp`, and `SourceCidrIp` (optional).
- If you need to authorize access to other security groups, use the following parameters: `IpProtocol`, `PortRange`, `SourcePortRange` (optional), `NicType`, `Policy`, `DestCidrIp` (optional), `DestGroupOwnerAccount`, and `DestGroupId`.

Debug

Use [OpenAPI Explorer](#) to perform debug operations and generate SDK code examples.

Request parameters

Name	Type	Required?	Example value	Description
IpProtocol	String	Yes	tcp	The transport layer protocol. Case insensitive. Valid values: - icmp - gre - tcp - udp - all: supports all protocols
PortRange	String	Yes	80/80	The range of the ports enabled by the source security group for the transport layer protocol. . Valid values: - TCP/UDP. Value range: 1 to 65535. The start port and the end port are separated by a slash (/). Correct example: 1/200. Incorrect example: 200/1. - ICMP: -1/-1. - GRE: -1/-1. - ALL: -1/-1.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the source security group belongs. To view the latest list of Alibaba Cloud regions, call DescribeRegions .
SecurityGroupId	String	Yes	sg-securitygroupid	The ID of the source security group.

Name	Type	Required?	Example value	Description
Action	String	No	ModifySecurityGroupEgressRule	The name of this action. Value: ModifySecurityGroupRule
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	Guarantees the idempotence of the request. The value is generated by your client and must be globally unique. Only ASCII characters are allowed. It can contain a maximum of 64 ASCII characters. 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 length of the description is 1 to 512 characters.
DestCidrIp	String	No	XXX.XX.XXX.XXX/X	The destination CIDR block. CIDR IP addresses and IPv4 addresses are supported. Default value: 0.0.0.0/0
DestGroupId	String	No	sg-securitygroupid22	The ID of the destination security group.
DestGroupOwnerAccount	String	No	EcsforCloud@Alibaba.com	The account to which the destination security group belongs (also known as UID).
DestGroupOwnerId	Long	No	155780923770	The ID of the account to which the destination security group belongs.

Name	Type	Required?	Example value	Description
Ipv6DestCidrIp	String	No	2001:db8:1234:1a00::XXX	The destination CIDR block. CIDR IP addresses and IPv6 addresses are supported.
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00::XXX	The source CIDR block. CIDR IP addresses and IPv6 addresses are supported.
NicType	String	No	internet	The NIC type. Valid values: • internet: Internet NIC. • intranet: intranet NIC. If you configure mutual access between security groups (that is, <code>DestGroupId</code> is specified but <code>DestCidrIp</code> is not), the value of <code>NicType</code> must be <code>intranet</code>.
Policy	String	No	accept	The access permission. Valid values: • accept: admits access. • drop: denies access. No denied access message is returned. Default value: <code>accept</code>
Priority	String	No	1	The priority of the security group. Value range: 1 to 100 Default value: 1
SourceCidrIp	String	No	XXX.XX.XXX.XXX/X	The source CIDR block. CIDR IP addresses and IPv4 addresses are supported.

Name	Type	Required?	Example value	Description
SourcePort Range	String	No	80/80	The range of the ports enabled by the source security group for the transport layer protocol. Valid values: - TCP/UDP. Value range: 1 to 65535. The start port and the end port are separated by a slash (/). Correct example: 1/200. Incorrect example: 200/1. - ICMP: -1/-1. - GRE: -1/-1. - ALL: -1/-1.

Response parameters

Name	Type	Example value	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The request ID.

Example

Request example

```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupEgressRule
&SecurityGroupId=sg-F876FF7BA
&SourceGroupId=sg-1651FBB64
&SourceGroupOwnerAccount=test@aliyun.com
&IpProtocol=tcp
&PortRange=80/80
&Policy=allow
&Description=Thisisanewsecuritygroup rule.
&<CommonRequestParameters>
```

Response example

XML format

```
<ModifySecurityGroupEgressRuleResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
```

```
</ ModifySecurityGroupEgressRuleResponse >
```

JSON format

```
{
  "RequestId": "CEF72CEB - 54B6 - 4AE8 - B225 - F876FF7BA9 84 "
}
```

Errors

HTTP status code	Error code	Error message	Meaning
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The specified security group does not exist under this account. Check whether the security group ID is correct.
404	InvalidDestinationGroupId.NotFound	The DestinationGroupId provided does not exist in our records.	The specified destination security group does not exist.
400	OperationDenied	The specified IpProtocol does not exist or IpProtocol and PortRange do not match.	The specified IP Protocol does not exist, or does not match the port range.
400	InvalidIpProtocol.Malformed	The specified parameter "PortRange" is not valid.	The format of the specified IP Protocol is invalid.
403	InvalidDestinationGroupId.Mismatch	NicType is required or NicType expects intranet.	You must specify NicType or specify the access as intranet.
400	InvalidDestinationCidrIp.Malformed	The specified parameter "DestCidrIp" is not valid.	The specified DestCidrIp is invalid. Check whether this parameter is correct.
403	MissingParameter	The input parameter "DestinationGroupId" or "DestCidrIp" cannot be both blank.	The parameters DestinationGroupId and DestCidrIp cannot be both blank.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The specified Policy is invalid. Check whether this parameter is correct.

HTTP status code	Error code	Error message	Meaning
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The specified NIC type does not exist.
400	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The specified NIC type conflicts with the authorized type.
403	AuthorizationLimitExceed	The limit of authorization records in the security group reaches.	The number of security group rules reaches the upper limit. Check whether the security group rules are set correctly.
403	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The source security group must be different from the destination security group.
400	InvalidDestGroupId.Mismatch	Specified security group and destination group are not in the same VPC.	The specified security group is not in the same VPC as the destination security group.
400	InvalidDestGroup.NotFound	Specified destination security group does not exist.	The specified destination security group does not exist.
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The VPC does not support security groups.
400	InvalidPriority.Malformed	The specified parameter "Priority" is not valid.	The specified Priority is invalid.
400	InvalidPriority.ValueNotSupported	The specified Priority is invalid.	The specified Priority is invalid.
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The specified DestCidrIp is invalid. Check whether this parameter is correct.

HTTP status code	Error code	Error message	Meaning
500	InternalServerError	The request processing has failed due to some unknown error.	An internal error occurs . Try again. If the error persists, open a ticket.
403	InvalidNetworkType.Conflict	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The network type of the specified SecurityGroup must be the same as that of SourceGroup .
403	InvalidSecurityGroup.IsSame	The authorized SecurityGroupId should be different from the DestGroupId.	The authorized SecurityGroupId cannot be the same as DestGroupId .
400	InvalidNicType.ValueNotSupported	The specified NicType is not valid.	The specified NIC type does not exist.
400	InvalidSecurityGroupDiscription.Malformed	The specified security group rule description is not valid.	The description of the specified security group rule is invalid.
404	SecurityGroupRule.NotFound	The target security group rule do not exist.	The target security group rule does not exist.
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 specified network type is invalid.
400	MissingParameter.Dest	The parameter DestCidrIp or DestGroupId is essential.	The fields for both DestCidrIp and DestGroupId cannot be blank.

HTTP status code	Error code	Error message	Meaning
400	InvalidParam. PortRange	The specified param PortRange or SourcePort Range is not valid. should be integer and less than 65535, range separator is '/'.	The specified parameter is invalid.
400	InvalidIpP rotocol. ValueNotSu pported	The specified parameter IpProtocol should not be null and only tcp, udp, icmp, gre or all is supported. Ignore case.	The specified protocol must be TCP , UDP , ICMP , GRE , or All .
400	InvalidPriority .ValueNotSu pported	The parameter Priority is invalid.	The specified Priority is invalid.
400	InvalidParam. SourceIp	%s	The specified source IP address is invalid.
400	InvalidParam. DestIp	%s	The specified destination IP address is invalid.
400	InvalidParam. Ipv6DestCidrIp	%s	The specified destination IP address (IPv6 address) is invalid.
400	InvalidParam .Ipv6Source CidrIp	%s	The specified source IP address (IPv6 address) is invalid.
400	InvalidParam .Ipv4Protoc olConflict WithIpv6Address	%s	An IPv4 CIDR block and an IPv6 CIDR block cannot exist at the same time.
400	InvalidParam .Ipv6Protoc olConflict WithIpv4Address	%s	An IPv6 CIDR block and an IPv4 CIDR block cannot exist at the same time.
400	ILLEGAL_IP V6_CIDR	%s	The specified IPv6 CIDR block is invalid.

For a list of error codes, visit the [API Error Center](#).

13.14 ModifySecurityGroupPolicy

Modifies the intranet communication policy of a security group.

Description

When you call this operation, note that:

- When the `InnerAccessPolicy` parameter value is `Accept`, instances within the security group can communicate with each other. The `Accept` policy has the highest priority of all rules, and all other user-defined rules are ignored.
- When the `InnerAccessPolicy` value is `Drop`, instances in the security group are isolated from each other. In this case, user-defined security group rules have a higher priority and can be used to change the intranet access policy. For example, you can use [AuthorizeSecurityGroup](#) to allow ECS instances in the security group to communicate with each other.
- You can use [DescribeSecurityGroupAttribute](#) to query the intranet communication policy of the security group.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
<code>InnerAccessPolicy</code>	String	Yes	Accept	The intranet communication policy of the security group. Valid values: • Accept: Instances in the security group can communicate with each other. • Drop: Instances in the security group are isolated from each other. The values are case-insensitive.

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where the security group resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
SecurityGroupId	String	Yes	sg-securitygroupid1	The ID of the security group.
Action	String	No	ModifySecurityGroupPolicy	The operation that you want to perform. Set the value to ModifySecurityGroupPolicy.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The ClientToken parameter must be no more than 64 ASCII characters in length. For more information, see How to ensure idempotency .

Response parameters

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

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupPolicy&RegionId=cn-hangzhou
```

```
& SecurityGroupId = sg-1133aa
& InnerAccessPolicy = Drop
< Common request parameters >
```

Successful response examples

XML format

```
< ModifySecurityGroupPolicyResponse >
  < RequestId > CEF72CEB-54B6-4AE8-B225-F876FF7BZ015 </
    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 when the security group ID is invalid.
400	InvalidPolicy.Malformed	The Policy is invalid. Only 'Accept' and 'Drop' are supported. Ignore case.	The error message returned when the Policy parameter value is invalid.

[View error codes](#)

13.15 ModifySecurityGroupRule

Modifies the inbound rules of a security group. You can call `AuthorizeSecurityGroup` to add rules to a security group if no rules exist.

Description

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 authorize access permissions on specified IP address segments : IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp, and SourceCidrIp (optional).
- Parameters used to authorize access permissions on other security groups: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), DestGroupOwnerAccount, and DestGroupId.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
IpProtocol	String	Yes	icmp	The transport layer protocol. This parameter value is case-insensitive. Valid values: • icmp • gre • tcp • udp • all: All protocols are supported.

Name	Type	Required	Example	Description
PortRange	String	Yes	80/80	The range of destination ports relevant to the transport layer protocol. Valid values: - When IpProtocol is set to tcp or udp, the port number range is 1 to 65535. Separate the starting port and the ending port with a forward slash (/). Correct example: 1/200. Incorrect example: 200/1. - When IpProtocol is set to icmp, the port number range is -1/-1, indicating that all values are valid. - When IpProtocol is set to gre, the port number range is -1/-1, indicating that all values are valid. - When IpProtocol is set to all, the port number range is -1/-1, indicating that all values are valid.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the destination security group resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
SecurityGroupId	String	Yes	sg-securitygroupid1	The ID of the destination security group.
Action	String	No	ModifySecurityGroupRule	The operation that you want to perform. Set the value to ModifySecurityGroupRule.

Name	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The ClientToken parameter must be no more than 64 ASCII characters in length. For more information, see How to ensure idempotency .
Description	String	No	FinanceDept	The description of a security group rule. The description must be 1 to 512 characters in length.
DestCidrIp	String	No	10.0.0.0/8	The range of destination IP addresses. CIDR blocks and IPv4 addresses are supported. Default value: 0.0.0.0/0.
Ipv6DestCidrIp	String	No	2001:db8:1234:1a00::XXX	The destination IPv6 CIDR block. CIDR blocks and IPv6 addresses are supported.  Note: You can only specify IP addresses for VPC-connected instances. Default value: null.

Name	Type	Required	Example	Description
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00::XXX	The source IPv6 CIDR block . CIDR blocks and IPv6 addresses are supported.  Note: You can only specify IP addresses for VPC-connected instances. Default value: null.
NicType	String	No	intranet	The NIC type. Valid values: · internet · intranet When DestGroupId is specified and DestCidrIp is not, the value of NicType can only be intranet . Default value: internet.
Policy	String	No	accept	The access control policy. Valid values: · accept: grants access. · drop: denies access and returns no responses. Default value: accept.
Priority	String	No	1	The priority of security group rules. Valid values: 1 to 100. Default value: 1.
SourceCidrIp	String	No	0.0.0.0/0	The range of source IP addresses. CIDR blocks and IPv4 addresses are supported. Default value: 0.0.0.0/0.

Name	Type	Required	Example	Description
SourceGroupId	String	No	sg-securitygroupid2	The ID of the source security group to which you want to grant access permissions. Either the SourceGroupId parameter or the SourceCidrIp parameter must be specified. If SourceGroupId is specified and SourceCidrIp is not, the value of NicType can only be intranet. If both the SourceGroupId and SourceCidrIp parameters are set, the SourceCidrIp parameter will take precedence.
SourceGroupOwnerAccount	String	No	FinanceJoshua	The Alibaba Cloud account that manages the source security group when you set security group rules for different accounts. • If neither SourceGroupOwnerAccount nor SourceGroupOwnerId is specified, access permissions for other security groups are set. • If the SourceCidrIp parameter is specified, the SourceGroupOwnerAccount parameter will be ignored.

Name	Type	Required	Example	Description
SourceGroupOwnerId	Long	No	155780923770	The Alibaba Cloud account that manages the source security group when you set security group rules for different accounts. • If neither SourceGroupOwnerId nor SourceGroupOwnerAccount is specified, access permissions for other security groups are set. • If the SourceCidrIp parameter is specified, the SourceGroupOwnerId parameter will be ignored.
SourcePortRange	String	No	80/80	The range of source ports relevant to the transport layer protocol. Valid values: • When IpProtocol is set to tcp or udp, the port number range is 1 to 65535. Separate the starting port and the ending port with a forward slash (/). Correct example: 1/200. Incorrect example: 200/1. • When IpProtocol is set to icmp, the port number range is -1/-1, indicating that all values are valid. • When IpProtocol is set to gre, the port number range is -1/-1, indicating that all values are valid. • When IpProtocol is set to all, the port number range is -1/-1, indicating that all values are valid.

Response parameters

Name	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-F876FF7BA
&SourceGroupId=sg-1651FBB64
&SourceGroupOwnerAccount=test@aliyun.com
&IpProtocol=tcp
&PortRange=80/80
&Policy=allow
&Description=ThisIsANewSecurityGroupRule.
&<Common request parameters>
```

Successful response examples

XML format

```
<ModifySecurityGroupRuleResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</ModifySecurityGroupRuleResponse>
```

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 when the specified security group does not exist under this account. Check whether the security group ID is correct.

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 when the specified IP does not exist or does not match the port range.
400	InvalidIpProtocol. Malformed	The specified parameter "PortRange" is not valid.	The error message returned when the format of the IpProtocol parameter is invalid.
403	MissingParameter	The input parameter "SourceGroupId" or "SourceCidrIp" cannot be both blank.	The error message returned when the SourceGroupId and SourceCidrIp parameters are empty.
400	InvalidPolicy. Malformed	The specified parameter "Policy" is not valid.	The error message returned when the specified parameter is invalid. You need to check whether the parameter is correct.
400	InvalidNicType. Mismatch	Specified nic type conflicts with the authorization record.	The error message returned when the specified NIC type does not exist.
403	InvalidParameter. Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned when a specified security group is the same as the source security group.
400	InvalidPriority. Malformed	The parameter Priority is invalid.	The error message returned when the rule priority is invalid.
400	InvalidPriority. .ValueNotSupported	The parameter Priority is invalid.	The error message returned when the rule priority is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidSecurityGroupDiscription.Malformed	The specified security group rule description is not valid.	The error message returned when the description of the specified security group is invalid.
404	SecurityGroupRule.NotFound	The target security group rule not exist.	The error message returned when rules for the destination security group do not exist.
400	MissingParameter.Source	Either SourceCidrIp or SourceGroupId must be specified.	The error message returned when the SourceGroupId and SourceCidrIp parameters are empty.
400	InvalidParam.PortRange	Please specify the PortRange or SourcePort Range in integer, less than 65535, and separate the range with ? /?.	The error message returned when the range of destination or source port numbers is not specified. The port numbers must be smaller than 65,535. Use a forward slash (/) to separate the source and destination ports.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or All.	The error message returned when the protocol type is not TCP, UDP, ICMP, GRE or all.
400	InvalidParam.SourceIp	%s	The error message returned when the source IP address is invalid.
400	InvalidParam.DestIp	%s	The error message returned when the destination IP address is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned when the destination IPv6 CIDR block is invalid.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned when the source IPv6 CIDR block is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned when IPv4 addresses conflict with IPv6 addresses.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned when IPv6 addresses conflict with IPv4 addresses.
400	ILLEGAL_IP_V6_CIDR	%s	The error message returned when the specified IPv6 address range is invalid.

[View error codes](#)

14 Deployment sets

14.1 CreateDeploymentSet

Creates a deployment set in the specified region.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where the deployment set resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	CreateDeploymentSet	The operation that you want to perform. Set the value to CreateDeploymentSet.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The ClientToken parameter must be no more than 64 ASCII characters in length. For more information, see How to ensure idempotency .

Name	Type	Required	Example	Description
Deployment SetName	String	No	FinanceDeployment	The name of the deployment set. 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 (-).
Description	String	No	FinanceJoshua	The description of the deployment set. It must be 2 to 256 characters in length. It cannot start with http:// or https://.
Domain	String	No	Default	The deployment domain. Default value: Default.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
Granularity	String	No	Host	The deployment granularity.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.

Name	Type	Required	Example	Description
OnUnableToRedeployFailedInstance	String	No	CancelMembershipAndStart	The emergency solution to redeploy failed instances in the deployment set. Valid values: - CancelMembershipAndStart: restarts the instances immediately after they are shut down and migrated to other deployment sets. This is the default value. - KeepStopped: keeps the instances shut down and restarts them after the deployment set is replenished.
Strategy	String	No	StrictDispersion	The deployment strategy.  Note: This parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.

Response parameters

Name	Type	Example	Description
DeploymentSetId	String	ds-bp1frxuzdg87zh4pzqkcm	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
&DeploymentStrategy=Availability
&DeploymentSetName=AvailMySet
```


&< Common request parameters >

Successful response examples

XML format

```
< CreateDeploymentSetResponse >
  < RequestId > 04F0F334 - 1335 - 436C - A1D7 - 6C044FE733 68 </
    RequestId >
  < DeploymentSetId > ds - bp1frxuzdg 87zh4pzqkc m </ Deployment
    SetId >
</ CreateDeploymentSetResponse >
```

JSON format

```
{
  "RequestId": " 04F0F334 - 1335 - 436C - A1D7 - 6C044FE733 68 ",
  "DeploymentSetId": " ds - bp1frxuzdg 87zh4pzqkc "
}
```

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 when the required RegionId parameter is not specified .
400	InvalidDescription. Malformed	The specified parameter Description is not valid.	The error message returned when the value of the Description parameter is invalid. The value must be 2 to 256 characters in length and cannot start with http:// or https://.
400	MissingParameter	The input parameter DeploymentSetId that is mandatory for processing this request is not supplied.	The error message returned when the DeploymentSetId parameter is not specified .

[View error codes](#)

14.2 ModifyInstanceDeployment

Migrates an ECS instance to a dedicated host (DDH) in the same region.

Description

You can call the `ModifyInstanceDeployment` operation to complete the following tasks:

- Add an instance to a deployment set, or migrate an instance from one deployment set to another. The `DeploymentSetId` parameter is required for this task.
- You can migrate ECS instances from a shared host to the specified DDH, or migrate instances between two DDHs to reallocate your resources. The `DedicatedHostId` parameter is required for this task.

When migrating an ECS instance to a DDH, note that:

- Make sure that the instance is in the `Stopped` state. The instance automatically restarts after migration.
- You can only migrate VPC-connected ECS instances.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-instanceid1	The ID of the instance. The instance must be in the <code>Stopped</code> or <code>Running</code> state.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the instance resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.

Name	Type	Required	Example	Description
Action	String	No	ModifyInstanceDeployment	The operation that you want to perform. Set the value to ModifyInstanceDeployment.
DedicatedHostId	String	No	dh-2ze3lmtckdjw1pt8nr8x	The ID of the DDH. You can call DescribeDedicatedHosts to query available DDHs.
DeploymentSetId	String	No	ds-deploymentsetid1	The ID of the deployment set.
Force	Boolean	No	false	Indicates whether the DDH of an instance can be changed. · true: You are allowed to change the DDH of an instance. You can restart a running instance, a stopped Subscription-based instance , or a stopped Pay-As-You-Go instance that is still billed. · false: You are not allowed to change the DDH of an instance. You can only create a deployment set on the current DDH. This is the default value. Changing the DDH may cause the replacement of deployment set to fail.

Response parameters

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

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceDeployment
&RegionId=cn-hangzhou
&DeploymentSetId=ds-bp13v7bjnj9gisnlo1
&<Common request parameters>
```

Successful response examples

XML format

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

JSON format

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

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned when the ID of the specified DDH does not exist.
400	OperationDenied.UnstoppedInstance	Operation denied due to unstopped instance.	The error message returned when the operation is denied on the running instance.
400	InvalidDedicatedHostStatus.NotSupport	Operation denied due to dedicated host status.	The error message returned when the operation is denied under the current instance status.

HTTP status code	Error code	Error message	Description
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned when the expiration date of the instance is later than that of the DDH.
404	InvalidInstanceNetworkType.NotSupport	The specified Instance network type not support.	The error message returned when the network type of the specified instance is not supported.
404	InvalidInstanceType.NotSupport	The Dedicated host not support the specified instance type.	The error message returned when the current DDH does not support the instance types.
400	LackResource	There's no enough resource on the specified dedicated host.	The error message returned when DDH resources are fully consumed.
400	OperationDenied.LocalDiskInstance	Operation denied due to instance has local disk	The error message returned when a local storage disk does not support the current operation.
403	IncorrectInstanceState	%s	The error message returned when the specified resource is in a state that does not support the current operation.

[View error codes](#)

14.3 ModifyDeploymentSetAttribute

Modifies the name and description of a deployment set.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
DeploymentSetId	String	Yes	ds-deploymentsetid	The ID of a deployment set.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the deployment set resides. You can call DescribeRegions to view the latest list of Alibaba Cloud regions.
Action	String	No	ModifyDeploymentSetAttribute	The operation that you want to perform. Set the value to ModifyDeploymentSetAttribute.
DeploymentSetName	String	No	FinanceJoshua	The name of the deployment set. 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 (-).
Description	String	No	FinanceDept	The description of the deployment set. It must be 2 to 256 characters in length and cannot start with http:// or https://.

Response parameters

Name	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
&Strategy=Availability
&DeploymentSetId=ds-bp1frxuzdg87zh4pzqkc
&DeploymentSetName=AvailMySet
&<Common request parameters>
```

Successful response examples

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 when the RegionId parameter is empty.

HTTP status code	Error code	Error message	Description
400	InvalidDescription. Malformed	The specified parameter Description is not valid.	The error message returned when the specified description is invalid. It must be 2 to 256 characters in length and cannot start with http:// or https://.

[View error codes](#)

14.4 DeleteDeploymentSet

Deletes a deployment set.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
DeploymentSetId	String	Yes	ds-deploymentsetid1	The ID of the deployment set. You cannot delete a deployment set that contains instances.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the deployment set resides. You can call DescribeRegions to view the latest list of Alibaba Cloud regions.

Name	Type	Required	Example	Description
Action	String	No	DeleteDeploymentSet	The operation that you want to perform. Set the value to DeleteDeploymentSet.

Response parameters

Name	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-bp1frxuzdg87zh4pzqkc
&<Common request parameters>
```

Successful response examples

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 when the DeploymentSetId parameter is empty.
403	DependencyViolation.ReferByHPC	The specified deployment set is still referred by an HPC cluster.	The error message returned when the specified deployment set is associated with other HPC clusters.

[View error codes](#)

14.5 DescribeDeploymentSets

Queries a list of attributes of one or more deployment sets.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where a deployment set resides. You can call DescribeRegions to view the latest list of Alibaba Cloud regions.

Name	Type	Required	Example	Description
Action	String	No	DescribeDeploymentSets	The operation that you want to perform. Set the value to DescribeDeploymentSets.
DeploymentSetIds	String	No	["ds-xxxxxxxxx", "ds-yyyyyyyyy", ... "ds-zzzzzzzzz"]	The list of deployment set IDs. The value can contain a JSON array consisting of up to 100 deployment set IDs. The deployment set IDs must be separated by commas (,).
DeploymentSetName	String	No	FinanceJoshua	The name of a deployment set.
Domain	String	No	Default	The deployment domain.  Note: The parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
Granularity	String	No	Host	The deployment granularity.  Note: The parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.

Name	Type	Required	Example	Description
NetworkType	String	No	VPC	The network type in a deployment set.  Note: The parameter will be removed in the future. We recommend that you use other parameters to ensure compatibility.
PageNumber	Integer	No	1	The page number to be queried in the deployment set list. Starting value: 1. Default value: 1.
PageSize	Integer	No	10	The number of entries per page. Maximum value: 100. Default value: 10.
Strategy	String	No	Availability	The deployment strategy. Value: Availability. Default value: null.

Response parameters

Name	Type	Example	Description
DeploymentSets			The detailed information of deployment sets returned in an array.
CreationTime	String	2017-12-05T22:40:00Z	The time a deployment set is created.

Name	Type	Example	Description
DeploymentSetDescription	String	FinanceDeploymentHighAvailability	The description of a deployment set.
DeploymentSetId	String	ds-deploymentsetid1	The ID of a deployment set..
DeploymentSetName	String	FinanceJoshua	The name of a deployment set.
DeploymentStrategy	String	Availability	The deployment strategy.
Domain	String	Default	The deployment domain.
Granularity	String	Host	The deployment granularity.
InstanceAmount	Integer	1	The number of instances in a deployment set.
InstanceIds		["i-instanceid1"]	The list of instance IDs in a deployment set.
Strategy	String	StrictDispersion	The deployment strategy.
PageNumber	Integer	1	The page number to be queried in the deployment set list.
PageSize	Integer	10	The number of entries per page.
RegionId	String	cn-hangzhou	The ID of the region where a deployment set resides.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Name	Type	Example	Description
TotalCount	Integer	1	The total number of queried deployment sets.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDeploymentSets
&RegionId=cn-hangzhou
&DeploymentSetsIds=["ds-bp13v7bjnj9gislol1"]
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeDeploymentSetsResponse>
  <PageSize>10</PageSize>
  <TotalCount>1</TotalCount>
  <PageNumber>1</PageNumber>
  <RequestId>1CB9A584-9E43-408D-B5A8-DB42CDECE03B</RequestId>
  <DeploymentSets>
    <DeploymentSet>
      <DeploymentSetDescription>default</DeploymentSetDescription>
      <DeploymentSetId>ds-bp13v7bjnj9gislol1</DeploymentSetId>
      <DeploymentStrategy>Availability</DeploymentStrategy>
    </DeploymentSet>
    <DeploymentSetName>test</DeploymentSetName>
    <InstanceIds>
      <InstanceId>i-sdfkjsdfk</InstanceId>
      <InstanceId>i-kiiwsch</InstanceId>
    </InstanceIds>
  </DeploymentSets>
</DescribeDeploymentSetsResponse>
```

JSON format

```
{
  "DeploymentSets": {
    "DeploymentSet": [
      {
        "DeploymentSetDescription": "default",
        "InstanceIds": {
          "InstanceId": [
            "i-sdfkjsdfk",
            "i-kiiwsch"
          ]
        },
        "DeploymentSetName": "test",
        "DeploymentStrategy": "Availability"
      }
    ]
  }
}
```

```
    " Deployment SetId ":" ds - bp13v7bjnj 9gisnlo1ow "
  }
],
" PageNumber ": 1 ,
" TotalCount ": 1 ,
" PageSize ": 10 ,
" RequestId ":" 1CB9A584 - 9E43 - 408D - B5A8 - DB42CDECE0 3B "
}
```

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 when the number of specified deployment sets exceeds 100.

[View error codes](#)

15 SSH key pairs

15.1 CreateKeyPair

Creates an SSH key pair. The system stores the public key and returns the unencrypted private key. The private key is encoded by using PEM and is in the PKCS#8 format. You must store the private key on your own and ensure its confidentiality.

Description

In addition to calling `CreateKeyPair`, you can create a key pair through other key pair generators and call [ImportKeyPair](#) to upload the key pair to a region.

You can have up to 500 key pairs in each Alibaba Cloud region. For more information, see [SSH key pair](#).

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
KeyPairName	String	Yes	FinanceJoshuaV23	The name of the key pair. It must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code> . It can contain letters, digits, colons (:), underscores (_), and hyphens (-). The name must be globally unique and supports all character set encoding formats.

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where the key pair resides. You can call DescribeRegions to view the latest list of Alibaba Cloud regions.
Action	String	No	CreateKeyPair	The operation that you want to perform. Set the value to CreateKeyPair.
ResourceGroupId	String	No	rg-resourcegroupid1	The ID of the resource group to which the tag belongs.
Tag . N . Key	String	No	FinanceDept	The tag key of the key pair. Valid values of N: 1 to 20. It cannot be an empty string. It can be a maximum of 64 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https://.
Tag . N . Value	String	No	FinanceDept. Joshua	The tag value of the key pair. Valid values of N: 1 to 20. It can be an empty string. It can be a maximum of 128 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https://.

Response parameters

Name	Type	Example	Description
KeyPairFingerPrint	String	89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:d7	The fingerprint of the key pair. MD5 is used based on the public key fingerprint format defined in RFC 4716. For more information, see RFC 4716 .
KeyPairName	String	FinanceJoshuaV23	The name of the key pair.
PrivateKeyBody	String	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXXXX	The private key of the key pair. The private key is encoded by using PEM and is in PKCS#8 format. For more details, see OpenSSL PKCS #8.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateKeyPair
&RegionId=cn-qingdao
&KeyPairName=test
&<CommonRequestParameters>
```

Successful response examples

XML format

```
<CreateKeyPairResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <KeyPairName>test</KeyPairName>
  <KeyPairFingerPrint>89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:d7</KeyPairFingerPrint>
  <PrivateKeyBody>XXXXXXXXXX XXXXXXXXXXXX XXXXXXXXXXXX</PrivateKeyBody>
</CreateKeyPairResponse>
```

JSON format

```
{
```

```

" RequestId ":" 473469C7 - AA6F - 4DC5 - B3DB - A3DC0DE3C8 3E ",
" PrivateKey Body ":" xxxxxxxxxxxx xxxxxxxxxxxx xxxxxxxxxxxx ",
" KeyPairFingerPrint ":" 89 : f0 : ba : 62 : ac : b8 : aa : e1 : 61
: 5e : fd : 81 : 69 : 86 : 6d : 6b : f0 : c0 : 5a : d7 ",
" KeyPairName ":" test "
}

```

Error codes

HTTP status code	Error code	Error message	Description
403	QuotaExceed. KeyPair	The key pair quota exceeds.	The error message returned when the number of key pairs reaches the upper limit.
400	KeyPair. AlreadyExist	The key pair already exist.	The error message returned when a key pair already exists. Duplicate key pairs cannot be added.

[View error codes](#)

15.2 ImportKeyPair

Imports the public key of an RSA-encrypted key pair that was created by other key pair generators. After the public key is imported, you must store the private key on your own and ensure its confidentiality.

Description

When you call this operation, note that you can only import a maximum of 500 key pairs in each region.

You can use any of the following encryption methods for your key pair:

- 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

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
KeyPairName	String	Yes	FinanceJoshuaV24	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	XXXXXXXXXX XXXX	The public key of the key pair.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the key pair resides. You can call DescribeRegions to view the latest list of Alibaba Cloud regions.
Action	String	No	ImportKeyPair	The operation that you want to perform. Set the value to ImportKeyPair.

Response parameters

Name	Type	Example	Description
KeyPairFingerPrint	String	89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:d7	The fingerprint of the key pair. MD5 is used based on the public key fingerprint format defined in RFC 4716. For more information, see RFC 4716.
KeyPairName	String	FinanceJoshauV24	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=xxxxxxxxxx
&KeyPairName=test
&<Common request parameters>
```

Successful response examples

XML format

```
<ImportKeyPairResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <KeyPairName>test</KeyPairName>
  <KeyPairFingerPrint>89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:d7</KeyPairFingerPrint>
</ImportKeyPairResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "KeyPairFingerPrint": "89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:d7",
  "KeyPairName": "test"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	QuotaExceed. KeyPair	The key pair quota exceeds.	The error message returned when the number of key pairs reaches the upper limit.
400	InvalidPublicKeyBody. Malformed	The PublicKeyBody format is not supported.	The error message returned when 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 when the required PublicKeyBody parameter is not specified.
400	KeyPair. AlreadyExist	The key pair already exist.	The error message returned when a key pair already exists. Duplicate key pairs cannot be added.

[View error codes](#)

15.3 AttachKeyPair

Attaches an SSH key pair to one or multiple Linux-based instances.

Description

When you call this operation, note that:

- SSH key pairs are not supported on Windows-based instances.
- Once an SSH key pair is attached to an instance, the username-password authentication method is disabled on the instance.
- If an instance is in the Running state, call [RebootInstance](#) to restart the instance for the operation to take effect.
- If an instance is in the Stopped state, call [StartInstance](#) to start the instance for the operation 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

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId s	String	Yes	["i-xxxxxxx", "i-yyyyyyyy", ... "i-zzzzzzzz" "]	The IDs of instances to which you want to attach an SSH key pair. The value can contain a JSON array consisting of up to 50 instance IDs. The IDs must be separated by commas (,).
KeyPairName	String	Yes	FinanceJoshuaV25	The name of the SSH key pair.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the SSH key pair resides. You can call DescribeRegions to view the latest list of Alibaba Cloud regions.
Action	String	No	AttachKeyPair	The operation that you want to perform. Set the value to AttachKeyPair.

Response parameters

Name	Type	Example	Description
FailCount	String	0	The number of instances to which key pairs fail to be attached.
KeyPairName	String	FinanceJoshuaV25	The name of a key pair.

Name	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Results			The result set of attachment operations.
└Code	String	200	The operation status code returned . 200 indicates that the operation is successful.
└InstanceId	String	i-instanceid1	The ID of an instance.
└Message	String	successful	The operation information returned. When the value of code is 200, the value of message becomes successful.
└Success	String	true	The message returned indicating whether the operation is successful .
TotalCount	String	2	The total number of instances to which key pairs are bound.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AttachKeyPair
&InstanceId.s=["i-xxxxxxxx", "i-yyyyyyyy", ... "i-zzzzzzzz"]
&KeyPairName=FinanceJos_huaV25
&RegionId=cn-hangzhou
&<Common request parameters>
```

Successful response examples

XML format

```
<AttachKeyPairResponse>
  <TotalCount>2</TotalCount>
```



```

< RequestId > 4ADF7A06 - 66BD - 4FBF - A2ED - 2364E41D8C 06 </
RequestId >< RequestId > 4ADF7A06 - 66BD - 4FBF - A2ED - 2364E41D8C
06 </ RequestId >
< Results >
  </ Result >
    < Message > AccessDeni ed </ Message >
    < InstanceId > i - m5eg7be9nd loji64jknv </ InstanceId >
    < Success > true </ Success >
    < Code > 200 </ Code >
  </ Result >
  </ Result >
    < Message > AccessDeni ed </ Message >
    < InstanceId > i - m5e25x2mwr 0hk33dwv0h </ InstanceId >
    < Success > true </ Success >
    < Code > 200 </ Code >
  </ Result >
</ Results >
< FailCount > 0 </ FailCount >
</ AttachKeyP airRespons e >

```

JSON format

```

{
  " TotalCount ": 2 ,
  " RequestId ":" 4ADF7A06 - 66BD - 4FBF - A2ED - 2364E41D8C 06 ",
  " Results ":{
    " Result ":[
      {
        " Message ":" successful ",
        " InstanceId ":" i - m5eg7be9nd loji64jknv ",
        " Success ": true ,
        " Code ":" 200 "
      },
      {
        " Message ":" successful ",
        " InstanceId ":" i - m5e25x2mwr 0hk33dwv0h ",
        " Success ": true ,
        " Code ":" 200 "
      }
    ]
  },
  " FailCount ": 0
}

```

Error codes

HTTP status code	Error code	Error message	Description
403	Dependency Violation. WindowsInstance	The instance creating is windows, cannot use ssh key pair to login	The error message returned when you cannot detach key pairs from the specified Windows-based instance.

HTTP status code	Error code	Error message	Description
400	Dependency Violation. IoOptimize	The specified parameter InstanceIds is not valid.	The error message returned when the specified instance ID is invalid.

[View error codes](#)

15.4 DetachKeyPair

Detaches SSH key pairs from one or multiple Linux-based instances.

Description

When you call this operation, note that:

- After you detach an SSH key pair, you must restart the instance ([RebootInstance](#)) for the operation to take effect.
- After an SSH key pair is detached from an instance, the account-password authentication method is used by default.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceIds	String	Yes	["d-xxxxxxxxx", "d-yyyyyyyyyy", ... "d-zzzzzzzzzz"]	The IDs of instances from which SSH key pairs are detached. The value can be a JSON array consisting of up to 50 instance IDs. Multiple IDs must be separated by commas (,).

Name	Type	Required	Example	Description
KeyPairName	String	Yes	FinanceJoshuaV26	The SSH key pair names.
RegionId	String	Yes	cn-hangzhou	The ID of the region where an SSH key pair resides. You can call DescribeRegions to view the latest list of Alibaba Cloud regions.
Action	String	No	DetachKeyPair	The operation that you want to perform. Set the value to DetachKeyPair.

Response parameters

Name	Type	Example	Description
FailCount	String	0	The number of instances from which key pairs fail to be detached.
KeyPairName	String	FinanceJoshuaV26	The name of a key pair.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request. This parameter is returned regardless of whether the operation is successful.
Results			The result set of detach operation.
$\angle$ Code	String	200	The operation status code returned. 200 indicates that the operation is successful.
$\angle$ InstanceId	String	i-instanceid1	The ID of an instance.

Name	Type	Example	Description
<code>Message</code>	String	successful	The operation information returned. When the value of code is 200, the value of message is successful.
<code>Success</code>	String	true	The message returned indicating whether the operation is successful.
<code>TotalCount</code>	String	2	The total number of instances from which key pairs are detached.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DetachKeyPair
&RegionId=cn-qingdao
&InstanceId=i-xxxxxxx,"i-yyyyyy"]
&KeyPairName=test
&<Common request parameters>
```

Successful response examples

XML format

```
<DetachKeyPairResponse>
  <TotalCount>2</TotalCount>
  <RequestId>834B3E6B-2D1D-482F-81A4-810C327D4735</RequestId>
  <Results>
    <Result>
      <Message>AccessDenied</Message>
      <InstanceId>i-m5eg7be9ndloji64jknv</InstanceId>
      <Success>true</Success>
      <Code>200</Code>
    </Result>
    <Result>
      <Message>successful</Message>
      <InstanceId>i-m5e25x2mwr0hk33dvv0h</InstanceId>
      <Success>true</Success>
      <Code>200</Code>
    </Result>
  </Results>
  <FailCount>0</FailCount>
```

```
</ DetachKeyPairResponse >
```

JSON format

```
{
  "TotalCount": 2,
  "RequestId": "834B3E6B - 2D1D - 482F - 81A4 - 810C327D47 35",
  "Results": {
    "Result": [
      {
        "Message": "successful",
        "InstanceId": "i-m5eg7be9nd-loji64jknv",
        "Success": true,
        "Code": "200"
      },
      {
        "Message": "successful",
        "InstanceId": "i-m5e25x2mwr-0hk33dwv0h",
        "Success": true,
        "Code": "200"
      }
    ]
  },
  "FailCount": 0
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	Dependency Violation. WindowsInstance	The instance creating is windows, cannot use ssh key pair to login	The error message returned when you cannot detach key pairs from the specified Windows-based instance.

[View error codes](#)

15.5 DeleteKeyPairs

Deletes one or multiple SSH key pairs. The entry of a deleted SSH key pair is removed from the database. However, the instances bound with the SSH key pair can still use it.

Description

When you call this operation, note that:

- After you delete an SSH key pair, this pair cannot be returned in response to [DescribeKeyPairs](#).
- When you call [DescribeInstances](#) to query instance information, the SSH key pair name (KeyPairNames) is still returned, but without any other information.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
KeyPairNames	String	Yes	["key-xxxxxxxx", "key-yyyyyyyy", ... "key-zzzzzzzz"]	The SSH key pair names. The value can be a JSON array consisting of up to 100 SSH key pairs. Multiple key pairs must be separated by commas (,).
RegionId	String	Yes	cn-hangzhou	The ID of the region where a SSH key pair resides. You can call DescribeRegions to view the latest list of Alibaba Cloud regions.
Action	String	No	DeleteKeyPairs	The operation that you want to perform. Set the value to DeleteKeyPairs.

Response parameters

Name	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-qingdao
&KeyPairNames=test
&<Common request parameters>
```

Successful response examples

XML format

```
<DeleteKeyPairsResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C8-3E</
  RequestId>
</DeleteKeyPairsResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C8-3E"
}
```

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 when the required KeyPairNames parameter is not specified.
400	InvalidKeyPairNames.ValueNotSupported	The specified parameter "KeyPairNames" is not valid.	The error message returned when the KeyPairNames parameter is invalid.

[View error codes](#)

15.6 DescribeKeyPairs

Queries one or more key pairs.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where a key pair resides. You can call DescribeRegions to view the latest list of Alibaba Cloud regions.
Action	String	No	DescribeKeyPairs	The operation that you want to perform. Set the value to DescribeKeyPairs.
KeyPairFingerprint	String	No	XXXXXXXXXX	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 .

Name	Type	Required	Example	Description
KeyPairName	String	No	*Finance*	The name of the key pair. The asterisk (*) symbol can be used as a wild card in regular expressions to query key pairs by fuzzy match. Sample patterns: • *SshKey: queries key pair names ending with SshKey, including SshKey. • SshKey *: queries key pair names starting with SshKey, including SshKey. • * SshKey *: queries key pair names that contain SshKey. • SshKey: queries SshKey by exact match.
PageNumber	Integer	No	1	The page number to be queried in the SSH key pair list. Starting value: 1. Default value: 1.
PageSize	Integer	No	10	The number of entries per page . Maximum Value: 50 Default value: 10
ResourceGroupId	String	No	rg-resourcegroupid1	The ID of the resource group that hosts the key pair.

Name	Type	Required	Example	Description
Tag . N . Key	String	No	FinanceDept	The tag key of the key pair. Valid values of N: 1 to 20. It cannot be an empty string. It must be no more than 64 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https://.
Tag . N . Value	String	No	FinanceDept. Joshua	The tag value of the key pair. Valid values of N: 1 to 20. It can be an empty string. It can be a maximum of 64 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https://.

Response parameters

Name	Type	Example	Description
KeyPairs			A set of key pairs.
[└] KeyPairFingerPrint	String	XXXXXXXXXXXX	The fingerprint of the key pair.
[└] KeyPairName	String	FinanceJoshuaV27	The name of the key pair.
[└] ResourceGroupId	String	rg-resourcegroupid1	The ID of the resource group.
[└] Tags			The tags of the key pair.
[└] TagKey	String	FinanceDept	The tag key of the key pair.
[└] TagValue	String	FinanceDept. Joshua	The tag value of the key pair.

Name	Type	Example	Description
PageNumber	Integer	1	The current page number.
PageSize	Integer	10	The number of entries per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request. This parameter is returned regardless of whether the operation is successful.
TotalCount	Integer	1	The total number of key pairs.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeKeyPairs
&RegionId=cn-qingdao
&KeyPairFilter.Print=xxxxxxxxxx
&KeyPairName=test
&PageNumber=1
&PageSize=20
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeKeyPairsResponse>
  <PageNumber>1</PageNumber>
  <PageSize>2</PageSize>
  <TotalCount>1</TotalCount>
  <KeyPairs>
    <KeyPair>
      <KeyPairName>test</KeyPairName>
      <KeyPairFilter.Print>xxxxxxxxxx</KeyPairFilter.Print>
    </KeyPair>
  </KeyPairs>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DescribeKeyPairsResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 1,
  "KeyPairs": {
    "KeyPair": {
      "KeyPairFilter.Print": "xxxxxxxxxx",
```

```
    "KeyPairName": "test"
  }
],
"PageSize": 2,
"RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C8-3E"
}
```

Error codes

[View error codes](#)

16 Networks

16.1 AllocatePublicIpAddress

Assigns a public IP address to an instance.

Description

When you call this operation, note that:

- Before you can assign a public IP address to an instance, the instance must be in the Running or Stopped state.
- No public IP addresses can be assigned to a VPC-connected instance bound with an Elastic IP (EIP).
- You can assign only one public IP address to an instance. If an instance has a public IP address, the `AllocatedAlready` error message is returned.
- After you restart an instance ([RebootInstance](#)) or start an instance ([StartInstance](#)), the new public IP address takes effect.
- If an instance is [locked for security reasons](#) (the `OperationLocks` parameter is `"LockReason": "security"`), no public IP addresses can be assigned to the instance.

You can also bind an EIP to an instance. For more information, see [AssociateEipAddress](#).

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-instance1	The ID of the instance to be allocated an IP address.
Action	String	No	AllocatePublicIpAddress	The operation that you want to perform. Set the value to <code>AllocatePublicIpAddress</code> .

Name	Type	Required	Example	Description
IpAddress	String	No	10.1.149.159	The public IP address of an instance.
VlanId	String	No	100	The VLAN ID.

Response parameters

Name	Type	Example	Description
IpAddress	String	10.1.149.159	The public IP address of an instance.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AllocatePublicIpAddress
&InstanceId=i-instance1
&<Common request parameters>
```

Successful response examples

XML format

```
<AllocatePublicIpAddressResponse>
  <RequestId>F2EF6A3B-E345-46B9-931E-0EA094818567</RequestId>
  <IpAddress>10.1.149.159</IpAddress>
</AllocatePublicIpAddressResponse>
```

JSON format

```
{
  "RequestId": "F2EF6A3B-E345-46B9-931E-0EA094818567",
  "IpAddress": "10.1.149.159"
```

}

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidVlanId.NotFound	The VlanId provided does not exist in our records.	The error message returned when the ID of the specified VLAN 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 when the subscription of an instance has expired. You need to renew the subscription before proceeding.
404	InvalidIpAddress.NotFound	The specified IP is not in the specified vlan.	The error message returned when the specified IP address is not in the specified VLAN.
403	AllocatedAlready	There is an IpAddress allocated already for the specified instance.	The error message returned when you try to assign a specified IP address to an instance that already has an IP address.
400	OperationDenied	Specified operation is denied as your instance is in VPC.	The error message returned when the specified operation does not support VPC-connected instances.
400	AllocateIpInvalidInstanceBandwidth	OperationDenied The InternetMaxBandwidth Out of the specified instance cannot be less than 0.	The error message returned when the Internet bandwidth is less than 0.

HTTP status code	Error code	Error message	Description
400	OperationDenied	The specified parameter "VlanId" is not valid or vlan has not enough IP address.	The error message returned when the specified VLAN ID is invalid or the number of IP addresses in the VLAN reaches the upper limit.
403	NAT_PUBLIC_IP_BINDING_FAILED	Binding nat public ip failed	The error message returned when you fail to bind a public IP address to an instance.
403	NAT_PUBLIC_IP_ALLOCATION_FAILED	Nat public ip binding failed.	The error message returned when ECS fails to assign a public IP address to an instance.

[View error codes](#)

16.2 ConvertNatPublicIpToEip

Converts the public IP address of a VPC-connected ECS instance to an Elastic IP (EIP) address.

Description

When you call this operation, note that:

- The network type of the instance must be VPC.
- The ECS instance must be in either Stopped or Running state.
- The operation fails if no public IP address is assigned to the ECS instance.
- The operation fails if the ECS instance is bound to an EIP.
- The operation fails if the ECS instance has any inactivated specification changes.
- The operation fails if the instance expires in 24 hours.
- After you convert the public IP address to an EIP address, EIP is billed separately.
- The operation fails if the [public network bandwidth](#) of the [subscription-based](#) ECS instance is billed by bandwidth.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-test	The ID of the instance for which you want to convert its public IP address to an EIP address.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the instance resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	ConvertNatPublicIpToEip	The operation that you want to perform. Set the value to ConvertNatPublicIpToEip.

Response parameters

Name	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-test
&<Common request parameters>
```

Successful response examples

XML format

```
< ConvertNat PublicIpTo EipResponse >
  < RequestId > B154D309 - F3E1 - 4AB7 - BA94 - FECA8B890 01 </
    RequestId >
</ ConvertNat PublicIpTo EipResponse >
```

JSON format

```
{
  "RequestId ":" B154D309 - F3E1 - 4AB7 - BA94 - FECA8B890 01 "
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidInstanceId.PlannedChange	%s	The error message returned when the instance has incomplete changes.
403	InvalidInstanceState.Released	%s	The error message returned when the specified instance state is invalid.
403	IncorrectInstanceState	%s	The error message returned when the specified resource is in a state that does not support the current operation.
404	InvalidInstanceId.NotFound	%s	The error message returned when the specified instance does not exist.
403	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned when the InternetChargeType parameter is invalid.
403	MaxEIPQuotaExceeded	The number of EIP exceeds the limit per region.	The error message returned when the number of EIPs exceeds the limit in the region.

HTTP status code	Error code	Error message	Description
403	InvalidInstance. OverduePayment	%s	The error message returned when an account has overdue payments . You need to top up your account before proceeding.

[View error codes](#)

16.3 AttachClassicLinkVpc

Links a classic network instance to the [Virtual Private Cloud \(VPC\)](#), which allows the classic network instance communicating with the resources that are in the intranet of a VPC. For more information, see *VPC* topic [ClassicLink overview](#).

Description

When you call this interface, consider the following:

- The instance must be in the Running (`Running`) or Stopped (`Stopped`) status.
- The ClassicLink service must be enabled for the specified VPC. For more information, see *VPC* topic [Build ClassicLink connection](#).
- The classic network instance and the VPC must be in the same Alibaba Cloud region.

Request parameters

Name	Type	Required	Description
Action	String	Yes	The name of this interface. Value: AttachClassicLinkVpc.
RegionId	String	Yes.	Region ID of the instance. For more information, see DescribeRegions to obtain the latest region list.

Name	Type	Required	Description
InstanceId	String	Yes.	ID of the classic network instance. You can call DescribeInstances to obtain all of your instance IDs.
VpcId	String	Yes.	ID of the ClassicLink enabled VPC. You can call DescribeVpcs to obtain all of your VPC IDs.

Response parameters

All are common response parameters. For more information, see [Common parameter](#).

Examples

Request example

```
https://ecs.aliyuncs.com/?Action=AttachClassicLinkVpc
&RegionId=cn-hangzhou
&InstanceId=i-test
&VpcId=vpc-test
<CommonRequestParameters>
```

Response example

XML format

```
<AttachClassicLinkVpcResponse>
  <RequestId>C0003E8B-B930-4F59-ADC0-0E209A9012A8</
  RequestId>
</AttachClassicLinkVpcResponse>
```

JSON format

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

Error codes

The following error codes are specific to this interface. For more error codes, visit the [API error center](#).

Error code	Error information	HTTP status code	Description
Abs.InvalidInstanceId.Malformed	The specified instance has already been linked to another VPC.	400	The specified instance is already linked to another VPC.
InvalidInstanceId.Malformed	The specified instance is not a classic network type instance.	400	The network type of the specified instance is not a classic network.
InvalidRegionId.Malformed	The specified RegionId is invalid.	400	The specified <code>RegionId</code> does not exist or you are not authorized to access the specified region.
InvalidVpcId.Malformed	The specified VpcId is invalid.	400	The specified <code>VpcId</code> is invalid.
InvalidInstanceId.NotBelong	The user does not own the specified instance.	403	The specified instance does not belong to you.
InvalidStatus.InstanceLocked	The specified instance is in another processing list.	403	The specified instance is processing another task.
InvalidStatus.InstanceStatus	Only the Running or Stopped InstanceStatus is allowed.	403	The specified instance must be in the Running (<code>Running</code>) or Stopped (<code>Stopped</code>) status.
OperationDenied	The specified VPC are unable to attach ClassicLink.	403	The specified VPC cannot enable ClassicLink.

Error code	Error information	HTTP status code	Description
QuotaExceeded	The maximum number of links in the specified VPC exceeds.	403	The number of available links for the current VPC has reached the upper limit, up to 1000 classic network type instances are allowed to connect to the same VPC.
InvalidInstanceId. NotFound	The specified InstanceId does not exist.	404	The specified <code>InstanceId</code> does not exist.

16.4 DetachClassicLinkVpc

Unlinks a classic network-connected instance from the VPC. After the ClassicLink is disabled, the classic network-connected instance cannot access the VPC.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-test	The ID of the classic network-connected instance.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the instance resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
VpcId	String	Yes	vpc-test	The ID of the VPC to which the instance is linked.

Name	Type	Required	Example	Description
Action	String	No	DetachClassicLinkVpc	The operation that you want to perform. Set the value to DetachClassicLinkVpc.

Response parameters

Name	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-test
&InstanceId=i-test
&<Common request parameters>
```

Successful response examples

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	InvalidRegionId.Malformed	The specified parameter ? RegionId? is not valid.	The error message returned when the specified region ID is invalid.

HTTP status code	Error code	Error message	Description
403	OperationDenied	The instances are not allowed to detach from the linked vpc.	The error message returned when the linked instance cannot be detached from the VPC.
403	InvalidStatus. InstanceStatus	The specified instance status is not support this operation ,expect status is running or shutted.	The error message returned when the operation is not supported under the instance state . The expected state is Running or Shutted.
403	Forbidden. SubUser	User not authorized to operate on the specified resource.	The error message returned when the RAM user is not authorized to perform operations on this resource.

[View error codes](#)

16.5 DescribeBandwidthLimitation

Queries a list of bandwidth resources.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where an instance resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.

Name	Type	Required	Example	Description
Action	String	No	DescribeBandwidthLimitation	The operation that you want to perform. Set the value to DescribeBandwidthLimitation.
InstanceChargeType	String	No	PrePaid	The billing method of the instance. For more information, see Pricing overview . Valid values: - PrePaid: the subscription-based billing method. - PostPaid: the Pay-As-You-Go billing method. Default value: PostPaid.
InstanceType	String	No	ecs.g5.large	The type of the instance. For more information, see Instance type families , or call the DescribeInstanceTypes to query latest instance types.
OperationType	String	No	Upgrade	Specifies bandwidth operations. Valid values: - Upgrade - Downgrade - Create Default value: Create.
ResourceId	String	No	s-946ntx4xx	The ID of the resource. When you set the OperationType parameter to Upgrade or Downgrade, the ResourceId parameter is required.

Name	Type	Required	Example	Description
SpotStrategy	String	No	NoSpot	The spot strategy for a Pay-As-You-Go instance. Valid values: • NoSpot: indicates a regular Pay-As-You-Go instance. • SpotWithPriceLimit: indicates a Pay-As-You-Go instance with the maximum hourly price. • SpotAsPriceGo: indicates that the system automatically offers a spot hourly price for an instance based on the supply-demand statistics. The spot price is limited to the cost of resources you actually use. Default: NoSpot. The SpotStrategy parameter is applicable only when the InstanceChargeType parameter is set to PostPaid.

Response parameters

Name	Type	Example	Description
Bandwidths			The bandwidth types.
[⌞] InternetChargeType	String	PayByTraffic	The bandwidth billing method. Valid values: • PayByBandwidth: You are billed based on the fixed amount of bandwidth. • PayByTraffic

Name	Type	Example	Description
$\perp$ Max	Integer	100	The maximum bandwidth. No value is returned if the parameter is empty.
$\perp$ Min	Integer	0	The minimum bandwidth. No value is returned if the parameter is empty.
$\perp$ Unit	String	Mbps	The bandwidth unit. No value is returned if the parameter is empty.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

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

Successful response examples

XML format

```
<DescribeBandwidthLimitationResponse>
  <Bandwidths>
    <Bandwidth>
      <InternetChargeType>PayByTraffic</InternetChargeType>
    >
      <Max>100</Max>
      <Min>0</Min>
      <Unit>Mbps</Unit>
    </Bandwidth>
    <Bandwidth>
      <InternetChargeType>PayByTraffic</InternetChargeType>
    >
      <Max>100</Max>
      <Min>0</Min>
      <Unit>Mbps</Unit>
    </Bandwidth>
  </Bandwidths>
  <RequestId>675B6D89-A3EB-4987-BAF3-610591E0D019</RequestId>
```

```
</ DescribeBandwidthLimitationResponse >
```

JSON format

```
{
  "RequestId ":" 675B6D89 - A3EB - 4987 - BAF3 - 610591E0D0 19 ",
  "Bandwidths ":{
    "Bandwidth ":[
      {
        "Max ": 100 ,
        "InternetChargeType ":" PayByTraffic ",
        "Unit ":" Mbps ",
        "Min ": 0
      },
      {
        "Max ": 100 ,
        "InternetChargeType ":" PayByTraffic ",
        "Unit ":" Mbps ",
        "Min ": 0
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	Invalid.InstanceChargeType	The specified InstanceChargeType is not valid.	The error message returned when the InstanceChargeType parameter is invalid.
404	Invalid.NetworkCategory	The specified NetworkCategory is not valid.	The error message returned when the NetworkCategory parameter is invalid.
404	Invalid.SpotStrategy	The specified SpotStrategy is not valid.	The error message returned when the SpotStrategy parameter is invalid.
404	Invalid.IoOptimized	The specified IoOptimized is not valid.	The error message returned when the IoOptimized parameter is invalid.

HTTP status code	Error code	Error message	Description
404	Invalid.ResourceId	The specified ResourceId is not valid.	The error message returned when the resource does not exist in the region or is released.
404	Invalid.InstancePayType	The specified InstancePayType is not valid.	The error message returned when the InstancePayType parameter is invalid.

[View error codes](#)

16.6 DescribeClassicLinkInstances

Queries one or multiple classic network-connected instances that have established ClassicLink with VPCs.

Description

When you call this operation, note that:

- This API only supports classic network-connected instances.
- You can query a maximum of 100 classic network-connected instances each time.
- Either the VpcId parameter or the InstanceId parameter must be specified.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where the instance resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.

Name	Type	Required	Example	Description
Action	String	No	DescribeClassicLinkInstances	The operation that you want to perform. Set the value to DescribeClassicLinkInstances.
InstanceId	String	No	i-test	The ID of the instance. You can specify a maximum of 100 instance IDs, which must be separated by commas (,).
PageNumber	String	No	1	The current page number. Starting value: 1. Default value: 1.
PageSize	String	No	10	The number of entries per page. . Valid values: 1 to 100. Default value: 10.
VpcId	String	No	vpc-test	The ID of the VPC. The ClassicLink service must be enabled for the specified VPC.

Response parameters

Name	Type	Example	Description
Links			The links between classic network-connected instances and VPCs.
└InstanceId	String	i-test	The ID of an instance.
└VpcId	String	vpc-test	The ID of a VPC.
PageNumber	Integer	1	The page number you query in the link list.
PageSize	Integer	10	The number of entries per page.

Name	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the API request.
TotalCount	Integer	2	The total number of links.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeClassicLinkInstances
&RegionId=cn-hangzhou
&VpcId=vpc-test
&InstanceId=i-test,i-test1
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeClassicLinkInstancesResponse>
  <RequestId>B154D309-F3E1-4AB7-BA94-FEFC8B890001</RequestId>
  <TotalCount>2</TotalCount>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <Links>
    <Link>
      <InstanceId>i-test</InstanceId>
      <VpcId>vpc-test</VpcId>
    </Link>
    <Link>
      <InstanceId>i-test1</InstanceId>
      <VpcId>vpc-test</VpcId>
    </Link>
  </Links>
</DescribeClassicLinkInstancesResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 2,
  "Links": {
    "Link": [
      {
        "InstanceId": "i-test",
        "VpcId": "vpc-test"
      },
      {
        "InstanceId": "i-test1",
        "VpcId": "vpc-test"
      }
    ]
  }
}
```

```
} ,  
" PageSize ": 10 ,  
" RequestId ":" B154D309 - F3E1 - 4AB7 - BA94 - FEFCA8B890 01 "  
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidInstanceId. NotBelong	The specified instance does not belong to you.	The error message returned when the specified instance does not exist under your account.

[View error codes](#)

16.7 ModifyInstanceNetworkSpec

Modifies the bandwidth configurations of an ECS instance. When the network specifications of an instance cannot meet your needs, you can modify its bandwidth configurations to improve network performance.

Description

When you call this operation, note that:

- When modifying the bandwidth configurations of a prepaid instance, you can perform the following operations:
 - When outbound bandwidth to the Internet is upgraded from 0 Mbit/s to a non-zero value, a public IP address is automatically allocated.
 - You can use this API to change the bandwidth billing method from PayByTraffic to PayByBandwidth. You can use [ECS console](#) to change the bandwidth billing method from PayByTraffic to PayByBandwidth.

- When modifying the bandwidth configurations of a postpaid instance, you can perform the following operations:
 - You can upgrade or downgrade the bandwidth.
 - When outbound bandwidth to the Internet is upgraded from 0 Mbit/s to a non-zero value, a public IP address is automatically allocated. You need to call [AllocatePublicIpAddress](#) to assign a public IP address to an instance.
- For a classic instance, when outbound bandwidth to the Internet is upgraded from 0 Mbit/s to a non-zero value, the instance must be in the Stopped state.
- After the bandwidth is upgraded, AutoPay is set to true by default. Make sure that your account has sufficient balance. Otherwise, your order becomes invalid and you have to cancel this order. If your account balance is insufficient, you can set the AutoPay parameter to false to generate a normal order. Then, you can log on to the [ECS console](#) to pay for the order.
- You can downgrade instance type for each prepaid instance three times at most, because the refund of price difference cannot exceed three times.
- The price difference will be refunded to your original form of payment. Used coupons cannot be refunded.
- Each time a downgrade operation is successful, you cannot perform another operation on that instance within five minutes.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-xxxxx1	The ID of the instance for which you want to modify network configurations.
Action	String	No	ModifyInstanceNetworkSpec	The operation that you want to perform. Set the value to <code>ModifyInstanceNetworkSpec</code> .

Name	Type	Required	Example	Description
AllocatePublicIp	Boolean	No	false	Indicates whether to allocate a public IP address. Default value: false.
AutoPay	Boolean	No	true	Indicates whether to enable AutoPay. Valid values: · true: After the bandwidth is upgraded, AutoPay is enabled. Make sure that your account has sufficient balance. Otherwise, your order becomes invalid and you have to cancel this order. · false: After the bandwidth is upgraded, an order is generated and fees are not deducted. If your account balance is insufficient, you can set the AutoPay parameter to false to generate a normal order. Then, you can log on to the ECS console to pay for the order. Default value: true.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. It can be a maximum of 64 characters in length. For more information, see How to ensure idempotency .

Name	Type	Required	Example	Description
EndTime	String	No	2017-12-06T22Z	The time when bandwidth update ends. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddThhZ.
InternetMaxBandwidthIn	Integer	No	10	The maximum inbound bandwidth from the Internet. Unit: Mbit/s. Valid values: 1 to 200.
InternetMaxBandwidthOut	Integer	No	10	The maximum outbound bandwidth to the Internet. Unit: Mbit/s. Valid values: 0 to 100.
NetworkChargeType	String	No	PayByTraffic	The bandwidth billing method. Valid values: PayByTraffic: traffic-based billing method.
StartTime	String	No	2017-12-05T22:40Z	The time when bandwidth upgrade starts. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddThh:mmZ.

Response parameters

Name	Type	Example	Description
OrderId	String	1111111111 111111111111110	The ID of the generated order.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the API request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceNetworkSpec
&RegionId=cn-hangzhou
&InstanceId=i-xxxxx1
&InternetMaxBandwidthOut=10
&ClientToken=xxxxxxxxxxxx
<Common request parameters>
```

Successful response examples

XML format

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

JSON format

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

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInternetMaxBandwidthIn.ValueNotSupported	The specified InternetMaxBandwidthIn is beyond the permitted range.	The error message returned when the specified InternetMaxBandwidthIn parameter is invalid.
400	InvalidInternetMaxBandwidthOut.ValueNotSupported	The specified InternetMaxBandwidthOut is beyond the permitted range.	The error message returned when the specified InternetMaxBandwidthOut parameter is invalid.
403	IncorrectInstanceStatus	The current state of the instance does not support this operation.	The error message returned when this operation is not supported under the instance state.

HTTP status code	Error code	Error message	Description
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned when the subscription of the instance has expired. You must renew the subscription before proceeding.
403	ChargeTypeViolation	The operation is not permitted due to billing method of the instance.	The error message returned when the billing method of the instance is not supported.
400	OperationDenied	Specified instance is in VPC.	The error message returned when the specified instance is VPC-connected.
400	InvalidParameter.Bandwidth	%s	The error message returned when the parameter value is invalid.
400	InvalidParameter.Conflict	%s	The error message returned when parameter values conflict.
400	InvalidStartTime.ValueNotSupported	%s	The error message returned when the end time precedes the start time.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned when outstanding orders exist in your account.
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is invalid.	The error message returned when the specified bandwidth billing method is invalid.
400	DecreasedBandwidthNotAllowed	%s	The error message returned when the bandwidth cannot be downgraded.

HTTP status code	Error code	Error message	Description
400	BandwidthUpgradeDenied. EipBoundInstance	The specified VPC instance has bound EIP , temporary bandwidth upgrade is denied.	The error message returned when the instance cannot be upgraded because it is bound with an EIP.
403	InvalidAccountStatus. NotEnoughBalance	Your account does not have enough balance.	The error message returned when your account balance is insufficient. You need to top up your account before proceeding.
403	InvalidInstance. UnpaidOrder	The specified Instance has unpaid order.	The error message returned when outstanding orders exist in your account. You need to pay for the orders before proceeding.
400	IpAllocationError	Allocate public ip failed.	The error message returned when allocation of public IP addresses fails.
400	InvalidParam. AllocatePublicIp	The specified param AllocatePublicIp is invalid .	The error message returned when the specified AllocatePublicIp parameter is invalid.
400	InstanceDowngrade. QuotaExceed	Quota of instance downgrade is exceed.	The error message returned when the instance has been downgraded the allowed times.
400	InvalidBandwidth. ValueNotSupported	Instance upgrade bandwidth of temporary not allow less then existed .	The error message returned when you select a lower bandwidth for instance update.

HTTP status code	Error code	Error message	Description
403	InvalidInstance. InstanceNotSupported	The special vpc instance with eip not need bandwidth.	The error message returned when you specify the bandwidth for a VPC-connected instance bound with an EIP.
400	InvalidInstanceStatus	The specified instance state does not support this action.	The error message returned when this operation is not supported under the instance state.
403	InvalidInstanceStatus	The current state of the instance does not support this operation.	The error message returned when this operation is not supported under the instance state.
400	InvalidInstance. UnpaidOrder	Unpaid order exists in your account, please complete or cancel the payment in the expense center.	The error message returned when outstanding orders exist in your account.

[View error codes](#)

17 Elastic network interfaces

17.1 CreateNetworkInterface

Creates an Elastic Network Interface (ENI).

Description

- A newly created ENI is in the Available state.
- An ENI can only be attached to a VPC-connected instance in the same zone.
- An ENI can only be attached to one instance. Before you attach an ENI to another instance, you need to detach it from the current instance.
- When an ENI is attached to another instance, its properties remain unchanged and its data traffic is redirected to the new instance.
- One Alibaba Cloud account can have a maximum of 100 ENIs in a region by default. You can [submit a ticket](#) to apply for more ENIs.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where an instance resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
SecurityGroupId	String	Yes	sg-c0003exxxx	The ID of the security group to which an instance belongs. The security group and instance must be in the same VPC.
VSwitchId	String	Yes	[vswitchid]	The ID of the VSwitch in the VPC.

Name	Type	Required	Example	Description
Action	String	No	CreateNetworkInterface	The operation that you want to perform. Set the value to CreateNetworkInterface.
ClientToken	String	No	xxxxx	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. It can be a maximum of 64 characters in length. For more information, see How to ensure idempotency .
Description	String	No	test	The ENI description. The description must be 2 to 256 characters in length and cannot start with http:// or https://. Default value: null.
NetworkInterfaceName	String	No	eni-eniname1	The ENI name. 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 (-). Default value: null.

Name	Type	Required	Example	Description
PrimaryIpAddress	String	No	172.17. XX. XXX	The primary private IP address of the ENI. The specified IP address must be idle within the CIDR block of the VSwitch. If an IP address is not specified , an idle IP address of the VSwitch will be selected at random.
ResourceGroupId	String	No	rg-resourcegroupid1	The ID of the resource group.
Tag . N . Key	String	No	test	The tag key of the ENI. Valid values of N: 1 to 20. It cannot be a null string. It can be a maximum of 64 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https://.
Tag . N . Value	String	No	api	The tag value of the ENI. Valid values of N: 1 to 20. It can be a null string. It can be a maximum of 128 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https://.

Response parameters

Name	Type	Example	Description
NetworkInterfaceId	String	eni-enilxxxxx	The ENI ID.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https :// ecs . aliyuncs . com /? Action = CreateNetw  orkInterfa
ce
& RegionId = cn - hangzhou
& SecurityGr  oupId = sg - c0003exxxx  x
& VSwitchId =[ vswitchid ]
& Tag . 1 . Key = test
& Tag . 1 . Value = api
& ResourceGr  oupId = rg - resourcegr  oupid1
& PrimaryIpA  ddress = 172 . 17 . XX . XXX
& NetworkInt  erfaceName = eni - eniname1
& Descriptio  n = test
& ClientToke  n = xxxxxxxxxx
&< Common  request  parameters >
```

Successful response examples

XML format

```
< CreateNetw  orkInterfa  ceResponse >
  < RequestId > 04F0F334 - 1335 - 436C - A1D7 - 6C044FExxx  xx </
  RequestId >
  < NetworkInt  erfaceId > eni - eniIxxxxx </ NetworkInt  erfaceId >
</ CreateNetw  orkInterfa  ceResponse >
```

JSON format

```
{
  " RequestId ":" 04F0F334 - 1335 - 436C - A1D7 - 6C044FExxx  xx ",
  " NetworkInt  erfaceId ":" eni - eniIxxxxx "
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType. NotSupported	%s	The error message returned when your account type is not supported.
403	Abs.InvalidAcc ount.NotFound	%s	The error message returned when your Alibaba Cloud account does not exist or your AccessKey has expired.

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned when a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned when RAM users are not allowed to perform this operation.
400	UnsupportedParameter	%s	The error message returned when a parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned when the RAM user is not authorized to perform operations on this resource.
400	InvalidParameter	%s	The error message returned when the parameter format is incorrect.
400	InvalidInstanceId.MalFormed	%s	The error message returned when the instance ID format is incorrect.
400	InvalidOperation.InvalidEcsState	%s	The error message returned when the private IP address cannot be released under the instance state.
400	InvalidOperation.InvalidEniState	%s	The error message returned when the private IP address cannot be released under the ENI state.

HTTP status code	Error code	Error message	Description
400	InvalidOperation. DetachPrimaryEniNotAllowed	%s	The error message returned when the primary ENI cannot be detached from the instance.
404	InvalidEcsId. NotFound	%s	The error message returned when the specified instance ID does not exist.
404	InvalidEniId. NotFound	%s	The error message returned when the specified ENI ID does not exist.
404	InvalidVSwitchId. NotFound	%s	The error message returned when 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	EniPerInstanceLimitExceeded	%s	The error message returned when the number of ENIs exceeds the upper limit for the specified ECS instance type.
403	InvalidOperation. AvailabilityZoneMismatch	%s	The error message returned when the specified VPC VSwitch, ENI, and instance do not belong to the same zone.
403	InvalidOperation. VpcMismatch	%s	The error message returned when the specified ENI and security group do not belong to the same VPC.

HTTP status code	Error code	Error message	Description
403	SecurityGroupInstanceLimitExceed	%s	The error message returned when the number of instances in the specified security group exceeds the upper limit.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned when the specified security group is not VPC-connected.
403	InvalidOperation.InvalidEniType	%s	The error message returned when the ENI type does not support the operation.
403	InvalidVSwitchId.IpNotEnough	%s	The error message returned when the number of IP addresses in the specified VSwitch is insufficient.
403	InvalidVSwitchId.IpInvalid	%s	The error message returned when the specified private IP address is invalid.
400	Forbidden.RegionId	%s	The error message returned when the function is not supported in this region.

[View error codes](#)

17.2 AttachNetworkInterface

Attaches an ENI to a VPC-connected instance.

Description

- The ENI must be in the Available state.
- The instance must be in the Running or Stopped state.

- An ENI can only be attached to a VPC-connected ECS instance, and the ENI must belong to the same VPC as the ECS instance.
- One ENI can only be attached to one instance.
- An instance can be attached with multiple ENIs. For more information about the maximum number of ENIs that can be attached to each instance type, see [Elastic network Interface](#).
- Because a VSwitch of a VPC can only be located in a single zone, ensure that the ECS instance to be attached to an ENI is in the same zone as the VSwitch that hosts the ENI.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can call APIs, dynamically generate SDK example code, and quickly retrieve APIs.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-myInstance	The ID of the instance.
NetworkInterfaceId	String	Yes	[networkInterfaceId]	The ID of the ENI.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the ECS instance resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	AttachNetworkInterface	The operation that you want to perform. Set the value to AttachNetworkInterface.

Response parameters

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

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AttachNetworkInterface
&InstanceId=i-myInstance
&NetworkInterfaceId=[networkInterfaceId]
&RegionId=cn-hangzhou
<Common request parameters>
```

Successful response examples

XML format

```
<AttachNetworkInterfaceResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxx-xx</
  RequestId>
</AttachNetworkInterfaceResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxx-xx"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned when your account type is not supported.
403	Abs.InvalidAccount.NotFound	%s	The error message returned when the specified Alibaba Cloud account does not exist or your AccessKey has expired.
400	MissingParameter	%s	The error message returned when a required parameter is not specified.

HTTP status code	Error code	Error message	Description
403	Forbidden. NotSupportRAM	%s	The error message returned when RAM users are not allowed to perform this operation.
400	Unsupporte dParameter	%s	The error message returned when a parameter is not supported.
403	Forbidden. SubUser	%s	The error message returned when a RAM user is unauthorized to perform operations on this resource.
400	InvalidPar ameter	%s	The error message returned when the parameter format is invalid.
400	InvalidIns tanceId. MalFormed	%s	The error message returned when the instance ID format is invalid.
400	InvalidOperation .InvalidRegion	%s	The error message returned when the specified region ID is invalid.
400	InvalidOperation .InvalidEcsState	%s	The error message returned when the private IP address cannot be released under the instance state.
400	InvalidOperation .InvalidEniState	%s	The error message returned when the private IP address cannot be released under the ENI state.

HTTP status code	Error code	Error message	Description
400	InvalidOperation. DetachPrimaryEniNotAllowed	%s	The error message returned when the primary ENI cannot be detached from its instance.
404	InvalidEcsId. NotFound	%s	The error message returned when the specified instance ID does not exist.
404	InvalidEniId. NotFound	%s	The error message returned when the specified ENI ID does not exist.
404	InvalidVSwitchId. NotFound	%s	The error message returned when 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	EniPerInstanceLimitExceeded	%s	The error message returned when the number of ENIs exceeds the upper limit for the specified instance type.
403	InvalidOperation. AvailabilityZoneMismatch	%s	The error message returned when the specified VSwitch, ENI, and instance do not belong to the same zone.
403	InvalidOperation. VpcMismatch	%s	The error message returned when the specified ENI and security group do not belong to the same VPC.

HTTP status code	Error code	Error message	Description
403	SecurityGroupInstanceLimitExceed	%s	The error message returned when the number of instances in the specified security group exceeds the upper limit.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned when the specified security group is not VPC-connected.
403	InvalidOperation.InvalidEniType	%s	The error message returned when the ENI type is not supported.
400	Forbidden.RegionId	%s	The error message returned when this function is not supported in the region.
403	InvalidInstanceId.NotFound	%s	The error message returned when the specified instance does not exist.
400	InvalidOperation.InvalidGeneration	%s	The error message returned when the instance type is not supported.

[View error codes](#)

17.3 AssignPrivateIpAddresses

Assigns one or multiple secondary private IP addresses to an ENI. You can specify private IP addresses within the CIDR block of the VSwitch that hosts the ENI.

Alternatively, you can specify the number of private IP addresses for ECS to assign them automatically.

Description

- The ENI to which you want to assign IP addresses must be in the Available or InUse state.
- When you perform operations on the primary ENI, the instance to which the ENI is attached must be in the Running or Stopped state.
- When an ENI is in the Available state, you can assign up to 10 secondary private IP addresses to the ENI. When an ENI is attached 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 type families](#).

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can call APIs, dynamically generate SDK example code, and quickly retrieve APIs.

Request parameters

Name	Type	Required	Example	Description
NetworkInterfaceId	String	Yes	eni-myeni	The ID of the ENI.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the ECS instance resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	AssignPrivateIpAddresses	The operation that you want to perform. Set the value to AssignPrivateIpAddresses.

Name	Type	Required	Example	Description
PrivateIpAddress.N	RepeatList	No	172.17.XX.XXX	One or multiple secondary private IP addresses selected from the CIDR block of the VSwitch that hosts the ENI. Valid values of N: - When the ENI is in the Available state: 1 to 10. - When the ENI is in the InUse state: limited by the instance type. For more information, see Instance type families. You must specify either the PrivateIpAddress.N parameter or the SecondaryPrivateIpAddressCount parameter to assign secondary private IP addresses.
SecondaryPrivateIpAddressCount	Integer	No	1	The specified number of private IP addresses to be assigned by the ECS instance.

Response parameters

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

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AssignPrivateIpAddresses
&NetworkInterfaceId=eni-myeni
&RegionId=cn-hangzhou
&PrivateIpAddress.1=172.17.XX.XXX
&SecondaryPrivateIpAddressCount=1
```

&< Common request parameters >

Successful response examples

XML format

```
< AssignPrivateIpAddressResponse >
  < RequestId > 04F0F334 - 1335 - 436C - A1D7 - 6C044FE700 08 </
    RequestId >
</ AssignPrivateIpAddressResponse >
```

JSON format

```
{
  "RequestId": "04F0F334 - 1335 - 436C - A1D7 - 6C044FE700 08 "
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned when your account type is not supported.
403	Abs.InvalidAccount.NotFound	%s	The error message returned when the specified Alibaba Cloud account does not exist or your AccessKey has expired.
403	MissingParameter	%s	The error message returned when a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned when RAM users are not allowed to perform this operation.
400	UnsupportedParameter	%s	The error message returned when a parameter is not supported.

HTTP status code	Error code	Error message	Description
403	Forbidden.SubUser	%s	The error message returned when a RAM user is not authorized to perform operations on this resource.
400	InvalidParameter	%s	The error message returned when the parameter format is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned when the instance ID format is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned when the private IP address cannot be released under the instance state.
400	InvalidOperation.InvalidEniState	%s	The error message returned when the private IP address cannot be released under the ENI state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned when the primary ENI cannot be detached from its instance .
404	InvalidEcsId.NotFound	%s	The error message returned when the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned when the specified ENI ID does not exist.

HTTP status code	Error code	Error message	Description
404	InvalidVSwitchId.NotFound	%s	The error message returned when 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	EniPerInstanceLimitExceeded	%s	The error message returned when the number of ENIs exceeds the upper limit for the specified instance type.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned when the specified VSwitch, ENI, and instance do not belong to the same zone.
403	InvalidOperation.VpcMismatch	%s	The error message returned when the specified ENI and security group do not belong to the same VPC.
403	SecurityGroupInstanceLimitExceeded	%s	The error message returned when the number of instances in the specified security group exceeds the upper limit.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned when the specified security group is not VPC-connected.
403	InvalidOperation.InvalidEniType	%s	The error message returned when the ENI type is not supported.

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	%s	The error message returned when the specified instance does not exist.
403	InvalidVSwitchId.IpNotEnough	%s	The error message returned when IP addresses in the specified VSwitch are insufficient.
403	InvalidVSwitchId.IpInvalid	%s	The error message returned when the specified private IP address is invalid.
403	InvalidIp.IpAssigned	%s	The error message returned when the specified IP address is already assigned.
403	Operation.Conflict	%s	The error message returned when operations conflict. You need to try again.
400	Forbidden.RegionId	%s	The error message returned when this function is not supported in the region.
400	InvalidAction	%s	The error message returned when the operation is invalid.

[View error codes](#)

17.4 UnassignPrivateIpAddresses

Deletes one or multiple secondary private IP addresses from an ENI.

Description

- The ENI must be in the Available or InUse state.

- When you perform operations on the primary ENI, the instance to which the ENI is attached must be in the Running or Stopped state.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can call APIs, dynamically generate SDK example code, and quickly retrieve APIs.

Request parameters

Name	Type	Required	Example	Description
NetworkInterfaceId	String	Yes	eni-myeni	The ID of the ENI.
PrivateIpAddress . N	RepeatList	Yes	192.168.0.1	The secondary private IP addresses to be deleted. Valid values of N: · When the ENI is in the Available state: 1 to 10. · When the ENI is in the InUse state: subject to the instance type.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the ECS instance resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	UnassignPrivateIpAddresses	The operation that you want to perform. Set the value to UnassignPrivateIpAddresses.

Response parameters

Name	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-myeni
&PrivateIpAddress.1=192.168.0.1
&RegionId=cn-hangzhou
<Common request parameters>
```

Successful response examples

XML format

```
<UnassignPrivateIpAddressesResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE70008</
  RequestId>
</UnassignPrivateIpAddressesResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE70008"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned when your account type is not supported.
403	Abs.InvalidAccount.NotFound	%s	The error message returned when the specified Alibaba Cloud account does not exist or your AccessKey has expired.
403	MissingParameter	%s	The error message returned when a required parameter is not specified.

HTTP status code	Error code	Error message	Description
403	Forbidden. NotSupportRAM	%s	The error message returned when RAM users are not allowed to perform this operation.
400	Unsupporte dParameter	%s	The error message returned when a parameter is not supported.
403	Forbidden. SubUser	%s	The error message returned when a RAM user is not authorized to perform operations on this resource.
400	InvalidPar ameter	%s	The error message returned when the parameter format is invalid.
400	InvalidIns tanceId. MalFormed	%s	The error message returned when the instance ID format is invalid.
400	InvalidOperation .InvalidEcsState	%s	The error message returned when the private IP address cannot be released under the instance state.
400	InvalidOperation .InvalidEniState	%s	The error message returned when the private IP address cannot be released under the ENI state.
400	InvalidOperation .DetachPrim aryEniNotA llowed	%s	The error message returned when the primary ENI cannot be detached from its instance .

HTTP status code	Error code	Error message	Description
404	InvalidEcsId.NotFound	%s	The error message returned when the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned when the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned when 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	EniPerInstanceLimitExceeded	%s	The error message returned when the number of ENIs exceeds the upper limit for the specified instance type.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned when the specified VSwitch, ENI, and instance are not in the same zone.
403	InvalidOperation.VpcMismatch	%s	The error message returned when the specified ENI and security group do not belong to the same VPC.
403	SecurityGroupInstanceLimitExceeded	%s	The error message returned when the number of instances in the specified security group exceeds the upper limit.

HTTP status code	Error code	Error message	Description
403	InvalidSecurityGroupId. NotVpc	%s	The error message returned when the specified security group is not VPC-connected.
403	InvalidOperation. .InvalidEniType	%s	The error message returned when the ENI type is not supported.
404	InvalidInstanceId. NotFound	%s	The error message returned when the specified instance does not exist.
403	InvalidVSwitchId. .IpInvalid	%s	The error message returned when the specified private IP address is invalid.
403	InvalidIp. IpUnassigned	%s	The error message returned when the specified IP address is not assigned.
403	Operation. Conflict	%s	The error message returned when operations conflict. You need to try again.
400	Forbidden. RegionId	%s	The error message returned when this function is not supported in the region.
400	InvalidAction	%s	The error message returned when the operation is invalid.

[View error codes](#)

17.5 DetachNetworkInterface

Detaches an ENI from an instance.

Description

When you call this operation, note that:

- You cannot detach the primary ENI of an instance.
- The ENI must be in the Detaching or InUse state.
- The instance must be in the Running or Stopped state.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can call APIs, dynamically generate SDK example code, and quickly retrieve APIs.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-myinstance	The ID of the instance.
NetworkInterfaceId	String	Yes	eni-myeni	The ID of the ENI.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the ECS instance resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DetachNetworkInterface	The operation that you want to perform. Set the value to DetachNetworkInterface.

Response parameters

Name	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-myinstance
&NetworkInterfaceId=eni-myeni
&RegionId=cn-hangzhou
<Common request parameters>
```

Successful response examples

XML format

```
<DetachNetworkInterfaceResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxx-xx</
  RequestId>
</DetachNetworkInterfaceResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxx-xx"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned when your account type is not supported.
403	Abs.InvalidAccount.NotFound	%s	The error message returned when the specified Alibaba Cloud account does not exist or your AccessKey has expired.
400	MissingParameter	%s	The error message returned when a required parameter is not specified.

HTTP status code	Error code	Error message	Description
403	Forbidden. NotSupportRAM	%s	The error message returned when RAM users are not allowed to perform this operation.
400	Unsupporte dParameter	%s	The error message returned when a parameter is not supported.
403	Forbidden. SubUser	%s	The error message returned when a RAM user is not authorized to perform operations on this resource.
400	InvalidPar ameter	%s	The error message returned when the parameter format is invalid.
400	InvalidIns tanceId. MalFormed	%s	The error message returned when the instance ID format is invalid.
400	InvalidOperation .InvalidRegion	%s	The error message returned when the specified region ID is invalid.
400	InvalidOperation .InvalidEcsState	%s	The error message returned when the private IP address cannot be released under the instance state.
400	InvalidOperation .InvalidEniState	%s	The error message returned when the private IP address cannot be released under the ENI state.

HTTP status code	Error code	Error message	Description
400	InvalidOperation. DetachPrimaryEniNotAllowed	%s	The error message returned when the primary ENI cannot be detached from its instance.
404	InvalidEcsId. NotFound	%s	The error message returned when the specified instance ID does not exist.
404	InvalidEniId. NotFound	%s	The error message returned when the specified ENI ID does not exist.
404	InvalidVSwitchId. NotFound	%s	The error message returned when 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	EniPerInstanceLimitExceeded	%s	The error message returned when the number of ENIs exceeds the upper limit for the specified instance type.
403	InvalidOperation. AvailabilityZoneMismatch	%s	The error message returned when the specified VSwitch, ENI, and instance are not in the same zone.
403	InvalidOperation. VpcMismatch	%s	The error message returned when the specified ENI and security group do not belong to the same VPC.

HTTP status code	Error code	Error message	Description
403	SecurityGroupInstanceLimitExceed	%s	The error message returned when the number of instances in the security group exceeds the upper limit.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned when the specified security group is not VPC-connected.
403	InvalidOperation.InvalidEniType	%s	The error message returned when the ENI type is not supported.
400	Forbidden.RegionId	%s	The error message returned when this function is not supported in the region.
400	InvalidParams.EniId	%s	The error message returned when the format of the specified ENI ID is invalid.

[View error codes](#)

17.6 DeleteNetworkInterface

Deletes an Elastic Network Interface (ENI).

Description

- The ENI must be in the Available state.
- If the ENI is already attached to an ECS instance, you can delete the ENI only after it is detached from the ECS instance ([DetachNetworkInterface](#)).
- After the ENI is removed,
 - the primary private IP address of the ENI is automatically released.
 - The deleted ENI is automatically removed from all security groups it was added to.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can call APIs, dynamically generate SDK example code, and quickly retrieve APIs.

Request parameters

Name	Type	Required	Example	Description
NetworkInterfaceId	String	Yes	eni-myeni	The ID of an ENI.
RegionId	String	Yes	cn-hangzhou	The ID of the region that hosts the ENI. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DeleteNetworkInterface	The operation that you want to perform. Set the value to DeleteNetworkInterface.

Response parameters

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

Examples

Sample requests

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

Successful response examples

XML format

```
<DetachNetworkInterface>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxx</RequestId>
```

```
</ DetachNetworkInterface >
```

JSON format

```
{
  "RequestId ":" 04F0F334 - 1335 - 436C - A1D7 - 6C044FExxx  xx "
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned when your account type is not supported.
403	Abs.InvalidAccount.NotFound	%s	The error message returned when the specified Alibaba Cloud account does not exist or your AccessKey has expired.
400	MissingParameter	%s	The error message returned when a required parameter is not specified .
403	Forbidden.NotSupportRAM	%s	The error message returned when RAM users are not allowed to perform this operation.
400	UnsupportedParameter	%s	The error message returned when a parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned when a RAM user is not authorized to perform operations on this resource.

HTTP status code	Error code	Error message	Description
400	InvalidParameter	%s	The error message returned when the parameter format is invalid.
400	InvalidInstanceId.MalFormed	%s	The error message returned when the instance ID format is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned when the private IP address cannot be released under the instance state.
400	InvalidOperation.InvalidEniState	%s	The error message returned when the private IP address cannot be released under the ENI state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned when the primary ENI cannot be detached from its instance .
404	InvalidEcsId.NotFound	%s	The error message returned when the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned when the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned when the specified VSwitch ID does not exist.

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	%s	The error message returned when the specified security group ID does not exist.
403	EniPerInstanceLimitExceeded	%s	The error message returned when the number of ENIs exceeds the upper limit for the specified instance type.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned when the specified VSwitch, ENI, and instance are not in the same zone.
403	InvalidOperation.VpcMismatch	%s	The error message returned when the specified ENI and security group do not belong to the same VPC.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned when the number of instances in the specified security group exceeds the upper limit.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned when the specified security group is not VPC-connected.
403	InvalidOperation.InvalidEniType	%s	The error message returned when the ENI type is not supported.
400	Forbidden.RegionId	%s	The error message returned when this function is not supported in the region.

HTTP status code	Error code	Error message	Description
400	InvalidParams. EniId	%s	The error message returned when the format of the specified ENI ID is invalid.

[View error codes](#)

17.7 DescribeNetworkInterfaces

You can call this operation to query ENIs.

Description

- You can specify attribute values to filter the results.
- If no attribute values are specified, all ENIs are returned.
- You can query a maximum of 100 ENIs at a time.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can call APIs, dynamically generate SDK example code, and quickly retrieve APIs.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where the ECS instance resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DescribeNetworkInterfaces	The operation that you want to perform. Set the value to DescribeNetworkInterfaces.

Name	Type	Required	Example	Description
InstanceId	String	No	AY121018033933eaxxxxxx	The ID of the instance to which an ENI is attached.
NetworkInterfaceId . N	RepeatList	No	eni-bp17pdijfczaxZZZZxxxxxx	The ID of the ENI. You can query a maximum of 100 ENIs at a time.
NetworkInterfaceName	String	No	my-eni-name	The name of an ENI.
PageNumber	Integer	No	1	The page number of the query result. The parameter value is a positive integer. Default value: 1.
PageSize	Integer	No	100	The number of entries on each page. Valid values: 1 to 100. Default value: 10.
PrimaryIpAddress	String	No	172.17. XX. XXX	The private IP address of the primary ENI.
ResourceGroupId	String	No	rg-resourcegroupid1	The ID of the resource group.
SecurityGroupId	String	No	sg-bp144yr32sx6ndwxxxxxx	The ID of the security group.
Tag . N . Key	String	No	test	The tag key of an ENI. Valid values of N: 1 to 20. It cannot be a null string. It can be a maximum of 64 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https://. It cannot start with aliyun or acs:. It cannot contain http:// or https://.

Name	Type	Required	Example	Description
Tag . N . Value	String	No	api	The tag value of an ENI. Valid values of N: 1 to 20. It can be a null string. It can be a maximum of 128 characters in length. It cannot start with aliyun or acs:. It cannot contain http:// or https://.It cannot start with aliyun or acs:. It cannot contain http:// or https://.
Type	String	No	Secondary	The type of an ENI. Valid values : - Primary - Secondary
VSwitchId	String	No	vsw-bp16usj2p27htro3xxxxx	The ID of the VSwitch associated with the ENIs to be queried.
VpcId	String	No	vsw-bp16usj2p27htro3xxxxx	The ID of the VPC to which an ENI belongs.

Response parameters

Name	Type	Example	Description
NetworkInterfaceSets			A set of ENIs.
└AssociatedPublicIp			The public IP address associated with the secondary private IP address of an ENI.
└AllocationId	String	eip-2ze88m67qx5zxxxxx	The ID of an EIP.
└PublicIpAddress	String	116.62.129.250	The public IP address of the instance.

Name	Type	Example	Description
<code>CreationTime</code>	String	2017-11-24T06:14:22Z	The creation time of the instance.
<code>Description</code>	String	test1	Description
<code>InstanceId</code>	String	AY121018033933eaxxxxxx	The ID of the instance.
<code>Ipv6Sets</code>			A set of IPv6 addresses assigned to an ENI.
<code>Ipv6Addresses</code>	String	2001:db8:1234:1a00::XXX	The IPv6 address assigned to an ENI.
<code>MacAddress</code>	String	00:16:3e:0f:XX:XX	The MAC address of an ENI.
<code>NetworkInterfaceId</code>	String	eni-bp17pdijfczaxZZZZxxxxxx	The ID of an ENI.
<code>NetworkInterfaceName</code>	String	my-eni-name	The name of an ENI.
<code>PrivateIpAddress</code>	String	172.17. XX.XXX"	The private IP address of the instance.
<code>PrivateIpSets</code>			A set of private IP addresses.
<code>AssociatedPublicIp</code>			The public IP address associated with an ENI.
<code>AllocationId</code>	String	eip-2ze88m67qx5zxxxxxx	The ID of an EIP.
<code>PublicIpAddress</code>	String	116.62.129.250	The public IP address of the instance.
<code>Primary</code>	Boolean	true	Indicates whether the IP address is primary.
<code>PrivateIpAddress</code>	String	172.17. XX.XXX	The private IP address of the instance.

Name	Type	Example	Description
└ ResourceGroupId	String	rg-resourcegroupid1	The ID of the resource group.
└ SecurityGroupIds		sg-bp144yr32sx6ndwxxxxx	The IDs of security groups to which the specified ENIs belong.
└ Status	String	Available	The status of an ENI.
└ Tags			The tag of an ENI.
└ TagKey	String	test	The tag key of an ENI.
└ TagValue	String	api	The tag value of an ENI.
└ Type	String	Secondary	The type of an ENI.
└ VSwitchId	String	vsw-bp16usj2p27htro3xxxxx	The ID of the VSwitch associated with the ENIs to be queried.
└ VpcId	String	vpc-bp1j7w3gc1cexjqdxxxxx	The ID of the VPC to which an ENI belongs.
└ ZoneId	String	cn-hangzhou-e	The ID of the zone in which an ENI resides.
PageNumber	Integer	1	The page number that you query in the instance list.
PageSize	Integer	100	The number of entries per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of instances.

Examples

Sample requests

```
https :// ecs . aliyuncs . com /? Action = DescribeNe  tworkInter
faces
& RegionId = cn - hangzhou
& Tag . 1 . Key = test
& Tag . 1 . Value = api
& ResourceGr oupId = rg - resourcegr oupid1
& VSwitchId = vsw - bp16usj2p2 7htro3xxxx x
& VpcId = vsw - bp16usj2p2 7htro3xxxx x
& PrimaryIpA ddress = 172 . 17 . XX . XXX
& SecurityGr oupId = sg - bp144yr32s x6ndwxxxxx
& NetworkInt  erfaceName = my - eni - name
& Type = Secondary
& InstanceId = AY12101803 3933eaxxxx x
& NetworkInt  erfaceId . 1 = eni - bp17pdijfc zaxZZZxxx xx
& PageNumber = 1
& PageSize = 100
&< Common request parameters >
```

Successful response examples

XML format

```
< DescribeNe tworkInter facesRespo nse >
  < NetworkInt  erfaceSets >
    < NetworkInt  erfaceSet >
      < Associated PublicIp />
      < CreationTi me > 2017 - 11 - 24T06 : 14 : 22Z </ CreationTi
me >
      < InstanceId > AY12101803 3933eaxxxx x </ InstanceId >
      < MacAddress > 00 : 16 : 3e : 0f : XX : XX </ MacAddress >
      < NetworkInt  erfaceId > eni - bp17pdijfc zaxZZZxxx xx </
NetworkInt  erfaceId >
      < PrivateIpA ddress > XXX . XXX . XX . XX </ PrivateIpA ddress
>
      < PrivateIpS ets >
        < PrivateIpS et >
          < Associated PublicIp />
          < Primary > true </ Primary >
          < PrivateIpA ddress > XXX . XXX . XX . XX </ PrivateIpA
ddress >
        </ PrivateIpS et >
      </ PrivateIpS ets >
      < SecurityGr oupIds >
        < SecurityGr oupId > sg - bp144yr32s x6ndwxxxxx </
SecurityGr oupId >
      </ SecurityGr oupIds >
      < Status > Available </ Status >
      < Type > Secondary </ Type >
      < VpcId > vpc - bp1j7w3gc1 cexjqdxxxx x </ VpcId >
      < VSwitchId > vsw - bp16usj2p2 7htro3xxxx x </ VSwitchId >
      < ZoneId > cn - hangzhou - e </ ZoneId >
    </ NetworkInt  erfaceSet >
  </ NetworkInt  erfaceSets >
  < PageNumber > 1 </ PageNumber >
  < PageSize > 100 </ PageSize >
  < RequestId > CEE5C347 - 0B64 - 4535 - A061 - 95BE95Axxx xx </
RequestId >
```

```
< TotalCount > 1 </ TotalCount >
</ DescribeNetworkInterfacesResponse >
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 1,
  "PageSize": 100,
  "RequestId": "CEE5C347 - 0B64 - 4535 - A061 - 95BE95Axxx xx",
  "NetworkInterfaceSets": {
    "NetworkInterfaceSet": [
      {
        "Type": "Secondary",
        "InstanceId": "AY12101803 3933eaxxxx x",
        "PrivateIpSets": {
          "PrivateIpSet": [
            {
              "PrivateIpAddress": "XXX . XXX . XX . XX",
              "Primary": true,
              "AssociatedPublicIp": {}
            }
          ]
        },
        "ZoneId": "cn - hangzhou - e",
        "VSwitchId": "vsw - bp16usj2p2 7htro3xxxx x",
        "VpcId": "vpc - bp1j7w3gc1 cexjqdxxxx x",
        "AssociatedPublicIp": {},
        "NetworkInterfaceId": "eni - bp17pdijfc zaxZZZxxx xx",
        "CreationTime": "2017 - 11 - 24T06 : 14 : 22Z",
        "Status": "Available",
        "MacAddress": "00 : 16 : 3e : 0f : XX : XX",
        "SecurityGroups": {
          "SecurityGroupId": [
            "sg - bp144yr32s x6ndwxxxxx "
          ]
        },
        "PrivateIpAddress": "XXX . XXX . XX . XX"
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType. NotSupported	%s	The error message returned when your account type is not supported.

HTTP status code	Error code	Error message	Description
403	Abs.InvalidAccount.NotFound	%s	The error message returned when the specified Alibaba Cloud account does not exist or your AccessKey has expired.
400	MissingParameter	%s	The error message returned when a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned when RAM users are not allowed to perform this operation.
400	UnsupportedParameter	%s	The error message returned when a parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned when a RAM user is not authorized to perform operations on this resource.
400	InvalidParameter	%s	The error message returned when the parameter format is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned when the instance ID format is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned when the private IP address cannot be released under the instance state.

HTTP status code	Error code	Error message	Description
400	InvalidOperation. InvalidEniState	%s	The error message returned when the private IP address cannot be released under the ENI state.
400	InvalidOperation. DetachPrimaryEniNotAllowed	%s	The error message returned when the primary ENI cannot be detached from the instance.
404	InvalidEcsId. NotFound	%s	The error message returned when the specified instance ID does not exist.
404	InvalidEniId. NotFound	%s	The error message returned when the specified ENI ID does not exist.
404	InvalidVSwitchId. NotFound	%s	The error message returned when 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	EniPerInstanceLimitExceeded	%s	The error message returned when the number of ENIs exceeds the upper limit for the specified instance type.
403	InvalidOperation. AvailabilityZoneMismatch	%s	The error message returned when the specified VSwitch, ENI, and instance are not in the same zone.

HTTP status code	Error code	Error message	Description
403	InvalidOperation. VpcMismatch	%s	The error message returned when the specified ENI and security group do not belong to the same VPC.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned when the number of instances in the specified security group exceeds the upper limit.
403	InvalidSecurityGroupId. NotVpc	%s	The error message returned when the specified security group is not VPC-connected.
403	InvalidOperation. InvalidEniType	%s	The error message returned when the ENI type is not supported.
400	Forbidden. RegionId	%s	The error message returned when this operation is not supported in the region.

[View error codes](#)

17.8 ModifyNetworkInterfaceAttribute

You can call this operation to modify attributes of an ENI.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can call APIs, dynamically generate SDK example code, and quickly retrieve APIs.

Request parameters

Name	Type	Required	Example	Description
NetworkInterfaceId	String	Yes	eni-myeni	The ID of the ENI.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the ECS instance resides. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	ModifyNetworkInterfaceAttribute	The operation that you want to perform. Set the value to ModifyNetworkInterfaceAttribute.
Description	String	No	test	The description of the ENI. • The description must be 2 to 256 characters in length. • It cannot start with http:// or https://. • If not specified, this parameter is null. Default value: null.
NetworkInterfaceName	String	No	my-eni-name	The name of the ENI. • The name must be 2 to 128 characters in length. It must start with a letter and can contain digits, underscores (_), and hyphens (-). • The ENI name is displayed in the console. • It cannot start with http:// or https://. • If not specified, this parameter is null. Default value: null.

Name	Type	Required	Example	Description
SecurityGroupId . N	RepeatList	No	sg-1133aa	Changes the security group for the ENI. The existing security groups will be replaced by the specified SecurityGroupId . N . Valid range of N: 1 to 5.Valid range of N: 1 to 5.

Response parameters

Name	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-myeni
&RegionId=cn-hangzhou
&SecurityGroupId.1=sg-1133aa
&NetworkInterfaceName=my-eni-name
&Description=test
&<Common request parameters>
```

Successful response examples

XML format

```
<DetachNetworkInterfaceResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxx xx</RequestId>
</DetachNetworkInterfaceResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxx xx"
```

}

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType. NotSupported	%s	The error message returned when your account type is not supported.
403	Abs.InvalidAccount.NotFound	%s	The error message returned when the specified Alibaba Cloud account does not exist, or your AccessKey has expired.
400	MissingParameter	%s	The error message returned when a required parameter is not specified.
403	Forbidden. NotSupportRAM	%s	The error message returned when RAM users are not allowed to perform this operation.
400	UnsupportedParameter	%s	The error message returned when a parameter is not supported.
403	Forbidden. SubUser	%s	The error message returned when a RAM user is not authorized to perform operations on this resource.
400	InvalidParameter	%s	The error message returned when the parameter format is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidInstanceId.MalFormed	%s	The error message returned when the instance ID format is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned when the private IP address cannot be released under the instance state.
400	InvalidOperation.InvalidEniState	%s	The error message returned when the private IP address cannot be released under the ENI state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned when the primary ENI cannot be detached from the instance.
400	InvalidParams.EniId	%s	The error message returned when the format of the specified ENI ID is invalid.
404	InvalidEcsId.NotFound	%s	The error message returned when the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned when the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned when the specified VSwitch ID does not exist.

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	%s	The error message returned when the specified security group ID does not exist.
403	EniPerInstanceLimitExceeded	%s	The error message returned when the number of ENIs exceeds the upper limit for the specified instance type.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned when the specified VSwitch, ENI, and instance are not in the same zone.
403	InvalidOperation.VpcMismatch	%s	The error message returned when the specified ENI and security group do not belong to the same VPC.
403	SecurityGroupInstanceLimitExceeded	%s	The error message returned when the number of instances in the specified security group exceeds the upper limit.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned when the specified security group is not VPC-connected.
403	InvalidOperation.InvalidEniType	%s	The error message returned when the ENI type is not supported.
400	Forbidden.RegionId	%s	The error message returned when this operation is not supported in the region.

[View error codes](#)

18 System event

18.1 DescribeInstancesFullStatus

Queries the full status information of one or more instances. The full status information includes the instance status and the instance event status. The instance status is the lifecycle status of the instance. The instance event status is the health status of the maintenance event. For more information, see ECS instance lifecycle and System events.

Description

The response includes the status information about the instance and the scheduled system events.

If a period is specified, all the events in the period are queried.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where the instance is located. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DescribeInstancesFullStatus	The operation that you want to perform. Set the value to DescribeInstancesFullStatus.

Name	Type	Required	Example	Description
EventId . N	RepeatList	No	[EventId. 1="e-xhskHun1256xxx", EventId. 2="e-xhskHun1257xxx".....]	The IDs of one or more events. Valid values of N: 1 to 100. You can specify multiple values in the form of a repeated list.
EventPublishTime . End	String	No	2017-12-07T00:00:00Z	The end time of the period during which a system event is pushed. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ.
EventPublishTime . Start	String	No	2017-11-30T00:00:00Z	The start time of the period during which a system event is pushed. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ.

Name	Type	Required	Example	Description
EventType	String	No	InstanceExpiration.Stop	The type of the event. The EventType parameter takes effect only when the InstanceEventType.N parameter is not specified. Valid values: • SystemMaintenance.Reboot : The instance restarts due to maintenance. • SystemFailure.Reboot: The instance restarts due to a system failure. • InstanceFailure.Reboot: The instance restarts 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 instance is stopped due to overdue payments. • AccountUnbalanced.Delete: The instance is released due to overdue payments.

Name	Type	Required	Example	Description
HealthStatus	String	No	Maintaining	The health status of the instance. Valid values: • Impaired: The instance is impaired. • Warning: The instance performance may be degraded because of maintenance or technical issues. • Maintaining: The instance is in maintenance. • Initializing: The instance is in initialization. • InsufficientData: The status cannot be determined because of insufficient data. • NotApplicable: Not applicable. All the values are case-sensitive.

Name	Type	Required	Example	Description
InstanceEventTypes . N	RepeatList	No	InstanceExpiration.Stop	The types of one or more events. Valid values of N: 1 to 30. You can specify multiple values in the form of a repeated list. Valid values: - SystemMaintenance.Reboot: The instance restarts due to maintenance. - SystemFailure.Reboot: The instance restarts due to a system failure. - InstanceFailure.Reboot: The instance restarts 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 instance is stopped due to overdue payments. - AccountUnbalanced.Delete: The instance is released due to overdue payments.
InstanceId . N	RepeatList	No	[InstanceId. 1="i-instance1", InstanceId. 2="i-instance2".....]	The IDs of one or more instances. Valid values of N: 1 to 100. You can specify multiple values in the form of a repeated list.

Name	Type	Required	Example	Description
NotBefore . End	String	No	2017-11-30T00:00:00Z	The end time of the scheduled event execution period. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ.
NotBefore . Start	String	No	2017-12-07T00:00:00Z	The start time of the scheduled event execution period. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ.
PageNumber	Integer	No	1	The page number of the query result. The value must be a positive integer. Default value: 1.
PageSize	Integer	No	10	The number of entries per page . Valid values: 1 to 100. Default value: 10.
Status	String	No	Running	The lifecycle status of the specified instance. Valid values : - Starting - Running - Stopped

Response parameters

Name	Type	Example	Description
InstanceFullStatusSet			An array of InstanceFullStatus data.

Name	Type	Example	Description
└HealthStatus			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-instance1	The ID of the instance.
└ScheduledSystemEventSet			An array of ScheduledSystemEventData.
└EventCycleStatus			The event status.
└Code	Integer	24	The code of the event status.
└Name	String	Scheduled	The name of the event status.
└EventId	String	e-event1	The ID of the instance event.
└EventPublishTime	String	2017-11-30T06:32:31Z	The publishing time of the event. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ.
└EventType			The event type.
└Code	Integer	1	The code of the event type.
└Name	String	SystemMaintenance.Reboot	The name of the event type.
└ExtendedAttribute			The extended attribute of system events for instances with local disks.
└Device	String	/dev/vdb	The device name of the local disk.
└DiskId	String	d-diskid2	The ID of the local disk.

Name	Type	Example	Description
└NotBefore	String	2017-12-07T00:00:00Z	The scheduled execution time of the event. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ.
└Status			The instance lifecycle status.
└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.
PageSize	Integer	10	The number of entries per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of entries.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstancesFullStatus
&RegionId=cn-hangzhou
&InstanceId.1=i-instance1
&EventId.1=e-event1
&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=10
&<Common request parameters>
```

Successful response examples

XML format

```

< DescribeInstancesResponse >
  < InstanceStatusSet >
    < InstanceStatusType >
      < InstanceId > i-instance1 </ InstanceId >
      < Status >
        < Code > 1 </ Code >
        < Name > Running </ Name >
      </ Status >
      < HealthStatus >
        < Code > 0 </ Code >
        < Name > Maintaining </ Name >
      </ HealthStatus >
      < ScheduledSystemEventSet >
        < ScheduledSystemEventType >
          < EventId > e-event1 </ EventId >
          < EventCycleStatus >
            < Code > 24 </ Code >
            < Name > Scheduled </ Name >
          </ EventCycleStatus >
          < EventType >
            < Code > 1 </ Code >
            < Name > SystemMaintenance.Reboot </ Name >
          </ EventType >
          < EventPublishTime > 2017-11-30T06:32:31Z </ EventPublishTime >
          < NotBefore > 2017-12-01T06:32:31Z </ NotBefore >
        </ ScheduledSystemEventType >
        < ScheduledSystemEventType >
          < EventId > e-event2 </ EventId >
          < EventCycleStatus >
            < Code > 24 </ Code >
            < Name > Scheduled </ Name >
          </ EventCycleStatus >
          < EventType >
            < Code > 34 </ Code >
            < Name > InstanceExpiration.Stop </ Name >
          </ EventType >
          < EventPublishTime > 2017-11-30T00:00:00Z </ EventPublishTime >
          < NotBefore > 2017-12-07T00:00:00Z </ NotBefore >
        </ ScheduledSystemEventType >
      </ ScheduledSystemEventSet >
    </ InstanceStatusType >
    < InstanceStatusType >
      < InstanceId > i-instance2 </ InstanceId >
      < Status >
        < Code > 1 </ Code >
        < Name > Running </ Name >
      </ Status >
      < HealthStatus >
        < Code > 64 </ Code >
        < Name > Warning </ Name >
      </ HealthStatus >
      < ScheduledSystemEventSet >
        < ScheduledSystemEventType >
          < EventId > e-event3 </ EventId >
          < EventCycleStatus >
            < Code > 24 </ Code >

```



```

        < Name > Scheduled </ Name >
    </ EventCycle Status >
    < EventType >
        < Code > 65 </ Code >
        < Name > SystemFailure . Reboot </ Name >
    </ EventType >
    < EventPublic shTime > 2017 - 11 - 30T06 : 32 :
31Z </ EventPublic shTime >
    < NotBefore > 2017 - 12 - 01T06 : 32 : 31Z </
NotBefore >
        </ ScheduledSystemEvent Type >
    </ ScheduledSystemEvent Set >
    </ InstanceFullStatusType >
</ InstanceFullStatusSet >
< PageSize > 10 </ PageSize >
< PageNumber > 1 </ PageNumber >
< TotalCount > 2 </ TotalCount >
    < RequestId > AAC49D3E - ED6F - 4F00 - XXXX - 377C551B1D D4 </
RequestId >
</ DescribeInstancesFullStatusResponse >

```

JSON format

```

{
  " PageNumber ": 1 ,
  " TotalCount ": 2 ,
  " PageSize ": 10 ,
  " InstanceFullStatusSet ":{
    " InstanceFullStatusType ":[
      {
        " Status ":{
          " Name ":" Running ",
          " Code ": 1
        },
        " HealthStatus ":{
          " Name ":" Maintaining ",
          " Code ": 0
        },
        " InstanceId ":" i - instance1 ",
        " ScheduledSystemEvent Set ":{
          " ScheduledSystemEvent Type ":[
            {
              " EventPublic shTime ":" 2017 - 11 - 30T06 : 32 : 31Z ",
              " NotBefore ":" 2017 - 12 - 01T06 : 32 : 31Z ",
              " EventId ":" e - event1 ",
              " EventType ":{
                " Name ":" SystemMaintenance . Reboot ",
                " Code ": 1
              },
              " EventCycle Status ":{
                " Name ":" Scheduled ",
                " Code ": 24
              }
            },
            {
              " EventPublic shTime ":" 2017 - 11 - 30T00 : 00 : 00Z ",
              " NotBefore ":" 2017 - 12 - 07T00 : 00 : 00Z ",
              " EventId ":" e - event2 ",
              " EventType ":{
                " Name ":" InstanceExpiration . Stop ",
                " Code ": 34
              },
              " EventCycle Status ":{

```

```

        " Name ":" Scheduled ",
        " Code ": 24
    }
}
]
}
},
{
    " Status ":{
        " Name ":" Running ",
        " Code ": 1
    },
    " HealthStat us ":{
        " Name ":" Warning ",
        " Code ": 64
    },
    " InstanceId ":" i - instance2 ",
    " ScheduledS ystemEvent Set ":{
        " ScheduledS ystemEvent Type ":[
            {
                " EventPubli shTime ":" 2017 - 11 - 30T06 : 32 : 31Z ",
                " NotBefore ":" 2017 - 12 - 01T06 : 32 : 31Z ",
                " EventId ":" e - event3 ",
                " EventType ":{
                    " Name ":" SystemFail ure . Reboot ",
                    " Code ": 65
                },
                " EventCycle Status ":{
                    " Name ":" Scheduled ",
                    " Code ": 24
                }
            }
        ]
    }
}
},
" RequestId ":" AAC49D3E - ED6F - 4F00 - XXXX - 377C551B1D D4 "
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	MissingParameter	%s	The error message returned when a required parameter is not specified.
403	InvalidParameter	%s	The error message returned when the parameter format is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidParameter.TimeEndBeforeStart	%s	The error message returned when the end time is earlier than the start time.
403	OperationDenied.NotInWhiteList	%s	The error message returned when you are not authorized to perform the operation.
403	InstanceIdLimitExceeded	%s	The error message returned when the specified instance IDs is more than 100.
403	EventIdLimitExceeded	%s	The error message returned when more than 100 simulated event IDs are specified.

[View error codes](#)

18.2 DescribeInstanceHistoryEvents

You can call this operation to query the system events of a specified instance. Inactive historical system events are queried by default. You can query system events within the last seven days. You can specify the InstanceEventCycleStatus parameter to query the system events that are in the Scheduled or Executing state.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The regions ID of the instance for which to query system events. You can call the DescribeRegions operation to query the latest region list.
Action	String	No	DescribeInstanceHistoryEvents	The operation that you want to perform. For API requests using the HTTP and HTTPS methods, <code>Action</code> is required. Set the value to <code>DescribeInstanceHistoryEvents</code> .
EventCycleStatus	String	No	Executed	The lifecycle status of the system event. This parameter takes effect only when the <code>InstanceEventCycleStatus.N</code> parameter is not specified. Valid values: • Scheduled • Avoided • Executing • Executed • Canceled • Failed
EventId . N	RepeatList	No	e-2ze9yxxxxwtqcvai68rl	The IDs of one or more system events. Valid values of N: 1 to 100. The event IDs must be displayed in a repeated list format.

Parameter	Type	Required	Example	Description
EventPublishTime . End	String	No	2017-12-01T06:32:31Z	The end of the time range where system events that are published during this time range is queried. 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 where system events that are published during this time range is queried. 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
EventType	String	No	SystemMaintenance.Reboot	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 has been restarted due to system maintenance. • SystemFailure.Reboot: The instance has been restarted due to system failure. • SystemFailure.Delete: The instance has been released due to instance creation failure. • InstanceFailure.Reboot: The instance has been restarted due to instance failure. • InstanceExpiration.Stop : The instance has been stopped due to subscription expiration. • InstanceExpiration.Delete : The instance has been released due to subscription expiration. • AccountUnbalanced.Stop : The instance has been stopped due to an overdue payment. • AccountUnbalanced.Delete : The instance has been released due to an overdue payment.

Parameter	Type	Required	Example	Description
InstanceEventCycleStatus . N	RepeatList	No	Executed	The lifecycle status of one or more system events. Valid values of N: 1 to 6. Multiple values must be displayed in a repeated list format. Valid values: • Scheduled • Avoided • Executing • Executed • Canceled • Failed

Parameter	Type	Required	Example	Description
InstanceEventTypes . N	RepeatList	No	SystemMaintenance.Reboot	The types of one or more system events. Valid values of N: 1 to 30. Multiple values must be displayed in a repeated list format. Valid values: • SystemMaintenance.Reboot : The instance has been restarted due to system maintenance. • SystemFailure.Reboot: The instance has been restarted due to system failure. • SystemFailure.Delete: The instance has been released due to instance creation failure. • InstanceFailure.Reboot: The instance has been restarted due to instance failure. • InstanceExpiration.Stop : The instance has been stopped due to subscription expiration. • InstanceExpiration.Delete : The instance has been released due to subscription expiration. • AccountUnbalanced.Stop : The instance has been stopped due to an overdue payment. • AccountUnbalanced.Delete : The instance has been released due to an overdue payment.

Parameter	Type	Required	Example	Description
InstanceId	String	No	i-myInstance	The ID of the instance to be queried. If no instance ID is specified, system events of all instances in the specified region are queried.
NotBefore . End	String	No	2017-12-01T06:32:31Z	The end of the time range where system events that are scheduled for execution during this time range are queried. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
NotBefore . Start	String	No	2017-11-30T06:32:31Z	The beginning of the time range where system events that are scheduled for execution during this time range are queried. 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
InstanceSystemEventSet			An array of system events for the instance.
└EventCycleStatus			The lifecycle status of the system event.
└Code	Integer	0	The status code of the system event.
└Name	String	Executed	The status name of the system event.
└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:mmZ format. The time is displayed in UTC.
└EventId	String	e-2ze9yxxxxwtqcvai68rx	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:mmZ format. The time is displayed in UTC.
└EventType			The type of the system event.
└Code	Integer	34	The code of the system event type.
└Name	String	InstanceExpiration.Stop	The name of the system event type.
└ExtendedAttribute			The extended attributes of the system event.
└Device	String	/dev/vda	The device name of the local disk.

Parameter	Type	Example	Description
<code>└DiskId</code>	String	d-diskid1	The ID of the local disk.
<code>└InstanceId</code>	String	i-myInstance	The ID of the instance.
<code>└NotBefore</code>	String	2017-12-06T00:00:00Z	The scheduled execution time of the system event. The time follows the ISO 8601 standard in the yyyy-MM-ddThh:mmZ format. The time is displayed in UTC.
<code>PageNumber</code>	Integer	1	The number of the page returned.
<code>PageSize</code>	Integer	10	The number of entries returned on each page.
<code>RequestId</code>	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
<code>TotalCount</code>	Integer	2	The total number of instance states.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceHistoryEvents
&RegionId=cn-hangzhou
&InstanceId=i-myInstance
&EventId.1=e-2ze9yxxxxw-tqcvai68rl
&InstanceEventCycleStatus.1=Executed
&EventCycleStatus=Executed
&InstanceEventType.1=SystemMaintenance.Reboot
&EventType=SystemMaintenance.Reboot
&NotBefore.Start=2017-11-30T06:32:31Z
&NotBefore.End=2017-12-01T06:32:31Z
&EventPublishTime.Start=2017-11-30T06:32:31Z
&EventPublishTime.End=2017-12-01T06:32:31Z
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeInstanceHistoryEventsResponse>
```

```

< InstanceSy stemEventS et >
  < InstanceSy stemEventT ype >
    < InstanceId > i - 2ze3tphuqv c93cixxxx3 </ InstanceId >
    < EventId > e - 2ze9yxxxxw tqcvai68rl </ EventId >
    < EventType >
      < Code > 1 </ Code >
      < Name > SystemMain tenance . Reboot </ Name >
    </ EventType >
    < EventCycle Status >
      < Code > 0 </ Code >
      < Name > Executed </ Name >
    </ EventCycle Status >
    < EventPubli shTime > 2017 - 11 - 30T06 : 32 : 31Z </
EventPubli shTime >
    < NotBefore > 2017 - 12 - 01T06 : 32 : 31Z </ NotBefore >
    < EventFinis hTime > 2017 - 12 - 01T06 : 35 : 31Z </
EventFinis hTime >
    </ InstanceSy stemEventT ype >
    < InstanceSy stemEventT ype >
      < InstanceId > i - 2ze3tphuqv c93cixxxx3 </ InstanceId >
      < EventId > e - 2ze9yxxxxw tqcvai68r3 </ EventId >
      < EventType >
        < Code > 34 </ Code >
        < Name > InstanceEx piration . Stop </ Name >
      </ EventType >
      < EventCycle Status >
        < Code > 8 </ Code >
        < Name > Avoided </ Name >
      </ EventCycle Status >
      < EventPubli shTime > 2017 - 11 - 29T06 : 32 : 31Z </
EventPubli shTime >
      < NotBefore > 2017 - 12 - 06T00 : 00 : 00Z </ NotBefore >
      < EventFinis hTime > 2017 - 12 - 05T12 : 35 : 31Z </
EventFinis hTime >
      </ InstanceSy stemEventT ype >
    </ InstanceSy stemEventS et >
    < PageSize > 10 </ PageSize >
    < PageNumber > 1 </ PageNumber >
    < TotalCount > 2 </ TotalCount >
    < RequestId > 02EA76D3 - 5A2A - 44EB - XXXX - 8901881D87 07 </
RequestId >
  </ DescribeIn stanceHist oryEventsR esponse >

```

JSON format

```

{
  " PageNumber ": 1 ,
  " TotalCount ": 2 ,
  " PageSize ": 10 ,
  " RequestId ":" 02EA76D3 - 5A2A - 44EB - XXXX - 8901881D87 07 ",
  " InstanceSy stemEventS et ":{
    " InstanceSy stemEventT ype ":[
      {
        " EventPubli shTime ":" 2017 - 11 - 30T06 : 32 : 31Z ",
        " NotBefore ":" 2017 - 12 - 01T06 : 32 : 31Z ",
        " EventFinis hTime ":" 2017 - 12 - 01T06 : 35 : 31Z ",
        " InstanceId ":" i - 2ze3tphuqv c93cixxxx3 ",
        " EventId ":" e - 2ze9yxxxxw tqcvai68rl ",
        " EventType ":{
          " Name ":" SystemMain tenance . Reboot ",
          " Code ": 1
        },
        " EventCycle Status ":{

```

```

    " Name ":" Executed ",
    " Code ": 0
  },
  {
    " EventPubli shTime ":" 2017 - 11 - 29T06 : 32 : 31Z ",
    " NotBefore ":" 2017 - 12 - 06T00 : 00 : 00Z ",
    " EventFinis hTime ":" 2017 - 12 - 05T12 : 35 : 31Z ",
    " InstanceId ":" i - 2ze3tphuqv c93cixxxx3 ",
    " EventId ":" e - 2ze9yxxxxw tqcvai68r3 ",
    " EventType ":{
      " Name ":" InstanceEx piration . Stop ",
      " Code ": 34
    },
    " EventCycle Status ":{
      " Name ":" Avoided ",
      " Code ": 8
    }
  }
]
}
}
}

```

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 the parameter format is invalid.
403	EventIdLimitExceeded	%s	The error message returned because more than 100 system event IDs are specified.
403	InvalidParameter. TimeEndBeforeStart	%s	The error message returned because the end time was earlier the start time.
403	OperationDenied.NotInWhiteList	%s	The error message returned because you are not authorized to perform this operation.

[View error codes](#)

18.3 DescribeDisksFullStatus

Queries the full status information of one or more disks.

Description

- The full status information of a disk includes the disk lifecycle status (Status), disk health status (HealthStatus), and disk event type (EventType).
- The disk-related event publishing time, scheduled event execution time, and actual event execution time are the same. If you specify a time period [EventTime.Start, EventTime.End], the system queries all events that occurred during this period. You can query events within the last seven days.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the disk belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DescribeDisksFullStatus	The operation that you want to perform. Set the value to DescribeDisksFullStatus.
DiskId . N	RepeatList	No	d-disk1	The ID of the disk to be queried . Valid values of N: 1 to 100.
EventId . N	RepeatList	No	e-event1	The event ID. Valid values of N: 1 to 100.

Name	Type	Required	Example	Description
EndTime . End	String	No	2018-05-08T02:48:52Z	The end time of events to be queried. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ.
EndTime . Start	String	No	2018-05-06T02:43:10Z	The start time of events to be queried. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ.
EventType	String	No	Stalled	The disk event type. Valid values: • Degraded: The disk performance is degraded. • SeverelyDegraded: The disk performance is seriously degraded. • Stalled: The disk may be stalled with I/O suspended.
HealthStatus	String	No	Warning	The health status of the disk. Valid values: • Impaired: The disk performance is damaged. • Warning: The disk performance may be degraded because of maintenance or technical issues. • Initializing: The instance is being initialized. • InsufficientData: The status cannot be determined because of insufficient data. • NotApplicable: Not applicable.

Name	Type	Required	Example	Description
PageNumber	Integer	No	1	The page number of the query result. The value must be a positive integer. Default value: 1.
PageSize	Integer	No	10	The number of entries per page. Valid values: 1 to 100. Default value: 10.
Status	String	No	Available	The lifecycle status of the disk. For more information, see Cloud disk status . Valid values: • In_Use • Available • Attaching • Detaching • Creating • ReIniting

Response parameters

Name	Type	Example	Description
DiskFullStatusSet			An array of DiskFullStatus data.
└Device	String	/dev/xvdb	The device name of the disk that is attached to an instance, such as /dev/xvdb. It is null unless the disk is in the In_use state.
└DiskEventSet			An array of DiskEvent data.
└EventEndTime	String	2018-05-06T02:48:52Z	The end time of the event.
└EventId	String	e-event1	The ID of the disk event.

Name	Type	Example	Description
↳EventTime	String	2018-05-08T02:43:10Z	The occurrence time of the event.
↳EventType			The event type.
↳Code	Integer	7	The code of the event type.
↳Name	String	Stalled	The name of the event type.
↳DiskId	String	d-disk1	The ID of the disk.
↳HealthStatus			The disk health status.
↳Code	Integer	128	The code of the disk health status.
↳Name	String	Impaired	The name of the disk health status.
↳InstanceId	String	i-instance1	The ID of the instance.
↳Status			The disk lifecycle status.
↳Code	Integer	129	The code of the disk lifecycle status.
↳Name	String	Available	The name of the disk lifecycle status.
PageNumber	Integer	1	The page number of the instance list.
PageSize	Integer	10	The number of entries per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of instance statuses.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDiskFullStatus
&RegionId=cn-hangzhou
&DiskId.1=d-disk1
&EventId.1=e-event1
&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>
```

Successful response examples

XML format

```
<DescribeDiskFullStatusResponse>
  <DiskFullStatusSet>
    <DiskFullStatusType>
      <DiskEventsSet>
        <DiskEventType>
          <EventId>e-event1</EventId>
          <EventType>
            <Code>7</Code>
            <Name>Stalled</Name>
          </EventType>
          <EventTime>2018-05-08T02:43:10Z</EventTime>
        </DiskEventType>
      </DiskEventsSet>
      <DiskId>d-disk1</DiskId>
      <InstanceId>i-instance1</InstanceId>
      <Device>/dev/xvda</Device>
      <HealthStatus>
        <Code>128</Code>
        <Name>Impaired</Name>
      </HealthStatus>
      <Status>
        <Code>129</Code>
        <Name>Available</Name>
      </Status>
    </DiskFullStatusType>
    <DiskFullStatusType>
      <DiskEventsSet>
        <DiskEventType>
          <EventId>e-event2</EventId>
          <EventType>
            <Code>1</Code>
            <Name>Degraded</Name>
          </EventType>
          <EventTime>2018-05-06T02:43:10Z</EventTime>
          <EventEndTime>2018-05-06T02:48:52Z</EventEndTime>
        </DiskEventType>
      </DiskEventsSet>
      <DiskId>d-disk2</DiskId>
```

```

    < InstanceId > i - instance2 </ InstanceId >
    < Device >/ dev / xvdb </ Device >
    < HealthStat us >
      < Code > 64 </ Code >
      < Name > Warning </ Name >
    </ HealthStat us >
    < Status >
      < Code > 0 </ Code >
      < Name > Ok </ Name >
    </ Status >
  </ DiskFullSt atusType >
</ DiskFullSt atusSet >
< PageNumber > 1 </ PageNumber >
< PageSize > 10 </ PageSize >
< RequestId > 1A8B4B27 - 8B2D - XXXX - XXXX - 0F64DBE4C2 11 </
RequestId >
< TotalCount > 2 </ TotalCount >
</ DescribeDi sksFullSta tusRespons e >

```

JSON format

```

{
  " PageNumber ": 1 ,
  " TotalCount ": 2 ,
  " PageSize ": 10 ,
  " RequestId ":" 1A8B4B27 - 8B2D - XXXX - XXXX - 0F64DBE4C2 11 ",
  " DiskFullSt atusSet ":{
    " DiskFullSt atusType ":[
      {
        " Status ":{
          " Name ":" Available ",
          " Code ": 129
        },
        " Device ":"/ dev / xvda ",
        " HealthStat us ":{
          " Name ":" Impaired ",
          " Code ": 128
        },
        " InstanceId ":" i - instance1 ",
        " DiskEventS et ":{
          " DiskEventT ype ":[
            {
              " EventTime ":" 2018 - 05 - 08T02 : 43 : 10Z ",
              " EventId ":" e - event1 ",
              " EventType ":{
                " Name ":" Stalled ",
                " Code ":" 7 "
              }
            }
          ]
        }
      }
    ],
    " DiskId ":" d - disk1 "
  },
  {
    " Status ":{
      " Name ":" Available ",
      " Code ": 129
    },
    " Device ":"/ dev / xvdb ",
    " HealthStat us ":{
      " Name ":" Ok ",
      " Code ": 0
    }
  },

```

```

    " InstanceId ":" i - instance2 ",
    " DiskEvents et ":{
      " DiskEventT ype ":[
        {
          " EventTime ":" 2018 - 05 - 06T02 : 43 : 10Z ",
          " EventId ":" e - event2 ",
          " EventType ":{
            " Name ":" Degraded ",
            " Code ":" 1 "
          },
          " EventEndTi me ":" 2018 - 05 - 06T02 : 48 : 52Z "
        }
      ]
    },
    " DiskId ":" d - disk2 "
  }
}
}
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	MissingParameter	%s	The error message returned when a required parameter is not specified .
403	InvalidParameter	%s	The error message returned when the parameter format is invalid.
403	DiskIdLimitExceeded	%s	The error message returned when the specified instance IDs is more than 100.
403	EventIdLimitExceeded	%s	The error message returned when more than 100 simulated event IDs are specified.
403	InvalidParameter. TimeEndBeforeStart	%s	The error message returned when the end time is earlier than the start time.

[View error codes](#)

18.4 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 is in the Canceled state.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
EventId . N	RepeatList	Yes	e-xhskHun1256xxxx	The IDs of one or multiple system events. Valid values of N: 1 to 100. You can specify multiple values in the form of a repeated list.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	CancelSimulatedSystemEvents	The operation that you want to perform. Set the value to CancelSimulatedSystemEvents.

Response parameters

Name	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-xhskHun1256xxx
&RegionId=cn-hangzhou
&<Common request parameters>
```

Successful response examples

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 when a required parameter is not specified.
403	InvalidParameter	%s	The error message returned when the parameter format is invalid.
403	CannotCancelSystemEvent. NotSimulated	%s	The error message returned when you cancel a non-simulated system event.
403	InvalidEventId. NotFound	%s	The error message returned when the specified EventId does not exist.

HTTP status code	Error code	Error message	Description
400	EventIdLimitExceeded	%s	The error message returned when more than 100 simulated event IDs are specified.

[View error codes](#)

18.5 CreateSimulatedSystemEvents

Schedules simulated system events for one or more ECS instances. The simulated system events do not occur in the actual system and the simulation does not affect ECS instances.

Description

You can use the ECS console, [ECS APIs](#), or CloudMonitor to view the scheduled simulated system events.

The following table describes the lifecycle of a simulated system event.

- **Scheduled:** The status for the simulated system event is automatically changed to Scheduled after it is scheduled.
- **Executed:** The status for 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 for the simulated system event is changed to Canceled if you cancel the event by calling [CancelSimulatedSystemEvents](#).
- **Avoided:** The status for the simulated system event of 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.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
EventType	String	Yes	SystemMaintenance.Reboot	The type of a system event. Valid values: - SystemMaintenance.Reboot: The instance restarts due to maintenance. - SystemFailure.Reboot: The instance restarts due to a system failure. - InstanceFailure.Reboot: The instance restarts due to an instance failure.
InstanceId . N	RepeatList	Yes	i-instance1	The IDs of one or more ECS instances. Valid values of N: 1 to 100. You can specify multiple values in the form of a repeated list.
NotBefore	String	Yes	2018-12-01T06:32:31Z	The start time of the scheduled event execution period. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	CreateSimulatedSystemEvents	The operation that you want to perform. Set the value to CreateSimulatedSystemEvents.

Response parameters

Name	Type	Example	Description
EventIdSet		e-xhskHun1256xxxx	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-instance1
&NotBefore=2018-12-01T06:32:31Z
&RegionId=cn-hangzhou
&<Common request parameters>
```

Successful response examples

XML format

```
<CreateSimulatedSystemEventsResponse>
  <EventIdSet>
    <EventId>e-bp191hqye*****34y</EventId>
    <EventId>e-bp191hqye*****34x</EventId>
  </EventIdSet>
  <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
</CreateSimulatedSystemEventsResponse>
```

JSON format

```
{
  "EventIdSet":{
    "EventId":[
      "e-bp191hqye*****34y",
      "e-bp191hqye*****34x"
    ]
  },
  "RequestId":"679E9056-9B75-4306-8A72-A1DF93EBEF74"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	MissingParameter	%s	The error message returned when a required parameter is not specified .
403	InvalidParameter	%s	The error message returned when the parameter format is invalid.
403	InvalidNotBeforePassed	%s	The error message returned when the specified value of the NotBefore parameter is earlier than the current time.
404	InvalidInstanceId.NotFound	%s	The error message returned when the specified instance does not exist.
403	SimulatedEventLimitExceeded	%s	The error message returned when the number of simulated events has reached the upper limit.
403	InstanceIdLimitExceeded	%s	The error message returned when the specified instance IDs is more than 100.

[View error codes](#)

19 Monitoring

19.1 DescribeEniMonitorData

Queries traffic data information about a secondary ENI over a specific period.

Description

The traffic data information includes intranet inbound and outbound traffic, the number of packets sent and received by the secondary ENI, and the number of packets discarded by the secondary ENI. If some content in the returned information is missing, it is possible that the system did not obtain the corresponding information. For example, the traffic data information on the secondary ENI cannot be queried if the instance is in the Stopped state. Data also cannot be queried if the secondary ENI is not attached to an instance and in the Available state. When you call this operation, note that:

- Up to 400 monitored data entries can be returned per query. If the value of (EndTime and StartTime)/Period is greater than 400, an error is returned.
- You can only query the monitored data in the last 30 days. If the value of the StartTime parameter is earlier than 30 days, an error is returned.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
EndTime	String	Yes	2018-05-21T12:22:00Z	The end time of the retrieved data. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ. If the specified number of seconds (ss) is not 00, the time will be automatically rounded up to the next minute.
InstanceId	String	Yes	myInstance	The ID of the instance to which the secondary ENI is bound.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
StartTime	String	Yes	2018-05-21T12:19:00Z	The start time of the retrieved data. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ. If the specified number of seconds (ss) is not 00, the time will be automatically rounded up to the next minute.
Action	String	No	DescribeEniMonitorData	The operation that you want to perform. Set the value to DescribeEniMonitorData.

Name	Type	Required	Example	Description
EniId	String	No	eni-myENI	The ID of the secondary ENI . All secondary ENIs that are bound to the instance are queried by default.
Period	Integer	No	60	The interval of the retrieved data. Unit: seconds. Valid values: • 60 • 600 • 3600 Default value: 60.

Response parameters

Name	Type	Example	Description
MonitorData			An array of EniMonitorDataType data.
└ DropPacket Rx	String	0	The discarded intranet data packets received by the secondary ENI. Unit: packets.
└ DropPacket Tx	String	0	The discarded intranet data packets sent by the secondary ENI. Unit: packets.
└ EniId	String	eni-myENI	The ID of the secondary ENI.
└ IntranetRx	String	0	The intranet data traffic received by the secondary ENI. Unit: Kbit/s.
└ IntranetTx	String	0	The intranet data traffic sent by the secondary ENI. Unit: Kbit/s.

Name	Type	Example	Description
^L PacketRx	String	0	The intranet data traffic packets received by the secondary ENI. Unit : packets.
^L PacketTx	String	0	The intranet data packets sent by the secondary ENI. Unit: packets.
^L TimeStamp	String	2018-05-21T03:22:00Z	The timestamp of traffic query. The time follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	4	The total number of returned entries.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeEniMonitorData
&EndTime=2018-05-21T12:22:00Z
&InstanceId=myInstance
&RegionId=cn-hangzhou
&StartTime=2018-05-21T12:19:00Z
&EniId=eni-myENI
&Period=60
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeEniMonitorDataResponse>
  <RequestId>5A03C2BA-3BCE-4A87-8076-7DC1629</RequestId>
  <TotalCount>4</TotalCount>
  <MonitorData>
    <EniMonitorData>
      <PacketTx>0</PacketTx>
      <TimeStamp>2018-05-21T03:22:00Z</TimeStamp>
      <IntranetOut>0</IntranetOut>
      <DropPacketRx>0</DropPacketRx>
      <IntranetIn>0</IntranetIn>
```

```

    < EniId > eni - myENI </ EniId >
    < DropPacket Tx > 0 </ DropPacket Tx >
    < PacketRx > 0 </ PacketRx >
  </ EniMonitor Data >
  < EniMonitor Data >
    < PacketTx > 0 </ PacketTx >
    < TimeStamp > 2018 - 05 - 21T03 : 21 : 00Z </ TimeStamp >
    < IntranetOut > 0 </ IntranetOut >
    < DropPacket Rx > 0 </ DropPacket Rx >
    < IntranetIn > 0 </ IntranetIn >
    < EniId > eni - myENI </ EniId >
    < DropPacket Tx > 0 </ DropPacket Tx >
    < PacketRx > 0 </ PacketRx >
  </ EniMonitor Data >
  < EniMonitor Data >
    < PacketTx > 52240 </ PacketTx >
    < TimeStamp > 2018 - 05 - 21T03 : 19 : 00Z </ TimeStamp >
    < IntranetOut > 73344 </ IntranetOut >
    < DropPacket Rx > 0 </ DropPacket Rx >
    < IntranetIn > 467 </ IntranetIn >
    < EniId > eni - myENI </ EniId >
    < DropPacket Tx > 0 </ DropPacket Tx >
    < PacketRx > 6603 </ PacketRx >
  </ EniMonitor Data >
  < EniMonitor Data >
    < PacketTx > 34925 </ PacketTx >
    < TimeStamp > 2018 - 05 - 21T03 : 20 : 00Z </ TimeStamp >
    < IntranetOut > 48871 </ IntranetOut >
    < DropPacket Rx > 0 </ DropPacket Rx >
    < IntranetIn > 350 </ IntranetIn >
    < EniId > eni - myENI </ EniId >
    < DropPacket Tx > 0 </ DropPacket Tx >
    < PacketRx > 4888 </ PacketRx >
  </ EniMonitor Data >
</ MonitorData >
</ DescribeEniMonitorDataResponse >

```

JSON format

```

{
  "RequestId ":" 5A03C2BA - 3BCE - 4A87 - 8076 - 7DC1629 ",
  "MonitorData ":{
    "EniMonitor Data ":[
      {
        "TimeStamp ":" 2018 - 05 - 21T03 : 22 : 00Z ",
        "PacketTx ": 0 ,
        "IntranetOut ": 0 ,
        "DropPacket Rx ": 0 ,
        "EniId ":" eni - myENI ",
        "IntranetIn ": 0 ,
        "PacketRx ": 0 ,
        "DropPacket Tx ": 0
      },
      {
        "TimeStamp ":" 2018 - 05 - 21T03 : 21 : 00Z ",
        "PacketTx ": 0 ,
        "IntranetOut ": 0 ,
        "DropPacket Rx ": 0 ,
        "EniId ":" eni - myENI ",
        "IntranetIn ": 0 ,
        "PacketRx ": 0 ,
        "DropPacket Tx ": 0
      }
    ],
  },
}

```

```

{
  "TimeStamp ":" 2018 - 05 - 21T03 : 19 : 00Z ",
  "PacketTx ": 52240 ,
  "IntranetOut ": 73344 ,
  "DropPacket Rx ": 0 ,
  "EniId ":" eni - myENI ",
  "IntranetIn ": 467 ,
  "PacketRx ": 6603 ,
  "DropPacket Tx ": 0
},
{
  "TimeStamp ":" 2018 - 05 - 21T03 : 20 : 00Z ",
  "PacketTx ": 34925 ,
  "IntranetOut ": 48871 ,
  "DropPacket Rx ": 0 ,
  "EniId ":" eni - myENI ",
  "IntranetIn ": 350 ,
  "PacketRx ": 4888 ,
  "DropPacket Tx ": 0
}
]
}
}

```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidInstanceType. NotSupportCredit	The InstanceType of the specified instance does not support credit.	The error message returned when the instance type does not support burstable instances.
403	InvalidParameter.EndTime	The specified parameter EndTime is earlier than StartTime.	The error message returned when the end time is earlier than the start time.
4,003	InvalidParam. Malformed	The specified parameter "EniId" and "InstanceId" are not valid	The error message returned when the specified parameter is invalid.

[View error codes](#)

19.2 DescribeDiskMonitorData

Queries the monitoring data of a specified disk. The monitoring data includes read IOPS, write IOPS, read bandwidth (Byte/s), write bandwidth (Byte/s), read latency (ms), and write latency (ms) of the disk. Some portion may be missing from the monitoring data information. This is because the system cannot obtain the relevant information, such as when the disk is not in the In_Use state.

Description

When you call this operation, note that:

- You can only query monitoring information for the disks that are in the In_use state. For more information, see [Basic cloud disk status](#).
- Up to 400 monitoring data entries can be returned at a time. If the value of (EndTime - StartTime)/Period is greater than 400, an error is returned.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
DiskId	String	Yes	d-myDisk	The ID of the disk.
EndTime	String	Yes	2014-07-23T12:09:00Z	The end time of the query. The time format follows the ISO 8601 standard and uses UTC time. The format is yyyy-mm-ddThh:mm:ssZ. If the specified number of seconds (ss) is not 00, the time will be automatically rounded up to the next minute.

Name	Type	Required	Example	Description
StartTime	String	Yes	2014-07-23T12:07:00Z	The start time of the query. The time format follows the ISO 8601 standard and uses UTC time. The format is yyyy-mm-ddThh:mm:ssZ. If the specified number of seconds (ss) is not 00, the time will be automatically rounded up to the next minute.
Action	String	No	DescribeDiskMonitorData	The operation that you want to perform. Set the value to DescribeDiskMonitorData.
Period	Integer	No	60	The granularity of the retrieved monitoring data. Unit: seconds . Valid values: • 60 • 600 • 3600 Default value: 60.

Response parameters

Name	Type	Example	Description
MonitorData			A collection consisting of disk monitoring data.
└BPSRead	Integer	0	The system disk read bandwidth. Unit: Byte/s.
└BPSTotal	Integer	204	The system disk read and write bandwidth. Unit: Byte/s.

Name	Type	Example	Description
<code>└BPSWrite</code>	Integer	204	The system disk write bandwidth. Unit: Byte/s.
<code>└DiskId</code>	String	d-mydisk001	The ID of the disk.
<code>└IOPSRead</code>	Integer	0	The system disk read I/O operations . Unit: times/s.
<code>└IOPSTotal</code>	Integer	0	The system disk read and write I/O operations. Unit: times/s.
<code>└ IOPSWrite</code>	Integer	0	The system disk write I/O operations. Unit: times/s.
<code>└LatencyRead</code>	Integer	0	The read latency of the disk. Unit: μ s.
<code>└LatencyWrite</code>	Integer	0	The write latency of the disk. Unit: μ s.
<code>└TimeStamp</code>	String	2014-07-23T12:07:00Z	The time of the data query. The time format follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	3	The total number of disk monitoring data entries.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDiskMonitorData
&DiskId=d-myDisk
&EndTime=2014-07-23T12:09:00Z
&StartTime=2014-07-23T12:07:00Z
```

```
& Period = 60
&< Common request parameters >
```

Successful response examples

XML format

```
< DescribeDiskMonitorDataResponse >
  < MonitorData >
    < DiskMonitorData >
      < BPSRead > 0 </ BPSRead >
      < BPSTotal > 0 </ BPSTotal >
      < BPSWrite > 0 </ BPSWrite >
      < DiskId > d - 23b3p4r8b </ 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 - 23b3p4r8b </ 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 - 23b3p4r8b </ DiskId >
      < IOPSRead > 0 </ IOPSRead >
      < IOPSTotal > 0 </ IOPSTotal >
      < IOPSWrite > 0 </ IOPSWrite >
      < Timestamp > 2014 - 07 - 23T12 : 09 : 00Z </ Timestamp >
    </ DiskMonitorData >
  </ MonitorData >
  < RequestId > BF666447 - B171 - 4076 - BCBA - 48437C18FD 76 </
RequestId >
  < TotalCount > 3 </ TotalCount >
</ DescribeDiskMonitorDataResponse >
```

JSON format

```
{
  "TotalCount": 3,
  "RequestId": "A48A0A77 - 34F5 - 4C33 - 9066 - 9E8D2DA0D8 E2",
  "MonitorData": {
    "DiskMonitorData": [
      {
        "Timestamp": "2014 - 07 - 23T12 : 07 : 00Z",
        "BPSRead": 0,
        "IOPSTotal": 0,
        "IOPSRead": 0,
        "BPSTotal": 0,
        "BPSWrite": 0,
        "IOPSWrite": 0,
        "DiskId": "d - 23b3p4r8b"
      }
    ]
  }
}
```

```

    },
    {
      "TimeStamp ":" 2014 - 07 - 23T12 : 08 : 00Z ",
      "BPSRead ": 0 ,
      "IOPSTotal ": 0 ,
      "IOPSRead ": 0 ,
      "BPSTotal ": 204 ,
      "BPSWrite ": 204 ,
      "IOPSWrite ": 0 ,
      "DiskId ":" d - 23b3p4r8b "
    },
    {
      "TimeStamp ":" 2014 - 07 - 23T12 : 09 : 00Z "
      "BPSRead ": 0 ,
      "IOPSTotal ": 0 ,
      "IOPSRead ": 0 ,
      "BPSTotal ": 819 ,
      "BPSWrite ": 819 ,
      "IOPSWrite ": 0 ,
      "DiskId ":" d - 23b3p4r8b "
    }
  ]
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.NotSupportCredit	The InstanceType of the specified instance does not support credit.	The error message returned when the instance type does not support burstable instances.
400	InvalidParameter.EndTime	The specified parameter EndTime is earlier than StartTime.	The error message returned when the end time is earlier than the start time.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned when an unknown error occurs.

[View error codes](#)

19.3 DescribeInstanceMonitorData

Queries all the monitoring data about an ECS instance. The returned monitoring data includes the CPU usage, received data traffic, sent data traffic, network traffic,

and average bandwidth of the ECS instance. If some of the traffic data information is missing, it is because the system is unable to obtain the relevant information, such as when an instance is in the Stopped state.

Description

When you call this operation, note that:

- Up to 400 monitored data entries can be returned per query. If the value of (EndTime - StartTime)/Period is greater than 400, an error is returned.
- You can only query the monitoring data in the last 30 days. If the value of the StartTime parameter is earlier than 30 days, an error is returned.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
EndTime	String	Yes	2014-10-30T08:00:00Z	The end time of the retrieved monitoring data: The time format follows the ISO 8601 standard and uses UTC time. The format is YYYY-MM-DDThh:mm:ssZ. If the specified number of seconds (ss) is not 00, the time will be automatically rounded up to the next minute.
InstanceId	String	Yes	i-instnace1	The ID of the instance.

Name	Type	Required	Example	Description
StartTime	String	Yes	2014-10-29T23:00:00Z	The start time of the retrieved monitoring data. The time format follows the ISO 8601 standard and the UTC time is used. The format is YYYY-MM-DDThh:mm:ssZ. If the specified number of seconds (ss) is not 00, the time will be automatically rounded up to the next minute.
Action	String	No	DescribeInstanceMonitorData	The operation that you want to perform. Set the value to DescribeInstanceMonitorData.
Period	Integer	No	60	The interval of the retrieved monitoring data. Unit: seconds. Valid values: 60 600 3600 Default value: 60.

Response parameters

Name	Type	Example	Description
MonitorData			A collection consisting of instance monitoring data.
└BPSRead	Integer	1000	The system disk read bandwidth. Unit: Byte/s.
└BPSWrite	Integer	200	The system disk write bandwidth. Unit: Byte/s.

Name	Type	Example	Description
└CPU	Integer	2	The CPU utilization. Unit: percent (%).
└CPUAdvanceCreditBalance	Float	0.4	The excess credits consumed by the t5 instance.
└CPUCreditBalance	Float	120	The total credits of the t5 instance.
└CPUCreditUsage	Float	30	The number of credits consumed by the t5 instance.
└CPUNotpaidSurplusCreditUsage	Float	0.5	The unpaid excess credits.
└IOPSRead	Integer	1000	The system disk read I/O operations . Unit: times/s.
└IOPSWrite	Integer	200	The system disk write I/O operations. Unit: times/s.
└InstanceId	String	i-instnace1	The ID of the instance.
└InternetBandwidth	Integer	10	The Internet traffic of the instance. Unit: Kbit/s.
└InternetRX	Integer	122	The Internet traffic received by the instance at the time of traffic query . Unit: Kbit/s.
└InternetTX	Integer	343	The Internet traffic sent by the instance at the time of traffic query . Unit: Kbit/s.

Name	Type	Example	Description
<code>└IntranetBandwidth</code>	Integer	10	The intranet bandwidth of the instance. Unit: Kbit/s.
<code>└IntranetRX</code>	Integer	122	The intranet traffic received by the instance at the time of traffic query . Unit: Kbit/s.
<code>└IntranetTX</code>	Integer	343	The intranet traffic sent by the instance at the time of traffic query . Unit: Kbit/s.
<code>└TimeStamp</code>	String	2010-01-21T09:50:23Z	The time of traffic query. The time format follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ.
<code>RequestId</code>	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request. This parameter is returned regardless of whether the operation is successful .

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceMonitorData
&EndTime=2014-10-30T08:00:00Z
&InstanceId=i-instance1
&StartTime=2014-10-29T23:00:00Z
&Period=60
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeInstanceMonitorDataResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <MonitorData>
    <InstanceMonitorData>
      <InstanceId>Bc0102-23xYm09</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 > 200 </ BPSWrite >
    < Timestamp > 2010 - 01 - 21T09 : 50 : 23Z </ Timestamp >
  </ InstanceMonitorData >
</ MonitorData >
</ DescribeInstanceMonitorDataResponse >

```

JSON format

```

{
  "RequestId ":" C8B26B44 - 0189 - 443E - 9816 - D951F59623 A9 ",
  "MonitorData ":{
    "InstanceMonitorData ":[
      {
        "IOPSRead ": 1000 ,
        "BPSWrite ": 200 ,
        "IntranetBandwidth ": 10 ,
        "IntranetTX ": 343 ,
        "IntranetRX ": 122 ,
        "InstanceId ":" Bc0102 - 23xYm09 ",
        "InternetFlow ": 675 ,
        "CPU ": 0 ,
        "Timestamp ":" 2010 - 01 - 21T09 : 50 : 23Z ",
        "BPSRead ": 1000 ,
        "InternetRX ": 122 ,
        "IntranetFlow ": 675 ,
        "InternetBandwidth ": 10 ,
        "IOPSWrite ": 200 ,
        "InternetTX ": 343
      }
    ]
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidStartTime .ValueNotSupported	The specified parameter StartTime is later than EndTime.	The error message returned when the end time is earlier than the start time.

[View error codes](#)

19.4 GetInstanceScreenshot

Obtains screenshot information of an instance.

Description

The system returns an instance screenshot in JPG format, encoded in Base64.

However, you must decode the screenshot yourself. We recommend that you use this operation for troubleshooting and diagnosis, and take note of the following points:

- The instance must be in the Running state.
- For [phased-out instance types](#), you cannot obtain screenshot information.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-myInstance	The ID of the instance.
RegionId	String	Yes	cn-shenzhen	The ID of the region where the instance is located. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	GetInstanc eScreenshot	The operation that you want to perform. Set the value to GetInstanceScreenshot.
WakeUp	Boolean	No	false	Indicates whether to wake up instances in sleep mode. Default value: false.

Response parameters

Name	Type	Example	Description
InstanceId	String	i-myInstance	The ID of the instance.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Screenshot	String	iVBORw0KGgoA... AAABJRU5ErkJggg==	The JPG format instance screenshot, which is encoded in Base64.

Examples

Sample requests

```
http :// ecs - cn - hangzhou . example . com /? Action = GetInstanc
eScreensho t
& InstanceId = i - myInstance
& RegionId = cn - shenzhen
& WakeUp = false
&< Common request parameters >
```

Successful response examples

XML format

```
< GetInstanc eScreensho tResponse >
  < RequestId > 22A1933F - AD02 - 4560 - A6A7 - 53CF2231D9 42 </
  RequestId >
  < InstanceId > i - j5e42sbbth lokka11ech </ InstanceId >
  < Screenshot > iVBORw0KGg oA ... AAABJRU5Er kJggg ==</ Screenshot
  >
</ GetInstanc eScreensho tResponse >
```

JSON format

```
{
  " Screenshot ":" iVBORw0KGg oA ... AAABJRU5Er kJggg ==",
  " InstanceId ":" i - j5e42sbbth lokka11ech ",
  " RequestId ":" 22A1933F - AD02 - 4560 - A6A7 - 53CF2231D9 42 "
```

```
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned when a required parameter is not specified .
404	InvalidParameter	%s	The error message returned when the parameter format is invalid.
405	IncorrectInstanceState	%s	The error message returned when the specified resource is in a state that does not support the current operation.

[View error codes](#)

19.5 GetInstanceConsoleOutput

Obtains the command output of an instance. The returned command output is encoded in Base64.

Description

ECS is a virtualized cloud-based service that cannot be connected to any display devices. However, the command output for the last start, restart, or shutdown of the instance is cached. You can call `GetInstanceConsoleOutput` to obtain this information .

For [phased-out instance types](#), you cannot obtain the command output.

You cannot obtain the command output of Windows-based instances.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId	String	Yes	i-myInstance	The ID of the instance.
RegionId	String	Yes	cn-shenzhen-finance-1	The ID of the region where the instance is located. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	GetInstanceConsoleOutput	The operation that you want to perform. Set the value to GetInstanceConsoleOutput.

Response parameters

Name	Type	Example	Description
ConsoleOutput	String	V2VsY29tZS B0byBDZW50 T1MgCgpDaG Vja2luZyBm aWxl3lzdG VtcwpDaGVj a2luZyBhbG wgZmlsZSBz eXN0ZW1zLg pbL3NiaW4v ZnNjay5leH Q0ICgxKSA LSAvXSBmc2 NrLmV4dDQg LWEgL2Rldi 92ZGExIAov ZGV2L3ZkYT E6IGNsZWFu LCAzMjAxNi 8yNjIxNDQw IGZpbGVzLC A0NDc5NzQv MTA0ODU1MD QgYmxvY2tz CgpFbnRlcm luZyBub24t aW50ZXJhY3 RpdmUgc3Rh cnR1cApDYW xsaW5nIHRo ZSBzeXN0ZW 0gYWN0aXZp dHkgZGF0YS Bjb2xsZWN0 b3IgKHNhZG Mpli4uIAoK QnJpbmdpbm cgdXAgaW50 ZXJmYWNIIG V0aDA6ICAK RGV0ZXJtaW 5pbmcgSVAg aW5mb3JtYX Rpb24gZm9y IGV0aDAuLi 4gZG9uZS4K	The command output of the instance, in Base64 encoding.

Name	Type	Example	Description
InstanceId	String	i-myInstance	The ID of the instance.
LastUpdate Time	String	2018-03-22 10:04:57	The time the instance was last started, restarted, or shut down. The time format follows the ISO 8601 standard and uses UTC time. The format is yyyy-MM-ddTHH:mm:ssZ.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
http :// ecs - cn - hangzhou . aliyuncs . com /? Action = GetInstanc
eConsoleOu tput
& InstanceId = i - myInstance
& RegionId = cn - shenzhen - finance - 1
&< Common request parameters >
```

Successful response examples

XML format

```
< GetInstanc eConsoleOu tputRespon se >
  < RequestId > 22A1933F - AD02 - 4560 - A6A7 - 53CF2231D9 42 </
RequestId >
  < InstanceId > i - j5e42sbbth lokka11ech </ InstanceId >
  < LastUpdate Time > 2018 - 03 - 22 10 : 04 : 57 </ LastUpdate
Time >
  < ConsoleOut put > V2VsY29tZS B0byBDZW50 T1MgCgpDaG Vja2luZyBm
aWxlc3lzdG VtcwpDaGVj a2luZyBhbG wgZmlsZSBz eXN0ZW1zLg
pbL3NiaW4v ZnNjay5leH Q0ICgxKSAt LSAvXSBmc2 NrLmV4dDQg
LWEgL2Rldi 92ZGEeIAov ZGV2L3ZkYT E6IGNsZWFu LCAzMjAxNi
8yNjIxNDQw IGZpbGVzLC A0NDc5NzQv MTA0ODU1MD QgYmxvY2tz
CgpFbnRlcm luZyBub24t aW50ZXJhY3 RpdmUgc3Rh cnRlcApDYW
xsaW5nIHRo ZSBzeXN0ZW 0gYWN0aXZp dHkgZGF0YS Bjb2xsZWN0
b3IgaXN0ZG Mpl4uIAoK QnJpbmdpbm cgdXAgW50 ZXJmYWNlIG
V0aDA6ICAK RGV0ZXJtaW 5pbmcgSVAg aW5mb3JtYX Rpb24gZm9y
IGV0aDAuLi 4gZG9uZS4K CmFsaXl1bi 1zZXJ2aWNl IHN0YXJ0L3
J1bm5pbmcs IHByb2Nlc3 MgMTczMwpm aW5pc2hlZA oKQ2VudE9T
IHJlbGVhc2 UgNi44ICgk aW5hbCkKS2 VybmVsIDIu Ni4zMj02OT
YyMy4yLmVs Ni5pNjg2IG 9uIGFuIGk2 ODYKCmlaMn plZDK2ZTQ2
MmF5c3Bxwem w2czhaIGxv Z2lu0g ==</ ConsoleOut put >
```



```
</ GetInstanc eConsoleOut putResponse >
```

JSON format

```
{
  " ConsoleOut put ":" V2VsY29tZS B0byBDZW50 T1MgCgpDaG Vja2luZyBm
  aWxlc3lzdG VtcwpDaGVj a2luZyBhbG wgZmlsZSBz eXN0ZW1zLg
  pbL3NiaW4v ZnNjay5leH Q0ICgxKSAt LSAvXSBmc2 NrLmV4dDQg
  LWEgL2Rldi 92ZGExIAov ZGV2L3ZkYT E6IGNsZWFu LCAzMjAxNi
  8yNjIxNDQw IGZpbGVzLC A0NDc5NzQv MTA0ODU1MD QgYmxvY2tz
  CgpFbnRlcm luZyBub24t aW50ZXJhY3 Rpdmc3Rh cnRlcApDYW
  xsaW5nIHRo ZSBzeXN0ZW 0gYWN0aXZp dHkgZGF0YS Bjb2xsZWNO
  b3IgKHhhZG MpLi4uIAoK QnJpbmdpbm cgdXAgaw50 ZXJmYWNlIG
  V0aDA6ICAK RGV0ZXJtaW 5pbmcgSVAg aW5mb3JtYX Rpb24gZm9y
  IGV0aDAuLi 4gZG9uZS4K CmFsaXl1bi 1zZXJ2aWNl IHN0YXJ0L3
  J1bm5pbmcs IHByb2Nlc3 MgMTczMwpm aW5pc2hlZA oKQ2VudE9T
  IHJlbGVhc2 UgNi44ICGg aW5hbCkKS2 VybmVsIDIu Ni4zMj02OT
  YuMy4yLmVs Ni5pNjg2IG 9uIGFuIGk2 ODYKCmlaMn plZDk2ZTQ2
  MmF5cjBxem w2czhaIGxv Z2lu0g ==",
  " InstanceId ":" i - j5e42sbbth lokka1lech ",
  " RequestId ":" 22A1933F - AD02 - 4560 - A6A7 - 53CF2231D9 42 ",
  " LastUpdate Time ":" 2018 - 03 - 22 10 : 04 : 57 "
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned when a required parameter is not specified.
404	InvalidParameter	%s	The error message returned when the parameter format is invalid.
405	IncorrectInstanceState	%s	The error message returned when the specified resource is in a state that does not support the current operation.

[View error codes](#)

20 Cloud assistants

20.1 CreateCommand

Creates a cloud assistant command.

Description

- You can create commands of the following types:
 - Bat scripts for Windows-based instances ([RunBatScript](#))
 - PowerShell scripts for Windows-based instances ([RunPowerShellScript](#))
 - Shell scripts for Linux-based instances ([RunShellScript](#))
- You can specify the `TimeOut` parameter to set the maximum timeout period for command invocations on ECS instances. When a command invocation times out, the [cloud assistant client](#) will force the command process to stop.
 - For one-time invocation: After an invocation times out, the state of the command invocation ([InvokeRecordStatus](#)) on the specified ECS instance becomes Failed.
 - For periodic invocation:
 - The timeout period of periodic invocation is effective for every invocation record.
 - After an invocation times out, the state of the invocation record ([InvokeRecordStatus](#)) becomes Failed.
 - The timeout of last invocation does not affect the next invocation.
- You can use the `WorkingDir` parameter to specify the invocation path of the command. For Linux-based instances, the default path is `/root`. For Windows-based instances, the default path is the one where the cloud assistant client process is located, such as `C:\ProgramData\aliyun\assist\$(version)`.
- You can create up to 100 cloud assistant commands in a region. You can also [submit a ticket](#) to adjust the upper limit.
- You can enable variables in a script by setting `EnableParameter` to `true`. Cloud assistant supports the format of `{{&(parameter)}}` in the `CommandContent` parameter, while you run the script via the `InvokeCommand` method, you can enter the value of variables. Imagine that you create a script of `echo {{`

`name }}`, then you can set the `Parameter` to `< name , Jack >` and the like in the `InvokeCommand` method, in the actual invocation, the cloud assistant uses `echo Jack`.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
CommandContent	String	Yes	ZWNobyAxMjM=	The Base64-encoded content of the command. When you specify the <code>Type</code> parameter, you must specify this parameter. The parameter value must be Base64-encoded for transmission, and the size of the script after the Base64 encoding cannot exceed 16 KB.
Name	String	Yes	Test	The name of the command, which supports all the character sets. It can be a maximum of 128 characters in length.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.

Name	Type	Required	Example	Description
Type	String	Yes	RunShellScript	The type of the command. Valid values: • RunBatScript: Bat script for Windows-based instances • RunPowerShellScript: PowerShell script for Windows-based instances • RunShellScript: Shell script for Linux-based instances
Action	String	No	CreateComm and	The operation that you want to perform. Set the value to CreateCommand.
Descriptio n	String	No	Test1	The description of the command, which supports all character sets. It can be a maximum of 512 characters in length.
EnablePara meter	Boolean	No	false	Whether to use variables in a script or not. Default value: false.
Timeout	Long	No	3600	The value of the invocation timeout period of a command on ECS instances. Unit: seconds . When the command fails to run, the invocation times out, and the cloud assistant client forces to terminate the command process afterward. Default value: 3600.

Name	Type	Required	Example	Description
WorkingDir	String	No	/home/	The directory where the created command runs on the ECS instances. Default value: • For Linux-based instances, the default path is /root. • For Windows-based instances, the default path is the one where the cloud assistant client process is located, such as C:\ProgramData\aliyun\assist\\$(version).

Response parameters

Name	Type	Example	Description
CommandId	String	c-7d2a745b412b4601b2d47f6a768d3a14	The ID of the command.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateCommand
&CommandContent=ZWNobyAxMjM=
&Name=test
&RegionId=cn-hangzhou
&Type=RunShellScript
&Description=Test1
&WorkingDir=/home/
&Timeout=3600
&<Common request parameters>
```

Successful response examples

XML format

```
<CreateCommandResponse>
  <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
```

```
< CommandId > c - 7d2a745b41 2b4601b2d4 7f6a768d3a 14 </
CommandId >
</ CreateComm andRespons e >
```

JSON format

```
{
  "RequestId ":" E69EF3CC - 94CD - 42E7 - 8926 - F133B86387 C0 ",
  "CommandId ":" c - 7d2a745b41 2b4601b2d4 7f6a768d3a 14 "
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned when an unknown error occurs.
403	InvalidCmdType.NotFound	The specified command type does not exist.	The error message returned when the specified command type does not exist.
403	CmdName.ExceedLimit	The length of the command name exceeds the upper limit.	The error message returned when the command name exceeds the maximum length. Use a shorter command name.
403	CmdDesc.ExceedLimit	The length of the command description exceeds the upper limit.	The error message returned when the command description exceeds the maximum length. Use a shorter command description.
403	CmdCount.ExceedQuota	The total number of commands in the current region exceeds the quota.	The error message returned when the number of cloud assistant commands in the region exceeds the upper limit.

[View error codes](#)

20.2 InstallCloudAssistant

Installs the cloud assistant client on one or more instances.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId . N	RepeatList	Yes	i-bp1iudwa5b1tqaxxxxxx	The ID of the instance. Valid values of N: 1 to 20.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the instance is located. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	InstallCloudAssistant	The operation that you want to perform. Set the value to InstallCloudAssistant.  Note: After you call InstallCloudAssistant and RebootInstance in sequence, the cloud assistant client takes effect.

Response parameters

Name	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>
```

Successful response examples

XML format

```
<InstallCloudAssistantResponse>
  <RequestId>928E2273-5715-46B9-A730-238DC996A533</
  RequestId>
</InstallCloudAssistantResponse>
```

JSON format

```
{
  "RequestId": "928E2273-5715-46B9-A730-238DC996A533"
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned when an unknown error occurs.
404	InvalidInstance.NotFound	The specified instance does not exist.	The error message returned when the specified instance does not exist.

[View error codes](#)

20.3 InvokeCommand

Triggers a cloud assistant command on one or more ECS instances.

Description

- You can call the InvokeCommand operation in a region up to 5000 times a day. To adjust the maximum number of daily calls, [submit a ticket](#).
- The target instance type must be [VPC](#).
- The target instance must be in the Running state.
- The target instance must be pre-installed with the [cloud assistant client](#).
- Before you run PowerShell commands, make sure that the target Windows-based instance has the PowerShell feature configured.
- One-time invocations will run the commands only once.
- Periodic invocations will run the commands at the frequency specified by the Frequency parameter. The result of previous invocation does not affect the next invocation.
- Periodic invocation can only be scheduled in UTC+8. If the system time of your ECS instances are not UTC+8, make sure that you have made adjustments to ensure that your commands are executed at the correct time. For more information, see [Time setting: Synchronize NTP servers and change time zone for Linux instances](#) or [Time setting: Synchronize NTP servers for Windows instances](#).
- You can specify multiple ECS instances in this command. When one of these instances does not comply with the invocation conditions, you need to specify another instance.
- Command invocations may fail because of target instance status exceptions, network exceptions, or cloud assistant client exceptions. If an invocation fails, no invocation information is generated.
- If you added `EnableParameter = true` while creating a script, you should specify value for the variables in the InvokeCommand method.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
CommandId	String	Yes	c-e996287206324975b5fb e1dxxxxxxxxxx	The ID of the command. You can call DescribeCommands to view all available command IDs.
InstanceId . N	RepeatList	Yes	i-bp185dy2o3 o6nxxxxxxxx	The list of instances where the command need to be executed . You can specify up to 50 instance IDs in each request. Valid values of N: 1 to 50.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	InvokeCommand	The operation that you want to perform. Set the value to InvokeCommand.
Frequency	String	No	0 */20 * * * *	The frequency at which a periodic task is invoked. The frequency cannot be less than 10 seconds. When the Timed parameter is set to True, you must specify the Frequency parameter. The value of this parameter is expressed in Cron. For more information, see Cron expressions .

Name	Type	Required	Example	Description
Parameters	Json	No	<code>{"name":"Jack", "accessKey":"LTAIdyv*****aRY"}</code>	Specifies value for variables previously added in the script. The number of variables cannot be greater than 10. Use the format of <code>{" key ":" value "}</code> to set the values. Note that: • The key can support up to 64 characters, but it cannot be a null string. • The value can be a null string, which indicates that no values is set for this invocation. • After Base-64 encoded, the collective length of the <code>Parameters</code> and the <code>CommandContent</code> cannot exceed 16 KB.
Timed	Boolean	No	<code>true</code>	Indicates whether the command invocation is periodic. Default value: False.

Response parameters

Name	Type	Example	Description
InvokeId	String	<code>t-7d2a745b412b4601b2d47f6a768d3a14</code>	The invocation ID of the command.
RequestId	String	<code>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</code>	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=InvokeComm and
&CommandId=c-e996287206324975b5fbeldxxxxxxx xx
&InstanceId.1=i-bp185dy2o3o6nxxxxxxx
&RegionId=cn-hangzhou
```

```
& Timed = true
& Frequency = 0 */ 20 * * * *
&< Common request parameters >
```

Successful response examples

XML format

```
< InvokeComm andRespons e >
  < RequestId > E69EF3CC - 94CD - 42E7 - 8926 - F133B86387 C0 </
  RequestId >
  < InvokeId > t - 7d2a745b41 2b4601b2d4 7f6a768d3a 14 </ InvokeId
  >
</ InvokeComm andRespons e >
```

JSON format

```
{
  " RequestId ":" E69EF3CC - 94CD - 42E7 - 8926 - F133B86387 C0 ",
  " InvokeId ":" t - 7d2a745b41 2b4601b2d4 7f6a768d3a 14 "
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned when an unknown error occurs.
404	InvalidInstance.NotFound	The specified instance does not exist.	The error message returned when the specified instance does not exist.
403	MissingParam.Frequency	The frequency must be specified when you create a timed task.	The error message returned when no frequency is set for the periodic task.

[View error codes](#)

20.4 StopInvocation

Stops the process of a running cloud assistant command on one or more ECS instances.

Description

- If you stop the process of a one-time invocation command, the invocations that have already started are not interrupted. Invocations that have not started are canceled.
- If you stop the process of a periodic invocation command, the invocations that have already started are not interrupted. However, the invocation does not start in the next period.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InvokeId	String	Yes	t-7d2a745b412b4601b2d47f6a768d3a14	The invocation ID of the command process. You can call DescribeInvocations to view all the invocation IDs.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	StopInvocation	The operation that you want to perform. Set the value to StopInvocation.

Name	Type	Required	Example	Description
InstanceId . N	RepeatList	No	i-uf614fhehh zmxdqx	The list of instances where the command needs to be stopped. You can specify up to 50 instance IDs in each request. . Valid values of N: 1 to 50.

Response parameters

Name	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-7d2a745b412b4601b2d47f6a768d3a14
&RegionId=cn-hangzhou
&InstanceId.1=i-uf614fhehhzmxdqx
&<Common request parameters>
```

Successful response examples

XML format

```
<StopInvocationResponse>
  <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
</StopInvocationResponse>
```

JSON format

```
{
  "RequestId": "E69EF3CC-94CD-42E7-8926-F133B86387C0"
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned when an unknown error occurs.
404	InvalidInvokeId.NotFound	The specified invoke ID does not exist.	The error message returned when the specified InvokeId parameter does not exist.

[View error codes](#)

20.5 DeleteCommand

Deletes a cloud assistant command.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
CommandId	String	Yes	c-4d34302d02424c5c8e10281e3a315a05	The ID of the command. You can call DescribeCommands to view all available command IDs.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.

Name	Type	Required	Example	Description
Action	String	No	DeleteComm and	The operation that you want to perform. Set the value to DeleteCommand.

Response parameters

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

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteComm and
&CommandId=c-4d34302d02-424c5c8e10-281e3a315a-05
&RegionId=cn-hangzhou
&<Common request parameters>
```

Successful response examples

XML format

```
<DeleteComm andResponse>
  <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</
  RequestId>
</DeleteComm andResponse>
```

JSON format

```
{
  "RequestId": "E69EF3CC-94CD-42E7-8926-F133B86387C0"
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned when an unknown error occurs.

HTTP status code	Error code	Error message	Description
403	InvalidRegionId.NotFound	Current region is not available.	The error message returned when the specified region is unavailable.

[View error codes](#)

20.6 DescribeCloudAssistantStatus

Views whether the cloud assistant client is installed on one or more instances.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
InstanceId • N	RepeatList	Yes	i-bp1iudwa5b1tqaxxxxxx	The list of instance IDs. You can query up to 50 instances in each request. Valid values of N : 1 to 50.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the instance is located. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DescribeCloudAssistantStatus	The operation that you want to perform. Set the value to DescribeCloudAssistantStatus.

Response parameters

Name	Type	Example	Description
InstanceIdSet			A set of installation statuses of the cloud assistant clients on the instances.
CloudAssistantStatus	String	true	Indicates whether the cloud assistant client is installed on the instance.
InstanceId	String	i-bp1iudwa5b1tqaxxxxxx	The ID of the instance.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeCloudAssistantStatus
&InstanceId.1=i-bp1iudwa5b1tqaxxxxxx
&RegionId=cn-hangzhou
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeCloudAssistantStatusResponse>
  <InstanceIdSet>
    <InstanceId>i-bp1lf7trr4hb1lxxxxxx</InstanceId>
    <CloudAssistantStatus>True</CloudAssistantStatus>
  </InstanceIdSet>
  <InstanceId>i-bp1iudwa5b1tqaxxxxxx</InstanceId>
  <CloudAssistantStatus>True</CloudAssistantStatus>
</InstanceIdSet>
</DescribeCloudAssistantStatusResponse>
```

JSON format

```
{
  "InstanceIdSet":{
    "InstanceId":[
      {
```

```
" InstanceId ":" i - bp11f7trr4 hbi1xxxxxx ",
" CloudAssit antStatus ":" True "
},
{
" InstanceId ":" i - bp1iudwa5b 1tqaxxxxxx ",
" CloudAssit antStatus ":" True "
}
]
}
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError. Dispatch	An error occurs when you dispatched the request.	The error message returned when an unknown error occurs.
404	InvalidInstance. NotFound	The specified instance does not exist.	The error message returned when the specified instance does not exist.

[View error codes](#)

20.7 DescribeCommands

Views the cloud assistant commands that you have created. If you only specify the Action and RegionId parameters, the system queries all available commands by default.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DescribeCommands	The operation that you want to perform. Set the value to DescribeCommands.
CommandId	String	No	c-7d2a745b412b4601b2d47f6a768d3a14	The ID of the command.
Description	String	No	test	The description of the command.
Name	String	No	Test1	The name of the command. Partial command names are not supported.
PageNumber	Long	No	1	The current page number. Starting value: 1. Default value: 1.
PageSize	Long	No	10	The number of entries per page. Maximum value: 50. Default value: 10

Name	Type	Required	Example	Description
Type	String	No	RunShellScript	The type of the command. Valid values: - RunBatScript: Bat script for Windows-based instances - RunPowerShellScript: PowerShell script for Windows-based instances - RunShellScript: Shell script for Linux-based instances

Response parameters

Name	Type	Example	Description
Commands			An array of CommandSetType data.
└ CommandContent	String	Y2QgL3Jvb3Q=	The content of the command, which is Base64-encoded.
└ CommandId	String	c-7d2a745b412b4601b2d47f6a768d3a14	The ID of the command.
└ Description	String	test	The description of the command.
└ Name	String	Test1	The name of the command.
└ Timeout	Long	3600	The timeout period.
└ Type	String	RunShellScript	The type of the command.
└ WorkingDir	String	/home/	The directory path for command invocation.
PageNumber	Long	1	The page number of the command list.
PageSize	Long	10	The number of entries per page.

Name	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Long	5	The total number of commands.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeCommands
&RegionId=cn-hangzhou
&CommandId=c-7d2a745b41-2b4601b2d4-7f6a768d3a-14
&Name=Test1
&Description=test
&Type=RunShellScript
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeCommandsResponse>
  <TotalCount>5</TotalCount>
  <Commands>
    <Command>
      <Name>Test</Name>
      <WorkingDir></WorkingDir>
      <CommandContent>ZWNobyAxMjM=</CommandContent>
      <Timeout>3600</Timeout>
      <Type>RunShellScript</Type>
      <CommandId>c-7d2a745b41-2b4601b2d4-7f6a768d3a-14</CommandId>
      <Description>test</Description>
    </Command>
    <Command>
      <Name>Test1</Name>
      <WorkingDir></WorkingDir>
      <CommandContent>Y2QgL3Jvb3Q=</CommandContent>
      <Timeout>3600</Timeout>
      <Type>RunShellScript</Type>
      <CommandId>c-7d2a745b41-2b4601b2d4-7f6a768d3a-15</CommandId>
      <Description>test1</Description>
    </Command>
    <Command>
      <Name>Test2</Name>
      <WorkingDir></WorkingDir>
      <CommandContent>eXVtIHVwZGF0ZQ==</CommandContent>
      <Timeout>3600</Timeout>
      <Type>RunShellScript</Type>
```

```

        < CommandId > c - 7d2a745b41 2b4601b2d4 7f6a768d3a
16 </ CommandId >
        < Descriptio n > test2 </ Descriptio n >
    </ Command >
    < Command >
        < Name > Test3 </ Name >
        < WorkingDir ></ WorkingDir >
        < CommandCon tent > c2VydmVjZS BuZ2lueCBy ZWxvYWQ
=</ CommandCon tent >
        < Timeout > 3600 </ Timeout >
        < Type > RunShellSc ript </ Type >
        < CommandId > c - 7d2a745b41 2b4601b2d4 7f6a768d3a
17 </ CommandId >
        < Descriptio n > test3 </ Descriptio n >
    </ Command >
    < Command >
        < Name > Test4 </ Name >
        < WorkingDir ></ WorkingDir >
        < CommandCon tent > bHM =</ CommandCon tent >
        < Timeout > 120 </ Timeout >
        < Type > RunShellSc ript </ Type >
        < CommandId > c - 7d2a745b41 2b4601b2d4 7f6a768d3a
18 </ CommandId >
        < Descriptio n > test4 </ Descriptio n >
    </ Command >
    < PageNumber > 1 </ PageNumber >
    < RequestId > E69EF3CC - 94CD - 42E7 - 8926 - F133B86387 C0 </
RequestId >
    < PageSize > 10 </ PageSize >
</ DescribeCo mmandsResp onse >

```

JSON format

```

{
  " PageNumber ": 1 ,
  " TotalCount ": 5 ,
  " PageSize ": 10 ,
  " RequestId ":" E69EF3CC - 94CD - 42E7 - 8926 - F133B86387 C0 ",
  " Commands ":{
    " Command ":[
      {
        " Name ":" Test ",
        " Descriptio n ":" test ",
        " Timeout ": 3600 ,
        " CommandCon tent ": " ZWNobyAxMj M =",
        " Type ":" RunShellSc ript ",
        " CommandId ":" c - 7d2a745b41 2b4601b2d4 7f6a768d3a 14 ",
        " WorkingDir ":""
      },
      {
        " Name ":" Test1 ",
        " Descriptio n ":" test1 ",
        " Timeout ": 3600 ,
        " CommandCon tent ":" Y2QgL3Jvb3 Q =",
        " Type ":" RunShellSc ript ",
        " CommandId ":" c - 7d2a745b41 2b4601b2d4 7f6a768d3a 15 ",
        " WorkingDir ":""
      },
      {
        " Name ":" Test2 ",
        " Descriptio n ":" test2 ",
        " Timeout ": 3600 ,
        " CommandCon tent ":" eXVtIHVwZG F0ZQ ==",

```

```

    " Type ":" RunShellScript ",
    " CommandId ":" c - 7d2a745b41 2b4601b2d4 7f6a768d3a 16 ",
    " WorkingDir ":" "
  },
  {
    " Name ":" Test3 ",
    " Description ":" test3 ",
    " Timeout ": 3600 ,
    " CommandContent ":" c2VydmJjZS BuZ2lueCBy ZWxvYWQ =",
    " Type ":" RunShellScript ",
    " CommandId ":" c - 7d2a745b41 2b4601b2d4 7f6a768d3a 17 ",
    " WorkingDir ":" "
  },
  {
    " Name ":" Test4 ",
    " Description ":" test4 ",
    " Timeout ": 3600 ,
    " CommandContent ":" bHM =",
    " Type ":" RunShellScript ",
    " CommandId ":" c - 7d2a745b41 2b4601b2d4 7f6a768d3a 18 ",
    " WorkingDir ":" "
  }
]
}
}
}

```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned when an unknown error occurs.
403	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned when the specified parameter is invalid.
403	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned when the specified parameter is invalid.
403	InvalidRegionId.CloudAssistant	Current region is not available.	The error message returned when the specified region is unavailable.

[View error codes](#)

20.8 DescribeInvocations

Views the invocation list and status of cloud assistant commands.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DescribeInvocations	The operation that you want to perform. Set the value to DescribeInvocations.
CommandId	String	No	c-4d34302d02424c5c8e10281e3a315a05	The ID of the command. You can call DescribeCommands to view all available command IDs.
CommandName	String	No	Test1	The name of the command.
CommandType	String	No	RunShellScript	The type of the command.
InstanceId	String	No	i-uf614fhehhzxx	The ID of the instance. When you specify this parameter, the system queries all the invocations of the commands in the instance.

Name	Type	Required	Example	Description
InvokeId	String	No	t-7d2a745b41 2b4601b2d4 7f6a768d3b53	The invocation ID of the command.

Name	Type	Required	Example	Description
InvokeStatus	String	No	Finished	The overall invocation status of the command. The overall invocation status depends on the invocation status of command processes on all target instances. Valid values: • Running: The command process is running. - Periodic invocation: Before you manually stop a command on periodic invocation, the command process is always in the Running state. - One-time execution: The overall invocation state is Running, as long as the command process is in the Running state in any target instance. • Finished: The invocation of the command process is completed. - Periodic invocation: The command process can never be in the Finished state. - One-time execution: When invocations of command processes on all the target instances is completed, the overall invocation state is Finished. Or when you manually stop invocations of the command processes on some target instances and command invocations on other target instances are completed, the overall invocation state is Finished. • Failed: The command

Name	Type	Required	Example	Description
PageNumber	Long	No	1	The current page number. Starting value: 1. Default value: 1.
PageSize	Long	No	10	The number of entries per page. . Maximum value: 50. Default value: 10.
Timed	Boolean	No	true	Indicates whether the command invocation is periodic. Default value: False.

Response parameters

Name	Type	Example	Description
Invocations			An array of InvocationSetType data.
└ CommandId	String	c-4d34302d02 424c5c8e10 281e3a315a05	The ID of the command.
└ CommandName	String	Test1	The name of the command.
└ CommandType	String	RunShellScript	The type of the command.
└ Frequency	String	0 */20 * * * *	The invocation cycle of a periodic task. For more information about the value specifications, see Cron expressions .
└ InvokeId	String	t-7d2a745b41 2b4601b2d4 7f6a768d3b53	The invocation ID of the command.

Name	Type	Example	Description
↳InvokeInstances			An array of InvokeInstanceSetType data.
↳InstanceId	String	i-uf614fhehhzxx	The ID of the instance.
↳InstanceInvokeStatus	String	Finished	The command process status in the specified instance. • Running: The command process is running. - Periodic invocation: Before you manually stop a command on periodic invocation, the command process is always in the Running state. - One-time execution: The command process state in the specified instance is Running. • Finished: The invocation of the command process is completed. - Periodic invocation: The command process can never be in the Finished state. - One-time execution: The command process state in the specified instance is Finished. • Failed: The command invocation failed, timed out, or encountered other exceptions. - Periodic invocation: The command process can never be in the Failed state. - One-time execution: The command process state in the specified instance is Failed. • Stopped: The command process is manually stopped.

Name	Type	Example	Description
<code>InvokeStatus</code>	String	Finished	The overall invocation status of the specified commands. The overall invocation status depends on the invocation status of command processes on all target instances. Valid values: - Running: The command process is running. - Periodic invocation: Before you manually stop a command on periodic invocation, the command process is always in the Running state. - One-time execution: The overall invocation state is Running, as long as the command process is in the Running state in any target instance. - Finished: The invocation of the command process is completed. - Periodic invocation: The command process can never be in the Finished state. - One-time execution: When invocations of command processes on all the target instances are completed, the overall invocation state is Finished. Or when you manually stop invocations of command processes on some target instances and the invocations on other target instances is completed, the overall invocation state is Finished. - Failed: The command invocation failed, timed out, or encountered other exceptions.
			Periodic invocation: The command process can never be in the Failed state.

Name	Type	Example	Description
Timed	Boolean	false	Indicates whether the command invocation is periodic.
PageNumber	Long	1	The page number of the query result.
PageSize	Long	10	The number of entries per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Long	2	The total number of commands.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInvocations
&RegionId=cn-hangzhou
&InvokeId=t-7d2a745b412b4601b2d47f6a768d3b53
&CommandId=c-4d34302d02424c5c8e10281e3a315a05
&CommandName=Test1
&CommandType=RunShellScript
&Timed=true
&InvokeStatus=Finished
&InstanceId=i-uf614fhehhzxx
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeInvocationsResponse>
  <TotalCount>2</TotalCount>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <Invocations>
    <Invocation>
      <InvokeStatus>Running</InvokeStatus>
      <InvokeId>t-7d2a745b412b4601b2d47f6a768d3b53</InvokeId>
      <CommandName>Test1</CommandName>
      <CommandType>RunShellScript</CommandType>
      <Frequency>0*/20* * * * </Frequency>
      <InvocationInstances>
        <InvocationInstance>
          <InstanceId>i-uf614fhehhzmx</InstanceId>
```

```

        < InstanceIn  vokeStatus > Finished </ InstanceIn
vokeStatus >
        </ InvokeInst  ance >
        < InvokeInst  ance >
        < InstanceId > i - uf614fhehh  zmy </ InstanceId >
        < InstanceIn  vokeStatus > Running </ InstanceIn  vokeStatus
>
        </ InvokeInst  ance >
    </ InvokeInst  ances >
    < Timed > True </ Timed >
    < CommandId > c - 7d2a745b41  2b4601b2d4  7f6a768d3a  14 </
CommandId >
    </ Invocation >
    < Invocation >
        < InvokeStat  us > Finished </ InvokeStat  us >
        < InvokeId > t - 7d2a745b41  2b4601b2d4  7f6a768d3b  55 </
InvokeId >
        < CommandNam  e > Test3 </ CommandNam  e >
        < CommandTyp  e > RunShellSc  ript </ CommandTyp  e >
        < Frequency />
        < InvokeInst  ances >
        < InvokeInst  ance >
            < InstanceId > i - uf614fhehh  zmx </ InstanceId >
            < InstanceIn  vokeStatus > Finished </ InstanceIn
vokeStatus >
        </ InvokeInst  ance >
        < InvokeInst  ance >
            < InstanceId > i - uf64isakb7  13x </ InstanceId >
            < InstanceIn  vokeStatus > Finished </ InstanceIn
vokeStatus >
        </ InvokeInst  ance >
    </ InvokeInst  ances >
    < Timed > False </ Timed >
    < CommandId > c - 7d2a745b41  2b4601b2d4  7f6a768d3a  16 </
CommandId >
    </ Invocation >
</ Invocation  s >
< RequestId > E69EF3CC - 94CD - 42E7 - 8926 - F133B86387  C0 </
RequestId >
</ DescribeIn  vocationsR  esponse >

```

JSON format

```

{
  " PageNumber ": 1 ,
  " Invocation  s ": {
    " Invocation ": [
      {
        " CommandTyp  e ": " RunShellSc  ript ",
        " CommandNam  e ": " Test1 ",
        " InvokeStat  us ": " Running ",
        " InvokeId ": " t - 7d2a745b41  2b4601b2d4  7f6a768d3b  53 ",
        " CommandId ": " c - 7d2a745b41  2b4601b2d4  7f6a768d3a  14 ",
        " Timed ": true ,
        " InvokeInst  ances ": {
          " InvokeInst  ance ": [
            {
              " InstanceIn  vokeStatus ": " Finished ",
              " InstanceId ": " i - uf614fhehh  zmx "
            },
            {
              " InstanceIn  vokeStatus ": " Running ",
              " InstanceId ": " i - uf64isakb7  13x "
            }
          ]
        }
      }
    ]
  }
}

```



```

    }
  ],
  },
  "Frequency ":" 0 */ 20 * * * *",
},
{
  " CommandType e ":" RunShellSc ript ",
  " CommandNam e ":" Test3 ",
  " InvokeStat us ":" Finished ",
  " InvokeId ":"> t - 7d2a745b41 2b4601b2d4 7f6a768d3b 55 ",
  " CommandId ":" c - 7d2a745b41 2b4601b2d4 7f6a768d3a 16 ",
  " Timed ":" false ,
  " InvokeInst ances ":{
    " InvokeInst ance ":[
      {
        " InstanceIn vokeStatus ":" Finished ",
        " InstanceId ":" i - uf614fhehh zmx "
      },
      {
        " InstanceIn vokeStatus ":" Finished ",
        " InstanceId ":" i - uf64isakb7 13x "
      }
    ]
  }
}
]
}
},
" TotalCount ":" 2 ,
" PageSize ":" 10 ,
" RequestId ":" E69EF3CC - 94CD - 42E7 - 8926 - F133B86387 C0 "
}

```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalError. Dispatch	An error occurred when you dispatched the request.	The error message returned when an unknown error occurs.
403	InvalidParam. PageNumber	The specified parameter is invalid.	The error message returned when the specified parameter is invalid.
403	InvalidParam. PageSize	The specified parameter is invalid.	The error message returned when the specified parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidRegionId. CloudAssistant	Current region is not available.	The error message returned when the specified region is unavailable.

[View error codes](#)

20.9 DescribeInvocationResults

Views the command output of a cloud assistant command in the specified ECS instance.

Description

After you invoke a command, it may not succeed. You can call [DescribeInvocationResults](#) to view the command output of command invocation. The command output shall prevail.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DescribeInvocationResults	The operation that you want to perform. Set the value to DescribeInvocationResults.

Name	Type	Required	Example	Description
CommandId	String	No	c-4d34302d02424c5c8e10281e3a315a05	The ID of the command.
InstanceId	String	No	i-uf614fhehhzmxqdx	The ID of the instance.
InvokeId	String	No	t-7d2a745b412b4601b2d47f6a768d3a14	The invocation ID of the command. The invocation ID of the command process. You can call DescribeInvocations to view the invocation IDs.
InvokeRecordStatus	String	No	Finished	The status of the command invocation.
PageNumber	Long	No	1	The current page number. Starting value: 1. Default value: 1.
PageSize	Long	No	5	The number of entries per page. . Maximum value: 50. Default value: 10.

Response parameters

Name	Type	Example	Description
Invocation			The command invocation data.
↳ Invocation Results			The results of command invocation.
↳ CommandId	String	c-4d34302d02424c5c8e10281e3a315a05	The ID of the command.

Name	Type	Example	Description
↳ ExitCode	Long	0	The exit code of the command process: - For Linux-based instances, the exit code is the Shell process exit code. - For Windows-based instances, the exit code is the Bat or PowerShell process exit code.
↳ FinishedTime	String	2018-01-05 15:45:02	The time when the command process is completed. If a command process times out, the command completion time is subject to the TimedOut parameter specified in the CreateCommand operation.
↳ InstanceId	String	i-uf614fhehhzmxqdx	The ID of the instance.
↳ InvokeId	String	t-7d2a745b412b4601b2d47f6a768d3a14	The invocation ID of the command. The invocation ID of the command process. You can call DescribeInvocations to view the invocation IDs.
↳ InvokeRecordStatus	String	Finished	The status of the command invocation.
↳ Output	String	MTU6MzA6MDEK	The output of the command invocation, which is Base64-encoded.
↳ PageNumber	Long	1	The current page number. Starting value: 1. Default value: 1.

Name	Type	Example	Description
^L PageSize	Long	5	The number of entries per page. Maximum value: 20. Default value: 10.
^L TotalCount	Long	5	The total number of commands.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInvocationResults
&RegionId=cn-hangzhou
&InvokeId=t-7d2a745b412b4601b2d47f6a768d3a14
&InstanceId=i-uf614fhehhzmxdqx
&CommandId=c-4d34302d02424c5c8e10281e3a315a05
&InvokeRecordStatus=Finished
&PageNumber=1
&PageSize=5
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeInvocationResultsResponse>
  <TotalCount>5</TotalCount>
  <PageNumber>1</PageNumber>
  <PageSize>5</PageSize>
  <InvocationResults>
    <InvocationResult>
      <FinishedTime>2018-01-05 15:45:02</FinishedTime>
      <InstanceId>i-uf614fhehhzmxdqw</InstanceId>
      <Output>MTU6NDU6MD EK</Output>
    <InvokeRecordStatus>Finished<InvokeRecordStatus>
      <ExitCode>0</ExitCode>
    </InvocationResult>
    <InvocationResult>
      <FinishedTime>2018-01-05 15:40:02</FinishedTime>
      <InstanceId>i-uf614fhehhzmxdqw</InstanceId>
      <Output></Output>
    <InvokeRecordStatus>Finished<InvokeRecordStatus>
      <ExitCode>0</ExitCode>
    </InvocationResult>
    <InvocationResult>
      <FinishedTime>2018-01-05 15:30:02</FinishedTime>
      <InstanceId>i-uf614fhehhzmxdqw</InstanceId>
      <Output></Output>
    <InvokeRecordStatus>Finished<InvokeRecordStatus>
      <ExitCode>0</ExitCode>
    </InvocationResult>
  </InvocationResults>
</DescribeInvocationResultsResponse>
```

```

        < InstanceId > i - uf614fhehh  zmxdqw </ InstanceId >
        < Output > MTU6MzA6MD  EK </ Output >
        < ExitCode > 0 </ ExitCode >
    </ Invocation Result >
    < Invocation Result >
        < FinishedTi me > 2018 - 01 - 05   15 : 20 : 02 </
FinishedTi me >
        < InstanceId > i - uf614fhehh  zmxdqw </ InstanceId >
        < Output > </ Output >
        < ExitCode > 0 </ ExitCode >
    </ Invocation Result >
    < Invocation Result >
        < FinishedTi me > 2018 - 01 - 05   15 : 15 : 02 </
FinishedTi me >
        < InstanceId > i - uf614fhehh  zmxdqw </ InstanceId >
        < Output > MTU6MTU6MD  EK </ Output >
        < ExitCode > 0 </ ExitCode >
    </ Invocation Result >
    </ Invocation Results >
< RequestId >" E69EF3CC - 94CD - 42E7 - 8926 - F133B86387  C0 </
RequestId >
</ DescribeIn vocationRe sultsRespo nse >

```

JSON format

```

{
  "RequestId ":" E69EF3CC - 94CD - 42E7 - 8926 - F133B86387  C0 ",
  "Invocation ":{
    "PageNumber ": 1 ,
    "TotalCount ": 5 ,
    "Invocation Results ":{
      "Invocation Result ":[
        {
          "InvokeReco rdStatus ":" Finished ",
          "FinishedTi me ":" 2018 - 01 - 05   15 : 45 : 02 ",
          "ExitCode ": 0 ,
          "InstanceId ":" i - uf614fhehh  zmxdqw ",
          "Output ":" MTU6NDU6MD  EK "
        },
        {
          "InvokeReco rdStatus ":" Finished ",
          "FinishedTi me ":" 2018 - 01 - 05   15 : 40 : 02 ",
          "ExitCode ": 0 ,
          "InstanceId ":" i - uf614fhehh  zmxdqw ",
          "Output ":""
        },
        {
          "FinishedTi me ":" 2018 - 01 - 05   15 : 30 : 02 ",
          "ExitCode ": 0 ,
          "InstanceId ":" i - uf614fhehh  zmxdqw ",
          "Output ":" MTU6MzA6MD  EK "
        },
        {
          "FinishedTi me ":" 2018 - 01 - 05   15 : 20 : 02 ",
          "ExitCode ": 0 ,
          "InstanceId ":" i - uf614fhehh  zmd3zj4k74 ",
          "Output ":""
        },
        {
          "InvokeReco rdStatus ":" Finished ",
          "FinishedTi me ":" 2018 - 01 - 05   15 : 15 : 02 ",
          "ExitCode ": 0 ,
          "InstanceId ":" i - uf614fhehh  zmd3zj4k74 ",

```

```
    " Output ":" MTU6MTU6MD  EK "
  }
]
},
" PageSize ": 5
}
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned when an unknown error occurs.
403	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned when the specified parameter is invalid.
403	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned when the specified parameter is invalid.
403	InvalidRegionId.CloudAssistant	Current region is not available.	The error message returned when the specified region is unavailable.

[View error codes](#)

21 HPC clusters

21.1 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
Name	String	Yes	FinanceJoshua	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, colons (:), underscores (_), and hyphens (-).
RegionId	String	Yes	cn-hangzhou	The region ID of the HPC cluster. You can call the DescribeRegions operation to query the latest region list.
Action	String	No	CreateHpcCluster	The operation that you want to perform. Set the value to CreateHpcCluster.

Parameter	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotency .
Description	String	No	FinanceJoshua	The description of the HPC cluster. The description must be 2 to 256 characters in length. It cannot start with http:// or https://. Default value: empty string.
OwnerAccount	String	No	ECSforCloud@Alibaba.com	The logon name of the RAM user.

Response parameters

Parameter	Type	Example	Description
HpcClusterId	String	hpc-hpcclusterid1	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 > 04F0F334 - 1335 - 436C - A1D7 - 6C044FE733 68 </
    RequestId >
  < HpcClusterId > hpc - hpccluster 1 </ HpcClusterId >
</ CreateHpcClusterResponse >
```

JSON format

```
{
  "HpcClusterId": "hpc - hpccluster 1",
  "RequestId": "04F0F334 - 1335 - 436C - A1D7 - 6C044FE733 68"
}
```

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 of the HPC cluster is not valid.
400	InvalidHpcClusterDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified description of the HPC cluster is not valid.
404	InvalidRegionId.NotFound	The specified parameter "RegionId" is not valid.	The error message returned because the specified region ID does not exist. Check whether ECS is available in the region.

HTTP status code	Error code	Error message	Description
404	InternalServerError	Failed to create hpc cluster	The error message returned because an error occurs while the HPC cluster is created.
400	Invalid. Parameter	Invalid parameters	The error message returned because the specified parameter is not valid.

For more information about error codes, see [API Error Center](#).

21.2 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](#) dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
HpcClusterId	String	Yes	hpc-cluster1	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 latest region list.
Action	String	No	DeleteHpcCluster	The operation that you want to perform. Set the value to DeleteHpcCluster.

Parameter	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotency .

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-cluster1
&<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 region ID does not exist. Check whether ECS 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 required HpcClusterId parameter is not specified .
400	Invalid.Parameter	Invalid parameters.	The error message returned because the specified parameter is not valid.
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 HPC cluster contains instances and therefore cannot be deleted.

For more information about error codes, see [API Error Center](#).

21.3 DescribeHpcClusters

You can call this operation to query the available HPC clusters. Specified request parameters are used as filters with 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 dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the HPC cluster. You can call the DescribeRegions operation to query the latest region list.
Action	String	No	DescribeHpcClusters	The operation that you want to perform. Set the value to DescribeHpcClusters.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotency .

Parameter	Type	Required	Example	Description
HpcClusterIds	String	No	["hpc-xxxxxxxx", "hpc-yyyyyyyy", ... "hpc-zzzzzzzzz"]	The IDs of HPC clusters. You can specify a JSON array containing up to 100 HPC cluster IDs. Separate multiple HPC cluster 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 per page. Maximum value: 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
HpcClusters			The list of all available HPC clusters . The value is an array consisting of the information of each HPC cluster .
Description	String	FinanceDept	The description of a queried HPC cluster.
HpcClusterId	String	hpc-hpclusterid1	The ID of a queried HPC cluster.
Name	String	FinanceJoshua	The name of a queried HPC cluster.
PageNumber	Integer	1	The page number of the returned page.

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.
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>
  <HpcClusterList>
    <HpcCluster>
      <Name>chuatest1</Name>
      <Description>desc</Description>
      <HpcClusterId>hpc-l6ack54lcr-2g17563***</HpcClusterId>
    </HpcCluster>
    <HpcCluster>
      <Name>chuatest2</Name>
      <Description>desc</Description>
      <HpcClusterId>hpc-l6aam7fivc-fd21fun***</HpcClusterId>
    </HpcCluster>
  </HpcClusterList>
  <PageSize>10</PageSize>
  <RequestId>168D82CE-F8A0-4200-AC5C-26FD94438423</RequestId>
</DescribeHpcClustersResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 2,
  "PageSize": 10,
  "HpcClusterList": {
    "HpcCluster": [
```



```

{
  " Name ":" chuatest1 ",
  " Descriptio n ":" desc ",
  " HpcCluster Id ":" hpc - l6ack54lcr 2g17563 ***"
},
{
  " Name ":" chuatest2 ",
  " Descriptio n ":" desc ",
  " HpcCluster Id ":" hpc - l6aam7fivc fd21fun ***"
}
],
},
" RequestId ":" 382960A6 - C535 - 4705 - B6EA - 8338466270 C4 "
}

```

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 region ID does not exist. Check whether ECS 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 required HpcClusterId parameter is not specified .
400	InvalidHpcClusterIds. ExceedLimit	The amount of specified specified hpc cluster ids exceeds the limit.	The error message returned because the number of HPC cluster IDs exceeds the limit.
400	InvalidHpcClusterIds. Malformed	The amount of specified specified hpc cluster ids is invalid.	The error message returned because the HpcClusterIds parameter is not valid.
400	Invalid. Parameter	Invalid parameters.	The error message returned because the specified parameter is not valid.

For more information about error codes, see [API Error Center](#).

21.4 ModifyHpcClusterAttribute

You can call this operation to modify the description of 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
HpcClusterId	String	Yes	hpc-hpcclusterid1	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 latest region list.
Action	String	No	ModifyHpcClusterAttribute	The operation that you want to perform. Set the value to <code>ModifyHpcClusterAttribute</code> .
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotency .

Parameter	Type	Required	Example	Description
Description	String	No	FinanceDept	The description of the HPC cluster. The description must be 2 to 256 characters in length. It cannot start with http:// or https://. Default value: empty string.
Name	String	No	FinanceJoshua	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, colons (:), underscores (_), and hyphens (-). Default value: empty string.

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 - hpccluster id1
& RegionId = cn - hangzhou
&< Common request parameters >
```

Sample success responses

XML format

```
< ModifyHpcClusterAttributeResponse >
  < RequestId > 04F0F334 - 1335 - 436C - A1D7 - 6C044FE733 68 </
  RequestId >
```

```
</ ModifyHpcClusterAttributeResponse >
```

JSON format

```
{
  "RequestId ":" 04F0F334 - 1335 - 436C - A1D7 - 6C044FE733 68 "
}
```

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 of the HPC cluster is not valid.
400	InvalidHpcClusterDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified description of the HPC cluster is not valid.
400	InvalidRegionId.NotFound	The specified parameter "RegionId" is not valid.	The error message returned because the specified region ID does not exist. Check whether ECS 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 parameter is not valid. You must specify a value for one or both of the Name and Description parameters.

HTTP status code	Error code	Error message	Description
400	HPC_CLUSTER_MODIFY_FAILED	Modify failed, possibly this hpc cluster does not exist	The error message returned because the HPC cluster failed to be modified. The HPC cluster may not exist.
400	InvalidParameter	Invalid parameters	The error message returned because the specified parameter is not valid.
400	HpcClusterNotExists	The specified hpc cluster does not exist	The specified HPC cluster does not exist.

For more information about error codes, see [API Error Center](#).

22 Tags

22.1 TagResources

Creates and attaches tags to a list of specified ECS resources.

Limits

Each Alibaba Cloud account has a quota of tags that can be used. If the quota is exceeded, an error message is returned. For more information, see [Limits](#).

Debug

Go to [API Explorer](#) for online debugging. By using API Explorer, you can easily debug APIs, automatically generate SDK code examples, and quickly search for APIs.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	No	TagResources	The name of this action. Value: TagResources.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the ECS resource belongs. For more information, call DescribeRegions to obtain the latest region list.
ResourceId . N	RepeatList	Yes	i-bp1j6qtvdm 8w0z1o0XXX	The ID of the ECS resource. Value range of N: 1 to 50.

Parameter	Type	Required?	Example value	Description
ResourceType	String	Yes	ECS_INSTANCE("ALIYUN::ECS::INSTANCE")	The type of the ECS resource. Optional values: · instance · disk · snapshot · image · securitygroup · volume · eni · ddh · keypair · launchtemplate
OwnerAccount	String	No	ECSforCloud@Alibaba.com	The logon account of the RAM user.
Tag.N.Key	String	No	FinanceDept	The value of a tag. Value range of N: 1 to 20. The parameter cannot be a null string. The parameter must be 1 to 64 characters in length, and cannot start with aliyun, acs:, http://, or https://.
Tag.N.Value	String	No	FinanceJoshua	The value of a tag. Value range of N: 1 to 20. The parameter can be a null string. The parameter must be 1 to 128 characters in length, and cannot start with aliyun, acs:, http://, or https://.

Response parameters

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

Examples

Request example

```
https://ecs.aliyuncs.com/?Action=TagResources
&RegionId=cn-hangzhou
&ResourceId.1=i-bp1j6qtvdm8w0z1o0XXX
&ResourceType=instance
&Tag.1.Key=FinanceDept
&<CommonRequestParameters>
```

Response example

XML format

```
<TagResourcesResponse>
  <RequestId>C46FF5A8-C5F0-4024-8262-B16B639225A0</
  RequestId>
</TagResourcesResponse>
```

JSON format

```
{
  "RequestId": "C46FF5A8-C5F0-4024-8262-B16B639225A0"
}
```

Errors

HTTP status code	Error codes	Error message	Description
404	MissingParameter.TagOwnerId	The parameter - TagOwnerId should not be null	The specified tag owner UID does not exist.
404	MissingParameter.TagOwnerBid	The parameter - TagOwnerBid should not be null	The specified tag owner BID does not exist.
404	MissingParameter.Tags	The parameter - Tags should not be null	The Tags parameter does not exist.

HTTP status code	Error codes	Error message	Description
404	MissingParameter.RegionId	The parameter - RegionId should not be null	The specified region ID does not exist.
403	Permission Denied. TagOwnerId	The specified operator not have permission to set TagOwnerId value.	You do not have permission to set the tag owner.
403	Permission Denied.Scope	The specified operator not have permission to set Scope value.	You do not have permission to modify the scope value.
400	NumberExceed.ResourceIds	The ResourceIds parameter's number is exceed , Valid : 50	The number of resource IDs cannot exceed 50.
400	NumberExceed.Tags	The Tags parameter's number is exceed , Valid : 20	The number of tags cannot exceed 20.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The tag key contains duplicate keys.
404	InvalidResourceId.NotFound	The specified ResourceIds are not found in our records.	The specified resource does not exist.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The specified resource type does not exist.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The specified tag value is invalid.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The specified region ID does not exist. Please check if this product is available in this region.
400	Invalid.Scope	The specified scope is invalid.	The specified scope is invalid.
403	NoPermission.Tag	The operator is not permission for the tag.	You do not have permission to use this resource tag.

For a list of error codes, visit the [API Error Center](#).

22.2 ListTagResources

Queries a list of tags that are attached to one or more ECS resources.

Description

- To determine the search object, a request should include the parameter `ResourceId . N` or `Tag . N` (that is, `Tag . N . Key` and `Tag . N . Value`).
- `Tag . N` is a resource tag and consists of a key-value pair. When only `Tag . N . Key` is specified, all tag values associated with the tag key are returned. When only `Tag . N . Value` is specified, the error `InvalidParameter.TagValue` is reported.
- If you specify `Tag . N` and `Resource . N` simultaneously, `ResourceId . N` must match all the tag key-value inputs.
- If you specify multiple tag key-value pairs at the same time, the returned results are the resources that contain the specified multiple key-value pairs.

Debug

By using API Explorer, you can easily debug APIs, automatically generate SDK code examples, and quickly search for APIs.

Request parameters

Parameter	Type	Required ?	Example value	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the ECS resource belongs. For more information, call DescribeRegions to obtain the latest region list.

Parameter	Type	Required?	Example value	Description
ResourceType	String	Yes	instance	The type of the ECS resource. Valid values: - instance - disk - snapshot - image - securitygroup - volume - eni - ddh - keypair - launchtemplate
Action	String	No	ListTagResources	The name of this action. Value: ListTagResources.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The token for the next query.
ResourceId . N	RepeatList	No	i-instanceid1	The ID of the ECS resource. Value range of N: 1 to 50.
Tag . N . Key	String	No	FinanceDept	The value of a tag. Value range of N: 1 to 20. The parameter cannot be a null string. The parameter must be 1 to 64 characters in length. It can neither start with aliyun or acs :, nor contain http:// or https://.

Parameter	Type	Required?	Example value	Description
Tag.N.Value	String	No	FinanceJoshua	The value of a tag. Value range of N: 1 to 20. The parameter can be a null string. The parameter must be 1 to 128 characters in length. It can neither start with aliyun or acs :, nor contain http://, or https://.

Response parameters

Parameter	Type	Example value	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token for the next query.
RequestId	String	DE65F6B7-7566-4802-9007-96F2494AC5XX	The request ID.
TagResources			A collection of resources and their tags that contain information such as resource IDs, resource types, and tag keys.
└ResourceId	String	i-bp1j6qtvdm8w0z1o0XXX	The resource ID.
└ResourceType	String	instance	The resource type.
└TagKey	String	FinanceDept	The tag key.
└TagValue	String	FinanceJoshua	The tag value.

Examples

Request example

```
https://ecs.aliyuncs.com/?Action=ListTagResources
```

```
& RegionId = cn - hangzhou
& ResourceTy pe = instance
& ResourceId . 1 = i - bp1j6qtvdm 8w0z1o0XXX
&< Common Request Parameters >
```

Response example

XML format

```
< ListTagRes ourcesResp onse >
  < TagResourc es >
    < TagResourc e >
      < ResourceTy pe > instance </ ResourceTy pe >
      < TagValue > FinanceJos hua </ TagValue >
      < ResourceId > i - bp1j6qtvdm 8w0z1o0XXX </ ResourceId >
      < TagKey > FinanceDep t </ TagKey >
    </ TagResourc e >
  </ TagResourc es >
  < RequestId > DE65F6B7 - 7566 - 4802 - 9007 - 96F2494AC5 XX </
RequestId >
</ ListTagRes ourcesResp onse >
```

JSON format

```
{
  " TagResourc es ":{
    " TagResourc e ":[
      {
        " ResourceTy pe ":" instance ",
        " TagValue ":" FinanceJos hua ",
        " ResourceId ":" i - bp1j6qtvdm 8w0z1o0XXX ",
        " TagKey ":" FinanceDep t "
      }
    ]
  },
  "RequestId ":" DE65F6B7 - 7566 - 4802 - 9007 - 96F2494AC5 12 "
}
```

Errors

HTTP status code	Error codes	Error message	Description
404	MissingParameter. TagOwnerId	The parameter - TagOwnerId should not be null	The tag owner UID is not specified.
404	MissingParameter. TagOwnerBid	The parameter - TagOwnerBid should not be null	The tag owner BID is not specified.
404	MissingParameter. ResourceType	The parameter - ResourceType should not be null	The resource type is not specified.

HTTP status code	Error codes	Error message	Description
404	MissingParameter.Tags	The parameter - Tags should not be null	The tag is not specified.
404	MissingParameter.RegionId	The parameter - RegionId should not be null	The region ID is not specified.
403	PermissionDenied.TagOwnerId	The specified operator not have permission to set TagOwnerId value.	You do not have permission to set the tag owner.
403	PermissionDenied.Scope	The specified operator not have permission to set Scope value.	You do not have permission to modify the scope value.
400	NumberExceed.ResourceIds	The ResourceIds parameter's number is exceed , Valid : 50	The number of resource IDs cannot exceed 50.
400	NumberExceed.Tags	The Tags parameter's number is exceed , Valid : 20	The number of tags cannot exceed 20.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	Duplicate tag keys exist.
404	InvalidResourceId.NotFound	The specified ResourceIds are not found in our records.	The specified resource does not exist.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The specified resource type does not exist.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The specified tag key is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The specified tag value is invalid.
400	OperationDenied.QuotaExceed	The quota of tags on resource is beyond permitted range.	The quota of resource tags is reached.
403	InvalidResourceId.NotSupported	The specified ResourceId does not support tagging.	Tags are not supported by the specified resource ID.

HTTP status code	Error codes	Error message	Description
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The specified Tag.n.Key and Tag.n.Value do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The specified number of tags exceeds the quota.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The specified region ID does not exist. Please check if this product is available in this region.
400	Invalid.Scope	The specified scope is invalid.	The specified scope is invalid.
403	NoPermission.Tag	The operator is not permission for the tag.	You do not have permission to use this resource tag.

For a list of error codes, visit the [API Error Center](#).

22.3 UntagResources

Detaches and deletes tags from a list of specified ECS resources.

Debug

By using API Explorer, you can easily debug APIs, automatically generate SDK code examples, and quickly search for APIs.

Request parameters

Parameter	Type	Required ?	Example value	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the ECS resource belongs. For more information, call DescribeRegions to obtain the latest region list.

Parameter	Type	Required?	Example value	Description
ResourceId . N	RepeatList	Yes	i-bp1j6qtvdm8w0z1o0XXX	The ID of the ECS resource. Value range of N: 1 to 50.
ResourceType	String	Yes	instance	The type of the ECS resource. Valid values: - instance - disk - snapshot - image - securitygroup - volume - eni - ddh - keypair - launchtemplate
Action	String	No	UntagResources	The name of this action. Value: UntagResources
All	Boolean	No	false	Specifies whether to delete all the tags from the specified resources. This parameter is valid when TagKey.N is not specified in a request. Default value: false.
TagKey . N	RepeatList	No	FinanceDept	The value of a tag. Value range of N: 1 to 20. The parameter can be a null string, and must be 1 to 128 characters in length. It can neither start with aliyun or acs:, nor contain http:// or https://.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	C46FF5A8-C5F0-4024-8262-B16B639225A0	The request ID.

Examples

Request example

```
https://ecs.aliyuncs.com/?Action=UntagResources
&RegionId=cn-hangzhou
&ResourceType=instance
&ResourceId.1=i-bp1j6qtvdm8w0z1o0XXX
&TagKey.1=FinanceDept
&<CommonRequestParameters>
```

Response example

XML format

```
<UntagResourcesResponse>
  <RequestId>C46FF5A8-C5F0-4024-8262-B16B639225A0</RequestId>
</UntagResourcesResponse>
```

JSON format

```
{
  "RequestId": "C46FF5A8-C5F0-4024-8262-B16B639225A0"
}
```

Errors

HTTP status code	Error codes	Error message	Description
404	MissingParameter.TagOwnerId	The parameter - TagOwnerId should not be null	The tag owner UID is not specified.
404	MissingParameter.TagOwnerBid	The parameter - TagOwnerBid should not be null	The tag owner BID is not specified.

HTTP status code	Error codes	Error message	Description
404	MissingParameter.ResourceType	The parameter - ResourceType should not be null	The resource type is not specified.
404	MissingParameter.Tags	The parameter - Tags should not be null	The Tags parameter is not specified.
404	MissingParameter.RegionId	The parameter - RegionId should not be null	The region ID is not specified.
403	PermissionDenied.TagOwnerId	The specified operator not have permission to set TagOwnerId value.	You do not have permission to set the tag owner.
403	PermissionDenied.Scope	The specified operator not have permission to set Scope value.	You do not have permission to modify the scope value.
400	NumberExceed.ResourceIds	The ResourceIds parameter's number is exceed , Valid : 50	The number of resource IDs cannot exceed 50.
400	NumberExceed.Tags	The Tags parameter's number is exceed , Valid : 20	The number of tags cannot exceed 20.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	Duplicate tag keys exist.
404	InvalidResourceId.NotFound	The specified ResourceIds are not found in our records.	The specified resource does not exist.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The specified resource type does not exist.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The specified tag key is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The specified tag value is invalid.
400	OperationDenied.QuotaExceed	The quota of tags on resource is beyond permitted range.	The quota of resource tags is reached.

HTTP status code	Error codes	Error message	Description
403	InvalidResourceId. NotSupported	The specified ResourceId does not support tagging.	The specified resource ID does not support tags.
400	InvalidTag. Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The specified Tag.n.Key and Tag.n.Value do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The specified number of tags exceeds the quota.
404	InvalidRegionId. NotFound	The specified RegionId does not exist.	The specified region ID does not exist. Please check if this product is available in this region.
400	Invalid.Scope	The specified scope is invalid.	The specified scope is invalid.
403	NoPermission. Tag	The operator is not permission for the tag.	You do not have permission to use this resource tag.

For a list of error codes, visit the [API Error Center](#).

23 Regions

23.1 DescribeRegions

Views the Alibaba Cloud regions that you can use.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
AcceptLanguage	String	No	zh-CN	The set of supported natural languages. For more information, see RFC 7231 . Valid values: · zh-CN · en-US · ja Default value: null.
Action	String	No	DescribeRegions	The operation that you want to perform. Set the value to DescribeRegions.

Name	Type	Required	Example	Description
InstanceChargeType	String	No	PrePaid	The billing method for the instance. For more information, see Pricing overview . Valid values: • PrePaid: Subscription. You must ensure the balance of your account or credit balance can cover the cost of the subscription. Otherwise, the InvalidPayMethod error code will be returned. • PostPaid: Pay-As-You-Go. This is the default value.
ResourceType	String	No	Instance	The type of the resource.

Response parameters

Name	Type	Example	Description
Regions			A array that consists of region information.
└ LocalName	String	China (Qingdao)	The name of the region.
└ RegionEndpoint	String	ecs.aliyuncs.com	The endpoint of the region.
└ RegionId	String	cn-shanghai-et2-bo1	The ID of the region.
└ Status	String	available	
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeRegions
&InstanceChargeType=PrePaid
&ResourceType=Instance
&AcceptLanguage=null
&<CommonRequestParameters>
```

Successful response examples

XML format

```
<DescribeRegionsResponse>
  <RequestId>38EC7366-F5A9-46B1-BDB1-0FDC2E296397</RequestId>
  <Regions>
    <Region>
      <RegionId>cn-shanghai-et2-b01</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-shanghai-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
404	InvalidAccountLanguage.NotFound	Only Chinese (zh-CN), English (en-US), and Japanese (ja) are allowed.	The error message returned when the specified language is not supported.

[View error codes](#)

23.2 DescribeZones

You can call this operation to query zones in a specified region.

Description

Calling this operation only returns a list of zones and some resource inventory information related to each zone. If you want to query instance types and disk categories that are available for purchase in a zone, we recommend that you call the [DescribeAvailableResource](#) operation.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region for which to query zones. You can call the DescribeRegions operation to query the latest region list.

Parameter	Type	Required	Example	Description
AcceptLanguage	String	No	zh-CN	The set of supported natural languages. For more information, see RFC 7231 . Valid values: · zh-CN · en-US · ja Default value: zh-CN
Action	String	No	DescribeZones	The operation that you want to perform. For API requests using the HTTP and HTTPS methods, <code>Action</code> is required. Set the value to DescribeZones.
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. This is the default value.

Parameter	Type	Required	Example	Description
SpotStrategy	String	No	NoSpot	The bidding policy for the pay-as-you-go instance. Specify this parameter when the InstanceChargeType parameter is set to PostPaid. For more information, see Preemptible instances. Valid values: • NoSpot: pay-as-you-go instance. This is the default value. • SpotWithPriceLimit: preemptible instance with the maximum price • SpotAsPriceGo: price automatically provided by the system with the pay-as-you-go instance price as the maximum value

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Zones			An array that consists of ZoneType data.
AvailableDedicatedHostTypes		Compute type	The supported types of DDHs. The data type of this parameter is List.
AvailableDiskCategories		cloud	A set of supported disk categories. The data type of this parameter is List.

Parameter	Type	Example	Description
AvailableInstanceTypes		c5	The types of the instances that can be created. The data type of this parameter is List.
AvailableResourceCreation		DedicatedHost	A set of the types of resources that can be created. The data type of this parameter is List.
AvailableResources			The resources that can be created. This parameter is an array of AvailableResourcesType data.
DataDiskCategories		cloud_ssd	The categories of data disks. The data type of this parameter is List. Valid values: - cloud - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - cloud_essd: enhanced SSD - ephemeral_ssd: local SSD
InstanceGenerations		I	The generation number of the instance family. The data type of this parameter is List.
InstanceTypeFamilies		["d1", "d1ne"]	A list that consists of InstanceTypeFamilyItemType data.
InstanceTypes		["ecs.g5.large"]	The type of the instance. The data type of this parameter is List.

Parameter	Type	Example	Description
IoOptimized	Boolean	true	Indicates whether the instance is I/O optimized. Valid values: · none · optimized When the InstanceType parameter is Phased-out instance types, the default value of the IoOptimized parameter is none. For instance types that do not belong to Generation I, the default value is optimized.
NetworkTypes		VPC	The type of the network. The data type of this parameter is List. Valid values: · VPC · Classic
SystemDiskCategories		cloud_ssd	The category of the system disk. The data type of this parameter is List. Valid values: · cloud · cloud_efficiency: ultra disk · cloud_ssd: standard SSD · cloud_essd: enhanced SSD · ephemeral_ssd: local SSD
AvailableVolumeCategories		san_ssd	The category of available shared storage. The data type of this parameter is List.
DedicatedHostGenerations		I	The generation number of DDHs. The data type of this parameter is List.

Parameter	Type	Example	Description
LocalName	String	Hangzhou Zone G	The name of the zone in the local language.
ZoneId	String	cn-hangzhou-b	The ID of the zone.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeZones
&RegionId=cn-hangzhou
&InstanceChargeType=PostPaid
&SpotStrategy=NoSpot
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeZonesResponse>
  <Zones>
    <Zone>
      <AvailableResourceCreation>
        <ResourceTypes>Instance</ResourceTypes>
        <ResourceTypes>Disk</ResourceTypes>
      </AvailableResourceCreation>
      <LocalName/>
      <ZoneId>cn-hangzhou-d</ZoneId>
      <AvailableDiskCategories>
        <DiskCategories>cloud</DiskCategories>
      </AvailableDiskCategories>
    </Zone>
    <Zone>
      <AvailableResourceCreation>
        <ResourceTypes>Instance</ResourceTypes>
        <ResourceTypes>Disk</ResourceTypes>
      </AvailableResourceCreation>
      <LocalName/>
      <ZoneId>cn-hangzhou-b</ZoneId>
      <AvailableDiskCategories>
        <DiskCategories>cloud</DiskCategories>
      </AvailableDiskCategories>
    </Zone>
  </Zones>
  <RequestId>6DB97BCC-92BA-424D-A7C8-3F6486612BAE</RequestId>
</DescribeZonesResponse>
```

JSON format

```
{
  "RequestId": "A347EF0E-BBCC-4EFA-BD79-27AA3ACFD1BF",
  "Zones": [
    "Zone": [
```

```

{
  "AvailableResourceCreation":{
    "ResourceTypes":[
      "Instance ",
      "Disk "
    ]
  },
  "ZoneId ":" cn - hangzhou - d ",
  "LocalName ":"",
  "AvailableDiskCategories ":{
    "DiskCategories ":[
      "cloud "
    ]
  }
},
{
  "AvailableResourceCreation":{
    "ResourceTypes":[
      "Instance ",
      "Disk "
    ]
  },
  "ZoneId ":" cn - hangzhou - b ",
  "LocalName ":"",
  "AvailableDiskCategories ":{
    "DiskCategories ":[
      "cloud "
    ]
  }
}
]
}
}

```

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 Region ID does not exist. Check whether ECS is available in that region.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified instance type does not exist.

HTTP status code	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	InvalidAccountLanguage.NotFound	Only Chinese (zh-CN), English (en-US), and Japanese (ja) are allowed.	The error message returned because the specified language is not supported.

For more information about error codes, visit [API Error Center](#).

23.3 DescribeResourcesModification

Views the resources available in a zone before reconfiguring the instance specifications or the system disk capacity.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
DestinationResource	String	Yes	InstanceType	The type of the target resource. . Valid values: - InstanceType - SystemDisk
RegionId	String	Yes	cn-hangzhou	The ID of the target region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.

Name	Type	Required	Example	Description
ResourceId	String	Yes	i-instanceid	The ID of the resource. When the retrieved resources are instances, this parameter can be interpreted as InstanceId.
Action	String	No	DescribeResourcesModification	The operation that you want to perform. Set the value to DescribeResourcesModification.
Cores	Integer	No	2	The number of vCPU cores of the instance type. For more information, see Instance type families . The Cores parameter is valid only when the DestinationResource parameter is set to InstanceType.
InstanceType	String	No	ecs.g5.large	The type of the instance. For more information, see Instance type families , or call DescribeInstanceTypes to query the latest instance types. When the DestinationResource parameter is set to SystemDisk, you must specify the InstanceType parameter.

Name	Type	Required	Example	Description
Memory	Float	No	8.0	The memory size of the instance type. Unit: GiB. For more information, see Instance type families . The Memory parameter is valid only when the DestinationResource parameter is set to InstanceType.

Name	Type	Required	Example	Description
MigrateAcrossZone	Boolean	No	true	Indicates whether instance specifications 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, you must make sure that: • Instances of classic network: - For phased-out instance types, when a non-I/O optimized instance is upgraded to an I/O optimized instance, the instance information, including the private IP address, software authorization code, and the device name of the disk, will be changed. For Linux-based instances, device names of basic disks (cloud) will be changed to the form of xvda or xvdb, while device names of ultra disks (cloud_efficiency) and SSDs (cloud_ssd) are changed to the form of vda or vdb. - For available instance types, the private IP address of the instance will be changed. • VPC-type instances: For phased-out instance types, when a non-I/O optimized instance is upgraded to an

Name	Type	Required	Example	Description
OperationType	String	No	Upgrade	The operation types for the Subscription-based instance. Valid values: • Upgrade • Downgrade • RenewDowngrade • RenewModify Default value: Upgrade.

Response parameters

Name	Type	Example	Description
AvailableZones			An array of zone types.
└AvailableResources			An array of available resource types.
└SupportedResources			A collection of supported resource types.
└Max	Integer	2	The maximum value of the resource type. No value is returned when this parameter is null.
└Min	Integer	1	The minimum value of a resource type. No value is returned when the parameter is null.
└Status	String	Available	The status of the resource. Valid values: • Available • SoldOut

Name	Type	Example	Description
<code>└─StatusCategory</code>	String	WithStock	The resource category based on the stock. Valid values: - WithStock: sufficient stock - ClosedWithStock: insufficient stock - WithoutStock: running out of stock
<code>└─Unit</code>	String	null	The unit of the resource type. No value is returned when the parameter is null.
<code>└─Value</code>	String	ecs.sn1ne.xlarge	The value of the resource.
<code>└─Type</code>	String	InstanceType	The type of the resource. Valid values: - Zone - IoOptimized - InstanceType - SystemDisk - DataDisk - Network
<code>└─RegionId</code>	String	cn-hangzhou	The ID of the region.
<code>└─Status</code>	String	Available	The status of the resource. Valid values: - Available - SoldOut
<code>└─StatusCategory</code>	String	WithStock	The resource category based on the stock. Valid values: - WithStock: sufficient stock - ClosedWithStock: insufficient stock - WithoutStock: running out of stock

Name	Type	Example	Description
<code>ZoneId</code>	String	cn-hangzhou-e	The ID of the zone.
<code>RequestId</code>	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeResourcesModifications
&DestinationResource=InstanceType
&RegionId=cn-hangzhou
&ResourceId=i-instanceid
&MigrateAcrossZone=true
&OperationType=Upgrade
&InstanceType=["ecs.g5.large"]
&Cores=2
&Memory=8.0
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeResourcesModificationsResponse>
  <RequestId>994F2B60-B050-49E3-9283-44655FAC7A4X</RequestId>
  <AvailableZones>
    <AvailableZone>
      <Status>Available</Status>
      <RegionId>cn-hangzhou-dg-a01</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>
            <SupportedResource>
              <Status>Available</Status>
              <Value>ecs.hfg5.large</Value>
            </SupportedResource>
          </SupportedResources>
        </AvailableResource>
      </AvailableResources>
    </AvailableZone>
  </AvailableZones>
</DescribeResourcesModificationsResponse>
```

```

</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . hfc5 . 3xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . hfg5 . 4xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . hfg5 . 6xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . c5 . 4xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . t5 - c1m2 . xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . t5 - c1m1 . 2xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . ic5 . xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . t5 - lc1m4 . large </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . hfg5 . 3xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . t5 - c1m2 . 4xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . ic5 . 3xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . g5 . 6xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . ic5 . large </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . ic5 . 2xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . hfc5 . large </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . r5 . large </ Value >

```

```

</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . g5 . large </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . hfg5 . xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . r5 . 4xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . hfc5 . xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . hfc5 . 4xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . t5 - lc1m2 . small </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . t5 - c1m1 . large </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . g5 . 2xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . r5 . 6xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . t5 - c1m2 . 2xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . g5 . 3xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . t5 - c1m1 . xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . hfc5 . 6xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . t5 - c1m4 . xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . hfg5 . 2xlarge </ Value >
</ SupportedR esource >
< SupportedR esource >
  < Status > Available </ Status >
  < Value > ecs . hfc5 . 2xlarge </ Value >

```

```

    </ SupportedR esource >
    < SupportedR esource >
      < Status > Available </ Status >
      < Value > ecs . c5 . large </ Value >
    </ SupportedR esource >
    < SupportedR esource >
      < Status > Available </ Status >
      < Value > ecs . c5 . 6xlarge </ Value >
    </ SupportedR esource >
    < SupportedR esource >
      < Status > Available </ Status >
      < Value > ecs . t5 - c1m4 . large </ Value >
    </ SupportedR esource >
    < SupportedR esource >
      < Status > Available </ Status >
      < Value > ecs . r5 . 2xlarge </ Value >
    </ SupportedR esource >
    < SupportedR esource >
      < Status > Available </ Status >
      < Value > ecs . r5 . xlarge </ Value >
    </ SupportedR esource >
    < SupportedR esource >
      < Status > Available </ Status >
      < Value > ecs . c5 . 3xlarge </ Value >
    </ SupportedR esource >
    < SupportedR esource >
      < Status > Available </ Status >
      < Value > ecs . ic5 . 4xlarge </ Value >
    </ SupportedR esource >
    < SupportedR esource >
      < Status > Available </ Status >
      < Value > ecs . t5 - lc1m1 . small </ Value >
    </ SupportedR esource >
    < SupportedR esource >
      < Status > Available </ Status >
      < Value > ecs . c5 . 2xlarge </ Value >
    </ SupportedR esource >
    < SupportedR esource >
      < Status > Available </ Status >
      < Value > ecs . t5 - c1m1 . 4xlarge </ Value >
    </ SupportedR esource >
    < SupportedR esource >
      < Status > Available </ Status >
      < Value > ecs . t5 - lc2m1 . nano </ Value >
    </ SupportedR esource >
    < SupportedR esource >
      < Status > Available </ Status >
      < Value > ecs . g5 . 4xlarge </ Value >
    </ SupportedR esource >
    < SupportedR esource >
      < Status > Available </ Status >
      < Value > ecs . r5 . 3xlarge </ Value >
    </ SupportedR esource >
    < SupportedR esource >
      < Status > Available </ Status >
      < Value > ecs . t5 - c1m2 . large </ Value >
    </ SupportedR esource >
  </ SupportedR esources >
</ AvailableR esource >
</ AvailableR esources >
< ZoneId > cn - hangzhou - h </ ZoneId >
</ AvailableZ one >
</ AvailableZ ones >

```

```
</ DescribeRe  sourcesMod  ificationR  esponse >
```

JSON format

```
{
  "RequestId ":" 994F2B60 - B050 - 49E3 - 9283 - 44655FAC7A 4X ",
  "AvailableZ  ones ":{
    " AvailableZ  one ":[
      {
        " Status ":" Available ",
        " RegionId ":" cn - hangzhou - dg - a01 ",
        " AvailableR  esources ":{
          " AvailableR  esource ":[
            {
              " Type ":" InstanceTy  pe ",
              " SupportedR  esources ":{
                " SupportedR  esource ":[
                  {
                    " 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 "
                  },
                  {
                    " Status ":" Available ",
                    " Value ":" ecs . hfg5 . large "
                  },
                  {
                    " Status ":" Available ",
                    " Value ":" ecs . hfc5 . 3xlarge "
                  },
                  {
                    " Status ":" Available ",
                    " Value ":" ecs . hfg5 . 4xlarge "
                  },
                  {
                    " Status ":" Available ",
                    " Value ":" ecs . hfg5 . 6xlarge "
                  },
                  {
                    " Status ":" Available ",
                    " Value ":" ecs . c5 . 4xlarge "
                  },
                  {
                    " Status ":" Available ",
                    " Value ":" ecs . t5 - c1m2 . xlarge "
                  },
                  {
                    " Status ":" Available ",
                    " Value ":" ecs . t5 - c1m1 . 2xlarge "
                  },
                  {
                    " Status ":" Available ",
```



```

    " Value ":" ecs . ic5 . xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . t5 - lc1m4 . large "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . hfg5 . 3xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . t5 - c1m2 . 4xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . ic5 . 3xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . g5 . 6xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . ic5 . large "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . ic5 . 2xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . hfc5 . large "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . r5 . large "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . g5 . large "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . hfg5 . xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . r5 . 4xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . hfc5 . xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . hfc5 . 4xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . t5 - lc1m2 . small "
  },
  {
    " Status ":" Available ",

```

```

    " Value ":" ecs . t5 - c1m1 . large "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . g5 . 2xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . r5 . 6xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . t5 - c1m2 . 2xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . g5 . 3xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . t5 - c1m1 . xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . hfc5 . 6xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . t5 - c1m4 . xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . hfg5 . 2xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . hfc5 . 2xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . c5 . large "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . c5 . 6xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . t5 - c1m4 . large "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . r5 . 2xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . r5 . xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . c5 . 3xlarge "
  },
  {
    " Status ":" Available ",

```

```

    " Value ":" ecs . ic5 . 4xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . t5 - lc1m1 . small "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . c5 . 2xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . t5 - c1m1 . 4xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . t5 - lc2m1 . nano "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . g5 . 4xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . r5 . 3xlarge "
  },
  {
    " Status ":" Available ",
    " Value ":" ecs . t5 - c1m2 . large "
  }
]
}
}
}
}
},
" ZoneId ":" cn - hangzhou - h "
}
}
}
}
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	Invalid.RegionId	The specified RegionId does not exist.	The error message returned when the RegionId parameter is invalid.
400	Invalid.OperationType	The specified operationType is not valid.	The error message returned when the operationType parameter is invalid.

HTTP status code	Error code	Error message	Description
400	Invalid.Param	The input parameter DestinationResource that is mandatory for processing this request is not supplied.	The error message returned when the DestinationResource parameter is invalid.
404	Invalid.ResourceType	The ResourceType provided does not exist in our records.	The error message returned when the ResourceType parameter is invalid.
404	Invalid.DestinationResource	The specified DestinationResource is not valid.	The error message returned when the DestinationResource parameter is invalid.
404	Invalid.IoOptimized	The specified IoOptimized is not valid.	The error message returned when the IoOptimized parameter is invalid.
404	Invalid.NetworkCategory	The specified NetworkCategory is not valid.	The error message returned when the NetworkCategory parameter is invalid.
404	Invalid.SpotStrategy	The specified SpotStrategy is not valid.	The error message returned when the SpotStrategy parameter is invalid.
400	Invalid.InstanceChargeType	The specified InstanceChargeType is not valid.	The error message returned when the InstanceChargeType parameter is invalid.
404	Invalid.ResourceId	The specified ResourceId is not valid.	The error message returned when the resource does not exist in the region or has been released.

HTTP status code	Error code	Error message	Description
404	Invalid.InstancePayType	The specified InstancePayType is not valid.	The error message returned when the InstancePayType parameter is invalid.
403	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist in our records.	The error message returned when the resource does not exist in the region or has been released.
404	InvalidInstanceId.NotFound	The specified InstanceId provided does not exist in our records.	The error message returned when the resource does not exist in the region or has been released.
404	InvalidResourceId.NotFound	The specified ResourceId is not found in our records	The error message returned when the specified ResourceId does not exist.
403	InvalidParam.TypeAndCpuMem.Conflict	The specified 'InstanceType' and 'Cores','Memory' are not blank at the same time.	The error message returned when the specified ResourceId does not exist.
403	InvalidParam.Cores	The specified parameter 'Cores' should be empty	The error message returned when the Cores parameter is invalid.
403	InvalidParam.Memory	The specified parameter 'Memory' should be empty	The error message returned when the resource does not exist in the region or has been released.

[View error codes](#)

23.4 DescribeAvailableResource

You can call this operation to query resources in a zone. For example, you can query resources before creating an ECS instance (RunInstances) or modifying instance specifications (ModifyInstanceSpec) in a zone.

Description

When you call this operation, note that:

- When the ZoneId parameter is not specified, the system returns the resources that match the other criteria of all zones within the region.
- You can specify the DestinationResource parameter to retrieve different types of resources, and specify other parameters to refine your search. Options for the DestinationResource parameter have dependencies. When you select an option in the following chain, the options to the left of this option are all required.
 - Sequence: (Zone) > IoOptimized > InstanceType > SystemDisk > DataDisk
 - For example:
 - If you set the DestinationResource parameter to SystemDisk, you must specify the IoOptimized and InstanceType parameters.
 - If you set the DestinationResource parameter to InstanceType, you must specify the IoOptimized parameter.
 - If you set the DestinationResource parameter to DataDisk, you must specify the IoOptimized, InstanceType, and SystemDiskCategory parameters.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
DestinationResource	String	Yes	InstanceType	The resource types to be queried. Valid values: • Zone • IoOptimized • InstanceType • SystemDisk • DataDisk • Network
RegionId	String	Yes	cn-hangzhou	The ID of the region for which to query resources. You can call the DescribeRegions operation to query the latest region list.
Action	String	No	DescribeAvailableResource	The operation that you want to perform. For API requests using the HTTP and HTTPS methods, <code>Action</code> is required. Set the value to <code>DescribeAvailableResource</code>.
Cores	Integer	No	2	The number of vCPU cores of the instance type. For more information, see Instance type families. The Cores parameter is valid only when the DestinationResource parameter is set to InstanceType.

Parameter	Type	Required	Example	Description
DataDiskCategory	String	No	cloud_ssd	The category of the data disk. Valid values: - cloud - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - ephemeral_ssd: local SSD - cloud_essd: enhanced SSD
DedicatedHostId	String	No	dh-dedicatedhostid	The ID of the DDH.
InstanceChargeType	String	No	PrePaid	The billing method of resources. For more information, see Billing overview . Valid values: - PrePaid: subscription - PostPaid: pay-as-you-go Default value: PostPaid
InstanceType	String	No	ecs.g5.large	The type of the instance. For more information, see Instance type families or call the DescribeInstanceTypes operation to query the latest instance type list. When the DestinationResource parameter is set to SystemDisk or DataDisk, the InstanceType parameter is required.

Parameter	Type	Required	Example	Description
IoOptimized	String	No	optimized	Specifies whether the instance is I/O optimized. Valid values: · none · optimized When the DestinationResource parameter is set to InstanceType, SystemDisk, or DataDisk, the IoOptimized parameter is required. Default value: optimized.
Memory	Float	No	8.0	The memory size of the instance type. Unit: GiB. For more information, see Instance type families. The Memory parameter is valid only when the DestinationResource parameter is set to InstanceType.
NetworkCategory	String	No	vpc	The type of the network. Valid values: · vpc · classic
ResourceType	String	No	Instance	The type of the resource. Valid values: · instance · disk · reservedinstance · ddh

Parameter	Type	Required	Example	Description
SpotStrategy	String	No	NoSpot	The bidding policy for the pay-as-you-go instance. Valid values : • NoSpot: pay-as-you-go instance • SpotWithPriceLimit: preemptible instance with the maximum price • SpotAsPriceGo: price automatically provided by the system with the pay-as-you-go instance price as the maximum value Default value: NoSpot The SpotStrategy parameter is valid only when the InstanceChargeType parameter is set to PostPaid.
SystemDiskCategory	String	No	cloud_ssd	The category of the system disk . Valid values: • cloud • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • ephemeral_ssd: local SSD • cloud_essd: enhanced SSD When the DestinationResource parameter is set to SystemDisk , InstanceType, or DataDisk , the SystemDiskCategory parameter is optional. Default value: cloud_efficiency.

Parameter	Type	Required	Example	Description
ZoneId	String	No	cn-hangzhou-e	The ID of the zone for which to query resources. When the ZoneId parameter is not specified, the system returns resources that match the other criteria of all zones within the region.

Response parameters

Parameter	Type	Example	Description
AvailableZones			An array of zone types.
[⌞] AvailableResources			An array of available resource types.
[⌞] SupportedResources			An array of supported resource types.
[⌞] Max	Integer	2	The maximum number of resources of a specific type that can be created. No value is returned when this parameter is null.
[⌞] Min	Integer	1	The minimum value of resources of a specific type that can be created. No value is returned when the parameter is null.
[⌞] Status	String	Available	The type of the resource. Valid values: - Available - SoldOut

Parameter	Type	Example	Description
<code>└─StatusCategory</code>	String	WithStock	The resource category based on the stock. Valid values: - WithStock: sufficient stock - ClosedWithStock: insufficient stock - WithoutStock: running out of stock
<code>└─Unit</code>	String	null	The unit of the resource type. No value is returned when the parameter is null.
<code>└─Value</code>	String	ecs.d1ne.xlarge	The value of the resource.
<code>└─Type</code>	String	InstanceType	The type of the resource. Valid values: - Zone - IoOptimized - InstanceType - SystemDisk - DataDisk - Network
<code>└─RegionId</code>	String	cn-hangzhou	The ID of the region.
<code>└─Status</code>	String	Available	The type of the resource. Valid values: - Available - SoldOut
<code>└─StatusCategory</code>	String	WithStock	The resource category based on the stock. Valid values: - WithStock: sufficient stock - ClosedWithStock: insufficient stock - WithoutStock: running out of stock

Parameter	Type	Example	Description
<code>ZoneId</code>	String	cn-hangzhou-e	The ID of the zone.
<code>RequestId</code>	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeAvailableResource
&DestinationResource=InstanceType
&RegionId=cn-hangzhou
&InstanceChargeType=PrePaid
&SpotStrategy=NoSpot
&ZoneId=cn-hangzhou-e
&IoOptimized=optimized
&DedicatedHostId=dh-dedicatedhostid
&InstanceType="ecs.g5.large"
&SystemDiskCategory=cloud_ssd
&DataDiskCategory=cloud_ssd
&NetworkCategory=vpc
&Cores=2
&Memory=8.0
&ResourceType=Instance
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeAvailableResourceResponse>
  <RequestId>5272B7D8-F366-4781-AF7B-63E735FBC09A</RequestId>
  <AvailableZones>
    <AvailableZone>
      <Status>Available</Status>
      <RegionId>cn-hangzhou</RegionId>
      <ZoneId>cn-hangzhou-h</ZoneId>
    </AvailableZone>
    <AvailableZone>
      <Status>Available</Status>
      <RegionId>cn-hangzhou</RegionId>
      <ZoneId>cn-hangzhou-g</ZoneId>
    </AvailableZone>
    <AvailableZone>
      <Status>Available</Status>
      <RegionId>cn-hangzhou</RegionId>
      <ZoneId>cn-hangzhou-f</ZoneId>
    </AvailableZone>
    <AvailableZone>
      <Status>Available</Status>
      <RegionId>cn-hangzhou</RegionId>
      <ZoneId>cn-hangzhou-b</ZoneId>
    </AvailableZone>
  </AvailableZones>
</DescribeAvailableResourceResponse>
```

```

    < AvailableZ   one >
      < Status > Available </ Status >
      < RegionId > cn - hangzhou </ RegionId >
      < ZoneId > cn - hangzhou - e </ ZoneId >
    </ AvailableZ   one >
  </ AvailableZ   ones >
</ DescribeAv   ailableRes   ourceRespo   nse >

```

JSON format

```

{
  "RequestId ":" 5272B7D8 - F366 - 4781 - AF7B - 63E735FBC0   9A ",
  "AvailableZ   ones ":{
    "AvailableZ   one ":[
      {
        "Status ":" Available ",
        "RegionId ":" cn - hangzhou ",
        "ZoneId ":" cn - hangzhou - h "
      },
      {
        "Status ":" Available ",
        "RegionId ":" cn - hangzhou ",
        "ZoneId ":" cn - hangzhou - g "
      },
      {
        "Status ":" Available ",
        "RegionId ":" cn - hangzhou ",
        "ZoneId ":" cn - hangzhou - f "
      },
      {
        "Status ":" Available ",
        "RegionId ":" cn - hangzhou ",
        "ZoneId ":" cn - hangzhou - b "
      },
      {
        "Status ":" Available ",
        "RegionId ":" cn - hangzhou ",
        "ZoneId ":" cn - hangzhou - e "
      }
    ]
  }
}

```

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.

HTTP status code	Error code	Error message	Description
404	Unavailable.Regions	The available regions does not exists	The error message returned because the specified RegionId parameter is invalid.
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.
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.

HTTP status code	Error code	Error message	Description
403	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DDH ID does not exist.
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.
403	InvalidParam.TypeAndCpuMem.Conflict	The specified 'InstanceType' and 'Cores','Memory' are not blank at the same time.	The error message returned because the specified InstanceType , Cores, and Memory parameters conflict with each other.
403	InvalidParam.Cores	The specified parameter 'Cores' should be empty	The error message returned because the specified Cores parameter is invalid.
403	InvalidParam.Memory	The specified parameter 'Memory' should be empty	The error message returned because the specified Memory parameter is invalid.
400	InvalidRegionId.MalFormed	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.

[View error codes](#)

24 Others

24.1 CancelTask

Cancels a running task. You can cancel the running ImportImage and ExportImage tasks.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
TaskId	String	Yes	t-23ym6mvro	The ID of the task. You can call DescribeTasks to view the list of task IDs.
Action	String	No	CancelTask	The operation that you want to perform. Set the value to CancelTask.

Response parameters

Name	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-23ym6mvro
&<Common request parameters>
```

Successful response examples

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 when 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 when the TaskId parameter is null.
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned when the specified Region ID does not exist. Check whether the service is available in this region.

HTTP status code	Error code	Error message	Description
400	InvalidTaskId.NotFound	The specified "TaskId" is not found.	The error message returned when the specified task ID does not exist.
403	CancelTask Failed	The task is failed to cancel, Please contact the administrator.	The error message returned when the system failed to cancel the task. Contact a system administrator.

[View error codes](#)

24.2 DescribeTasks

You can call this operation to query the progress of one or more asynchronous requests.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region for which to query the progress of requests. You can call the DescribeRegions operation to query the latest region list.

Parameter	Type	Required	Example	Description
Action	String	No	DescribeTasks	The operation that you want to perform. For API requests using the HTTP and HTTPS methods, <code>Action</code> is required. Set the value to DescribeTasks.
EndTime	String	No	2015-11-23T15:16:00Z	The end of the time range where the data is queried. 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	2	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.
StartTime	String	No	2015-11-23T15:10:00Z	The beginning of the time range where the data is queried. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
TaskAction	String	No	ImportImage	The operation name of the task. Valid values: - ImportImage - ExportImage - RedeployInstance

Parameter	Type	Required	Example	Description
TaskIds	String	No	["t-bp10e8or*****74o8x";"t-bp10e8or*****74o8y"]	The task IDs. You can specify up to 100 task IDs at a time. Separate multiple tasks IDs with commas (,).
TaskStatus	String	No	Finished	The status of the task. Valid values: • Finished • Processing • Waiting • Deleted • Paused • Failed Default value: null. The system only retrieves tasks in the Finished, Processing, and Failed states. The request ignores other values.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The number of the page returned.
PageSize	Integer	2	The number of entries returned on the page.
RegionId	String	cn-hangzhou	The region ID.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TaskSet			A set of tasks.

Parameter	Type	Example	Description
<code>CreationTime</code>	String	2015-11-24T12:50Z	The time when the task was created.
<code>FinishedTime</code>	String	2015-11-24T12:50Z	The time when the task was finished.
<code>SupportCancel</code>	String	true	Indicates whether the task can be canceled.
<code>TaskAction</code>	String	IMPORT_IMAGE	The name of the task.
<code>TaskId</code>	String	t-bp10e8or*****74o8X	The ID of the task.
<code>TaskStatus</code>	String	Finished	The status of the task.
<code>TotalCount</code>	Integer	2	The total number of tasks.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeTasks
&RegionId=cn-hangzhou
&PageNumber=1
&PageSize=2
&TaskIds=t-bp10e8or*****74o8X
&TaskAction=ImportImage
&TaskStatus=Finished
&StartTime=2015-11-23T15:10:00Z
&EndTime=2015-11-23T15:16:00Z
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeTasksResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>2</TotalCount>
  <PageSize>2</PageSize>
  <RegionId>cn-hangzhou</RegionId>
  <RequestId>E5C82807-5588-4661-9A96-350B206A7623</RequestId>
  <TaskSet>
    <Task>
      <CreationTime>2015-11-24T12:50Z</CreationTime>
      <FinishedTime>2015-11-24T12:50Z</FinishedTime>
      <SupportCancel>true</SupportCancel>
```

```

    < TaskAction > IMPORT_IMA GE </ TaskAction >
    < TaskStatus > Finished </ TaskStatus >
    < TaskId > t - bp10e8or ***** 74o8X </ TaskId >
  </ Task >
  < Task >
    < CreationTi me > 2015 - 11 - 23T15 : 10Z </ CreationTi me >
    < FinishedTi me > 2015 - 11 - 23T15 : 16Z </ FinishedTi me >
    < SupportCan cel > true </ SupportCan cel >
    < TaskAction > IMPORT_IMA GE </ TaskAction >
    < TaskStatus > Finished </ TaskStatus >
    < TaskId > t - 23sgu0dyj </ TaskId >
  </ Task >
</ TaskSet >
</ DescribeTa sksRespons e >

```

JSON format

```

{
  " PageNumber ": 1 ,
  " TotalCount ": 2 ,
  " TaskSet ":[
    {
      " Task ":[
        {
          " CreationTi me ":" 2015 - 11 - 24T12 : 50Z ",
          " FinishedTi me ":" 2015 - 11 - 24T12 : 50Z ",
          " SupportCan cel ": true ,
          " TaskAction ":" ImportImag e ",
          " TaskStatus ":" Finished ",
          " TaskId ":" t - bp10e8or ***** 74o8X "
        },
        {
          " CreationTi me ":" 2015 - 11 - 23T15 : 10Z ",
          " FinishedTi me ":" 2015 - 11 - 23T15 : 16Z ",
          " SupportCan cel ": true ,
          " TaskAction ":" ImportImag e ",
          " TaskStatus ":" Finished ",
          " TaskId ":" t - 23sgu0dyj "
        }
      ]
    }
  ],
  " PageSize ": 2 ,
  " RequestId ":" F746C690 - D9EA - 4F87 - AF31 - 8E1910FAB5 41 ",
  " 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	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified Region ID does not exist. Check whether ECS is available in that region.

[View error codes](#)

24.3 DescribeTaskAttribute

Views the details about asynchronous tasks. You can query the ImportImage and ExportImage tasks.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.

Name	Type	Required	Example	Description
TaskId	String	Yes	t-taskid	The ID of the task. You can call DescribeTasks to obtain the list of task IDs.
Action	String	No	DescribeTaskAttribute	The operation that you want to perform. Set the value to DescribeTaskAttribute.

Response parameters

Name	Type	Example	Description
CreationTime	String	2015-11-23T02:13Z	The creation time of the task.
FailedCount	Integer	0	The number of failed tasks.
FinishedTime	String	2015-11-23T02:19Z	The completion time of the task.
OperationProgressSet			The returned task-related information such as the status of each subtask.
↳ ErrorCode	String	ParameterInvalid	The error code.
↳ ErrorMessage	String	The specified RegionId parameter is invalid.	Error message
↳ OperationStatus	String	Success	The status of the operation.
↳ RelatedItemSet			The type of the resource information.
↳ Name	String	OSSObject	The name of the related item.
↳ Value	String	MYOSSPRE_m-23f8tcp8y_t-23ym6mvro.vhd	The value of the related item.

Name	Type	Example	Description
RegionId	String	cn-hangzhou	The ID of the region.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SuccessCount	Integer	1	The number of tasks that were completed.
SupportCancel	String	true	Indicates whether the task can be canceled. Valid values: • True • False
TaskAction	String	ExportImage	The operation name of the task.
TaskId	String	t-taskid	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-taskid
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribeTaskAttributeResponse>
  <CreationTime>2015-11-23T02:13Z</CreationTime>
  <OperationProgressSet>
    <OperationProgress>
      <RelatedItemSet>
        <RelatedItem>
          <Name>OSSBucket</Name>
          <Value>image-temp</Value>
        </RelatedItem>
      </RelatedItemSet>
    </OperationProgress>
  </OperationProgressSet>
</DescribeTaskAttributeResponse>
```

```

    < RelatedItem m >
      < Name > OSSObject </ Name >
      < Value > MYOSSPRE_m - 23f8tcp8y_ t - 23ym6mvro . vhd </
Value >
    </ RelatedItem m >
    < RelatedItem m >
      < Name > ImageFormat </ Name >
      < Value > vhd </ Value >
    </ RelatedItem m >
  </ RelatedItem mSet >
  < ErrorMessage />
  < ErrorCode />
  < OperationStatus > Success </ OperationStatus >
</ OperationProgress >
</ OperationProgressSet >
< FinishedTime > 2015 - 11 - 23T02 : 19Z </ FinishedTime >
< FailedCount > 0 </ FailedCount >
< SupportCanCell > true </ SupportCanCell >
< TotalCount > 1 </ TotalCount >
< SuccessCount > 1 </ SuccessCount >
< RequestId > EF0C5969 - 279B - 49C8 - AD83 - BACCC74DD3 8C </
RequestId >
< RegionId > cn - hangzhou </ RegionId >
< TaskAction > ExportImage </ TaskAction >
< TaskStatus > Finished </ TaskStatus >
< TaskProgress > 100 %</ TaskProgress >
< TaskId > t - 23ym6mvro </ TaskId >
</ DescribeTaskAttributeResponse >

```

JSON format

```

{
  "OperationProgressSet": {
    "OperationProgress": [
      {
        "RelatedItemSet": {
          "RelatedItem": [
            {
              "Name": "OSSBucket",
              "Value": "image - temp"
            },
            {
              "Name": "OSSObject",
              "Value": "MYOSSPRE_m - 23f8tcp8y_ t - 23ym6mvro . vhd"
            },
            {
              "Name": "ImageFormat",
              "Value": "vhd"
            }
          ]
        }
      },
      {
        "ErrorMessage": "",
        "ErrorCode": "",
        "OperationStatus": "Success"
      }
    ]
  },
  "FailedCount": 0,
  "SupportCanCell": true,
  "TotalCount": 1,
  "TaskAction": "ExportImage",
  "TaskProgress": "100%",
  "TaskId": "t - 23ym6mvro",

```

```

" CreationTime ":" 2015 - 11 - 23T02 : 13Z ",
" FinishedTime ":" 2015 - 11 - 23T02 : 19Z ",
" SuccessCount ": 1 ,
" RequestId ":" 4BE2C7FE - C7A4 - 4675 - A153 - 174E032AAB FB ",
" RegionId ":" cn - hangzhou ",
" TaskStatus ":" Finished "
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned when the specified Region ID does not exist. Check whether the service is available in this region.
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied .	The error message returned when 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 when the TaskId parameter is not specified .
400	InvalidTaskId.NotFound	The specified "TaskId" is not found.	The error message returned when the specified task ID does not exist.

[View error codes](#)

24.4 DescribeAccountAttributes

You can call this operation to query the upper limit of ECS resources that you can create in a region. You can query the maximum number of security groups, ENIs, pay-as-you-go instance vCPUs, preemptible instance vCPUs, and Dedicated Hosts (DDHs). You can also obtain information such as network types available in the region and whether an account has passed real-name authentication.

Description

After [registering](#) for an Alibaba Cloud account, you can create a certain number of ECS resources in different regions. For more information, see [Limits](#).

You can also [submit a ticket](#) to raise the resource usage limit.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region for which to query the upper limit of ECS resources. You can call the DescribeRegions operation to query the latest region list.
Action	String	No	DescribeAccountAttributes	The operation that you want to perform. For API requests using the HTTP and HTTPS methods, <code>Action</code> is required. Set the value to <code>DescribeAccountAttributes</code> .
ZoneId	String	No	cn-hangzhou-b	The ID of the zone.

Parameter	Type	Required	Example	Description
AttributeN ame . N	RepeatList	No	max-security-groups	The types of resources whose upper limit is to be queried. Valid values of N: 1 to 8. Valid values: • instance-network-type: the available network types in the current region • max-security-groups: the number of security groups • max-elastic-network-interfaces: the number of ENIs in the current region • max-postpaid-instance-vcpu-count: the number of vCPU cores of pay-as-you-go instances in the current region • max-spot-instance-vcpu-count: the number of vCPU cores of preemptible instances in the current region • max-dedicated-hosts: the number of DDHs in the current region • supported-postpaid-instance-types: the types of pay-as-you-go I/O optimized instances in the current region • max-axt-command-count : the number of Cloud Assistant commands in the current region • max-axt-invocation-daily : the number of Cloud Assistant commands that can be run per day in the current region • real-name-authentication: whether the account has passed real-name authentication

Response parameters

Parameter	Type	Example	Description
AccountAttributeItems			A set of information about account privileges in a specified region.
└AttributeName	String	max-security-groups	The returned resource types. Valid values: • instance-network-type: the available network types in the current region • max-security-groups: the number of security groups • max-elastic-network-interfaces : the number of ENIs in the current region • max-postpaid-instance-vcpu-count: the number of vCPU cores of pay-as-you-go instances in the current region • max-spot-instance-vcpu-count : the number of vCPU cores of preemptible instances in the current region • max-dedicated-hosts: the number of DDHs in the current region • supported-postpaid-instance-types: the types of pay-as-you-go I/O optimized instances in the current region • real-name-authentication: whether the account has passed real-name authentication • max-axt-command-count: the number of Cloud Assistant commands in the current region • max-axt-invocation-daily: the number of Cloud Assistant commands that can be run per day in the current region

Parameter	Type	Example	Description
<code>⌞AttributeValues</code>			The upper limit of resources.
<code>⌞Count</code>	Integer	3	The number of resource types.
<code>⌞ExpiredTime</code>	String	2019-01-01T12:30:00Z	The time when the privileges expired. This parameter is only returned when account privileges have an expiration time. The time follows the ISO 8601 standard in the yyyy-MM-ddThh:mmZ format. The time is displayed in UTC.
<code>⌞InstanceChargeType</code>	String	PrePaid	The billing method of the instance.
<code>⌞InstanceType</code>	String	["ecs.g5.large"]	The instance type.

Parameter	Type	Example	Description
<code>└Value</code>	String	800	The upper limit of the resource type in the current region or all regions. Valid values: - When the value of the <code>AttributeName</code> parameter is <code>max-security-groups</code>, <code>max-elastic-network-interfaces</code>, <code>max-postpaid-instance-vcpu-count</code>, <code>max-dedicated-hosts</code>, or <code>max-spot-instance-vcpu-count</code>, 0 or a positive integer is returned. - When the value of the <code>AttributeName</code> parameter is <code>supported-postpaid-instance-types</code>, the instance type is returned. For more information, see Instance type families. - When the value of the <code>AttributeName</code> parameter is <code>real-name-authentications</code>, <code>yes</code>, <code>none</code>, or <code>unnecessary</code> is returned. - When the value of the <code>AttributeName</code> parameter is <code>instance-network-type</code>, <code>vpc</code> or <code>classic</code> is returned.
<code>└ZoneId</code>	String	<code>cn-hangzhou-b</code>	The ID of the zone.
<code>RequestId</code>	String	<code>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</code>	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

```

< DescribeAc countAttri butesRespo nse >
  < AccountAtt ributeItem s >
    < AccountAtt ributeItem >
      < AttributeN ame > max - security - groups </ AttributeN
ame >
      < AttributeV alues >
        < ValueItem >
          < Value > 800 </ Value >
        < ValueItem >
        </ AttributeV alues >
      </ AccountAtt ributeItem >
    < AccountAtt ributeItem >
      < AttributeN ame > instance - network - type </
AttributeN ame >
      < AttributeV alues >
        < ValueItem >
          < Value > vpc </ Value >
          < Value > classic </ Value >
        < ValueItem >
        </ AttributeV alues >
      </ AccountAtt ributeItem >
    </ AccountAtt ributeItem s >
    < RequestId > 675B6D89 - A3EB - 4987 - BAF3 - 610591E0D0 19 </
RequestId >
</ DescribeAc countAttri butesRespo nse >

```

JSON format

```

{
  "AccountAtt ributeItem s":{
    "AccountAtt ributeItem ":[
      {
        "AttributeV alues ":{
          "ValueItem ":[
            {
              "Value ":" 100 "
            }
          ]
        },
        "AttributeN ame ":" max - security - groups "
      },
      {
        "AttributeV alues ":{
          "ValueItem ":[
            {
              "Value ":" 2 "
            }
          ]
        },
        "AttributeN ame ":" max - dedicated - hosts "
      },
      {
        "AttributeV alues ":{
          "ValueItem ":[
            {
              "Value ":" 1000 "
            }
          ]
        },
        "AttributeN ame ":" max - postpaid - instance - vcpu - count "
      }
    ]
  }
}

```

```

    },
    {
      "AttributeV_alues ":{
        "ValueItem ":[
          {
            "Value ":" 1000 "
          }
        ]
      },
      "AttributeN_ame ":" max - spot - instance - vcpu - count "
    },
    {
      "AttributeV_alues ":{
        "ValueItem ":[
          {
            "Value ":" 5000 "
          }
        ]
      },
      "AttributeN_ame ":" max - elastic - network - interfaces "
    },
    {
      "AttributeV_alues ":{
        "ValueItem ":[
          {
            "Value ":" yes "
          }
        ]
      },
      "AttributeN_ame ":" real - name - authentica tion "
    },
    {
      "AttributeV_alues ":{
        "ValueItem ":[
          {
            "Value ":" vpc "
          }
        ]
      },
      "AttributeN_ame ":" instance - network - type "
    },
    {
      "AttributeV_alues ":{
        "ValueItem ":[
          {
            "Value ":" ecs . f3 - c16f1 . 4xlarge "
          },
          {
            "Value ":" ecs . g5 . 2xlarge "
          }
        ]
      },
      "AttributeN_ame ":" supported - postpaid - instance - types "
    }
  ]
},
"RequestId ":" 8CE45CD5 - 31FB - 47C2 - 959D - CA8144CE9F 42 "
}

```

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 a required parameter is not specified.

[View error codes](#)

24.5 DescribePrice

Views the latest price of ECS resources.

Description

When you query the prices for different types of resources, the required parameters are also different:

- 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 the DataDisk 1. Category and DataDisk. 1. Size parameters. When you query the price of disks, the PriceUnit parameter can be set to Hour only, and the system only returns the [Pay-As-You-Go](#) price of the disks.
- When you query the price of bandwidths, the system only returns the PayByTraffic price of bandwidths.

Debugging

You can use [API Explorer](#) to perform debugging. API Explorer allows you to perform various operations to simplify API usage. For example, you can retrieve APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Name	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
Action	String	No	DescribePrice	The operation that you want to perform. Set the value to DescribePrice.
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 with certain specifications. Valid values: 1 to 1000. Default value: 1.
DataDisk. N. Category	String	No	cloud_ssd	The category of data disk N, valid range of N is 1 to 5. Valid values: · cloud: basic disk · cloud_efficiency: ultra disk · cloud_ssd: SSD · ephemeral_ssd: local SSD · cloud_essd: ESSD

Name	Type	Required	Example	Description
DataDisk . N . Size	Integer	No	2000	The size of the data disk, valid range of N is 1 to 5. Unit: GiB. Valid values: - cloud: 5 to 2000 - cloud_efficiency: 20 to 32768 - cloud_ssd: 20 to 32768 - cloud_essd: 20 to 32768 - ephemeral_ssd: 5 to 800
ImageId	String	No	centos_7_05_64_20G_alibase_20181212.vhd	The ID of the image to be used to create the instances. You can call DescribeImages to view the available images. If you do not specify the parameter, the system queries the price of the Linux images by default.
InstanceNetworkType	String	No	vpc	The network type of the instance. Valid values: - classic - vpc Default value: vpc.
InstanceType	String	No	ecs.n1.tiny	The instance type. For more information, see Instance type families, or call DescribeInstanceTypes to query the latest instance types.
InternetChargeType	String	No	PayByTraffic	The billing method of network bandwidth. Valid values: PayByBandwidth: You are billed based on the fixed amount of bandwidth. Default value: PayByTraffic.

Name	Type	Required	Example	Description
InternetMaxBandwidthOut	Integer	No	5	The maximum value of public network outbound bandwidth. Unit: Mbit/s. Valid values: 0 to 100. Default value: 0.
IoOptimized	String	No	none	Indicates whether the instance is I/O optimized. Valid values: · none · optimized If the value of the InstanceType parameter indicates a Generation I type, the instance is non-I/O optimized by default. If the value of the InstanceType parameter does not indicate a Generation I type, the instance is I/O optimized by default.
Period	Integer	No	1	The billing duration of an ECS instance. Valid values: · The value range is 1 to 9 when the PriceUnit parameter is set to Month. · The value range is 1 to 3 when the PriceUnit parameter is set to Year. · The value is 1 when the PriceUnit parameter is set to Hour. Default value: 1.

Name	Type	Required	Example	Description
PriceUnit	String	No	Year	The pricing unit for ECS instance usage. Valid values: - Month - Year - Hour: This is the default value.
ResourceType	String	No	instance	The type of the resource. Valid values: - instance - disk - bandwidth Default value: instance.
SystemDisk . Category	String	No	cloud_ssd	The category of the system disk. When the InstanceType parameter is set to one of the Phased-out instance types and the IoOptimized parameter is set to none, the default value is cloud. In other cases, the default value is cloud_efficiency. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: SSD - ephemeral_ssd: local SSD - cloud_essd: ESSD

Name	Type	Required	Example	Description
SystemDisk • Size	Integer	No	80	The size of the system disk. Unit: GiB. Valid values: 20 to 500. The value of this parameter must be at least 20 GiB, or greater than or equal to the value of ImageSize. Default value: Max{40, the size of the specified image}.

Response parameters

Name	Type	Example	Description
PriceInfo			An array of PriceInfoType data, including price and discounts.
└Price			The price.
└Currency	String	CNY	The currency unit.
└DetailInfos			The details of the price information.
└DiscountPrice	Float	655.2	The discount.
└OriginalPrice	Float	4368	The original price.
└Resource	String	instance	The name of the resource.
└SubRules			A subset of pricing rules.
└Description	String	Get 15% discount on 1-year subscription	The description of the rule subset.
└RuleId	Long	587	The ID of the rule.

Name	Type	Example	Description
<code>TradePrice</code>	Float	3712.8	The transaction price.
<code>DiscountPrice</code>	Float	655.2	The discount.
<code>OriginalPrice</code>	Float	4368	The original price.
<code>TradePrice</code>	Float	3712.8	The transaction price, which is equal to the original price minus the discount.
<code>Rules</code>			The promotion rules.
<code>Description</code>	String	Get 15% discount on 1-year subscription	The description of the promotion rule.
<code>RuleId</code>	Long	587	The ID of the promotion rule.
<code>RequestId</code>	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribePrice
&RegionId=cn-hangzhou
&InstanceType=ecs.n1.tiny
&<Common request parameters>
```

Successful response examples

XML format

```
<DescribePriceResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
  <PriceInfo>
    <Price>
      <Currency>CNY</Currency>
      <DiscountPrice>655.2</DiscountPrice>
      <OriginalPrice>4368</OriginalPrice>
      <TradePrice>3712.8</TradePrice>
    </Price>
    <Rules>
      <Rule>
```

```

        < Descriptio n > Get 15 % discount on 1 - year
subscripti on </ Descriptio n >
        < RuleId > ONE_YEAR_8 5_PERCENT </ RuleId >
    </ Rule >
</ Rules >
</ PriceInfo >
</ DescribePr iceRespons e >

```

JSON format

```

{
  " PriceInfo ":{
    " Price ":{
      " DiscountPr ice ": 655 . 2 ,
      " OriginalPr ice ": 4368 ,
      " TradePrice ": 3712 . 8 ,
      " Currency ":" CNY "
    },
    " Rules ":{
      " Rule ":[
        {
          " Descriptio n ":" Get 15 % discount on 1 - year
subscripti on ",
          " Code ":" ONE_YEAR_8 5_PERCENT "
        }
      ]
    }
  },
  " RequestId ":" 04F0F334 - 1335 - 436C - A1D7 - 6C044FE733 68 "
}

```

Error codes

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 when the specified instance type is not supported
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 when the size of the specified data disk exceeds the upper limit.
400	InvalidDataDiskCategory. ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned when the DataDisk.n.Category parameter is invalid.

HTTP status code	Error code	Error message	Description
403	OperationDenied	The specified Image is disabled or is deleted.	The error message returned when the specified image is disabled or deleted.
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 when the specified image from Alibaba Cloud Marketplace is unavailable.
400	InvalidDiskCategoryMismatch	The specified disk categories' combination is not supported.	The error message returned when the combination of specified disk categories is not supported.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned when you are not authorized to access the specified resource.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned when the specified image does not exist under this account. Check whether the image ID is correct.
403	InvalidDiskSize.TooSmall	Specified disk size is less than the size of snapshot.	The error message returned when the capacity of the specified disk is smaller than that of the snapshot.

HTTP status code	Error code	Error message	Description
403	OperationDenied	The type of the disk does not support the operation	The error message returned when the disk type does not support the specified operation.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned when the specified instance type does not exist.
400	InvalidPeriod	The specified period is not valid.	The error message returned when the specified period is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned when the specified disk type is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned when the specified disk type is invalid.
403	InvalidDiskCategory.NotSupported	The specified disk category is not support the specified instance type .	The error message returned when the specified disk type 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 when the disks attached to the instance do not support instance specifications upgrades.
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 when the size of the specified data disk exceeds the upper limit.

HTTP status code	Error code	Error message	Description
404	InvalidSystemDiskSize.LessThanImageSize	The specified parameter SystemDisk.Size is less than the image size.	The error message returned when the size of the specified system disk is smaller than the image size.
403	InvalidParameter.ResourceOwnerAccount	ResourceOwnerAccount is Invalid.	The error message returned when the specified ResourceOwnerAccount parameter is invalid.
403	RegionUnauthorized	There is no authority to create instance in the specified region.	The error message returned when you are not authorized to create instances in the specified region.
404	InvalidSystemDiskSize.ValueNotSupported	The specified parameter SystemDisk.Size is invalid.	The error message returned when the specified value of the SystemDisk.Size parameter is invalid.
400	InstanceDiskNumber.LimitExceed	The total number of specified disk in an instance exceeds.	The error message returned when the number of disks attached to the instance exceeds the upper limit.
400	InvalidDiskCategory.ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned when the specified DiskCategory parameter is invalid.
403	OperationDenied	The resource is out of usage.	The error message returned when the instance is not in the running state. Start the instance.

HTTP status code	Error code	Error message	Description
400	InvalidInternetMaxBandwidthOut.ValueNotSupported	%s	The error message returned when the setting of the InternetMaxBandwidthOut parameter is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned when the parameter is not supported.
400	InvalidSystemDiskCategory.ValueNotSupported	%s	The error message returned when the parameter is not supported.
400	InvalidParameter.Conflict	%s	The error message returned when the parameter conflicts with another parameter.
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned when the parameter is not supported.
400	InvalidInstanceType.ValueNotSupported	%s	The error message returned when the instance type is incorrect.
403	InstanceType.Offline	%s	The error message returned when the instance type is unavailable.
500	InternalError	%s	The error message returned when an unknown internal error occurs.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned when the parameter is not supported.

HTTP status code	Error code	Error message	Description
400	InvalidDataDiskSize. ValueNotSupported	%s	The error message returned when the parameter is not supported.
400	PriceNotFound	The price of your queried resource is not available now, please try other resources.	The error message returned when the price of the resource cannot be queried. Try again later.
400	InvalidResourceType. ValueNotSupported	The specified parameter ResourceType is not valid.	The error message returned when the specified resource type is invalid.
400	InvalidPriceUnit. ValueNotSupported	The specified parameter PriceUnit is not valid.	The error message returned when the specified pricing unit is invalid.
403	OperationDenied	The specified parameter InstanceNetworkType is not authorized.	The error message returned when the specified instance network type is unauthorized.
403	InvalidAmount. Malformed	The specified parameter Amount is not valid.	The error message returned when the format of the Amount parameter is invalid.
400	EncryptedOption. Conflict	%s	The error message returned when the parameter does not support encrypted disks.
404	Invalid. InstanceId. NotFound	The Instance provided does not exist.	The error message returned when the specified instance does not exist.
403	InvalidDiskSize. TooSmall	Specified system disk size is less than the size of image	The error message returned when the size of the system disk is smaller than that of the image.

HTTP status code	Error code	Error message	Description
404	InvalidMarketImage.NotFound	The specified marketplace image does not exist, please change the imageId and try again.	The error message returned when the specified image does not exist in Alibaba Cloud Marketplace.
400	IncorrectImageStatus	The specified marketplace image is not available.	The error message returned when the specified image from Alibaba Cloud Marketplace is unavailable.
403	InvalidChargeType.MarketImage	The specified chargeType of marketplace image is invalid	The error message returned when the billing method for the images from Alibaba Cloud Marketplace is not supported.
403	InvalidDiskCategory.NotSupported	The specified disk category is not supported.	The error message returned when the cloud disk type is not supported.

[View error codes](#)

25 Appendix

25.1 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.

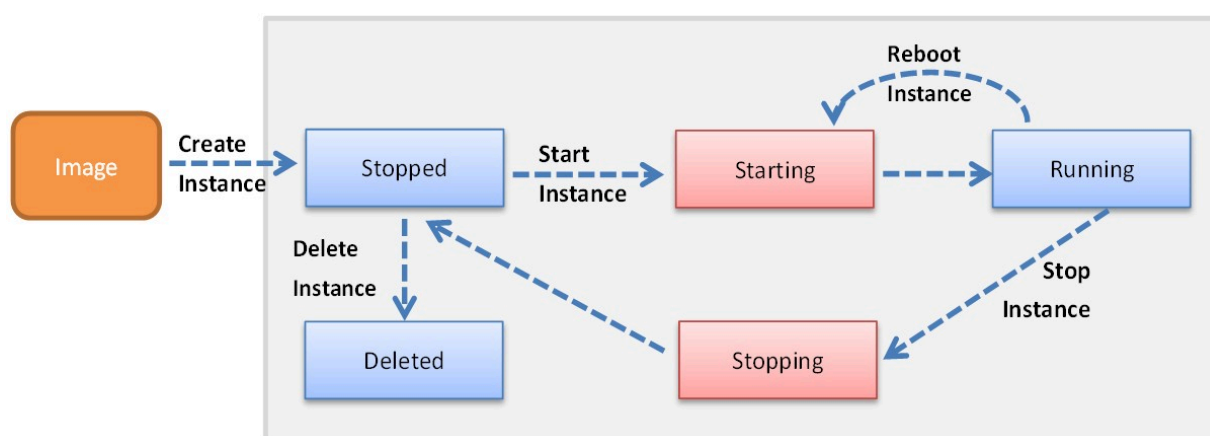
25.2 Instance states

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 through the ECS console or by calling RunInstances. Instances are only in the <code>pending</code> state during the creation process, and this state only lasts for a few seconds.  Note: If the instance is being created by calling #unique_386, you must then call #unique_387 to manually change the instance state from <code>pending</code> to <code>starting</code> . If the instance is being created by calling RunInstances, the instance automatically enters the <code>starting</code> state.
Starting	The transient state when an instance is enabled through the ECS console or by calling StartInstance .

State	Description
Running	The stable state after an instance is enabled through the ECS console or by calling <code>StartInstance</code> . 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 through the ECS console or by calling <code>StopInstance</code> .
Stopped	The stable state after an instance has been stopped.

25.3 Instance status chart

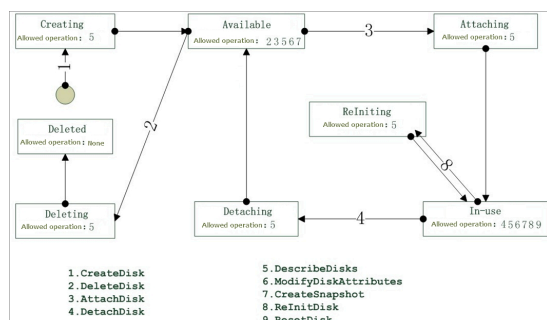


25.4 Basic cloud disk status table

Code	Description
In_use	In use
Available	Available to be attached
Attaching	Attaching
Detaching	Detaching
Creating	Creating
Deleting	Deleting
Deleted	Deleted
ReIniting	Initializing

The disks in `Deleting` or `Deleted` status cannot be queried using `DescribeDisks`. These two statuses are internal statuses.

25.5 Cloud disk status chart



25.6 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](#).

25.7 Disk category

See the following table for the disks provided by ECS.

Name	Code	Maximum capacity per disk (GiB)	Volume limit per instance	Maximum capacity of disks allowed per instance (GiB)
Basic cloud disk	cloud	2000	17	2000 * 17
Ultra cloud disks	cloud_efficiency	32768	17	32768 * 17
SSD cloud disks	cloud_ssd	32768	17	32768 * 17
ESSD*	essd	32768	17	32768 * 17

* Currently, the ESSD disk cannot be managed by calling the Alibaba Cloud ECS API.

For more information, see [Storage parameters and performance test](#).

25.8 API behavior for accounts with overdue payment

When payment is overdue, the `OperationLocks` in the outgoing parameters returned by the `DescribeInstances` or `DescribeDisks` will include `LockReason : financial`.

API request consequence with overdue payment

In the following tables, "Normal Logic" indicates that the interface is executed and result returned based on the normal logic of the interface.

Table 25-1: Instance with overdue payment

Actions	Disk Payment Overdue	Disk Normal
<code>AllocatePublicIpAddress</code>	Error	Error
<code>AttachDisk</code>	Error	Normal logic
<code>AuthorizeSecurityGroup</code>	Normal logic	Normal logic
<code>CreateDisk</code>	Error	Normal logic
<code>CreateImage</code>	Normal logic	Normal logic
<code>CreateInstance</code>	Error	Error
<code>CreateSecurityGroup</code>	Normal logic	Normal logic
<code>CreateSnapshot</code>	Normal logic	Normal logic
<code>DeleteDisk</code>	Normal logic	Normal logic
<code>DeleteImage</code>	Normal logic	Normal logic
<code>DeleteInstance</code>	Normal logic	Normal logic
<code>DeleteSecurityGroup</code>	Normal logic	Normal logic
<code>DeleteSnapshot</code>	Normal logic	Normal logic
<code>DescribeAutoSnapshot Policy</code>	Normal logic	Normal logic
<code>DescribeDisks</code>	Normal logic	Normal logic
<code>DescribeImages</code>	Normal logic	Normal logic
<code>DescribeInstanceStatus</code>	Normal logic	Normal logic
<code>DescribeInstanceTypes</code>	Normal logic	Normal logic
<code>DescribeInstanceMonitorData</code>	Normal logic	Normal logic

Actions	Disk Payment Overdue	Disk Normal
DescribeRegions	Normal logic	Normal logic
DescribeSecurityGroupAttribute	Normal logic	Normal logic
DescribeSecurityGroups	Normal logic	Normal logic
DescribeSnapshotAttribute	Normal logic	Normal logic
DescribeSnapshots	Normal logic	Normal logic
DescribeZones	Normal logic	Normal logic
DetachDisk	Normal logic	Normal logic
JoinSecurityGroup	Normal logic	Normal logic
LeaveSecurityGroup	Normal logic	Normal logic
ModifyAutoSnapshotPolicy	Normal logic	Normal logic
ModifyDiskAttribute	Normal logic	Normal logic
ModifyInstanceAttribute	Normal logic	Normal logic
RebootInstance	-	-
ReInitDisk	Error	Error
ReplaceSystemDisk	Error	Error
ResetDisk	Error	Error
RevokeSecurityGroup	Normal logic	Normal logic
StartInstance	Error	Error
StopInstance	-	-

Table 25-2: Disk with overdue payment

Actions	Instance Payment Overdue	Instance Normal
AllocatePublicIpAddress	Error	Normal logic
AttachDisk	Error	Error
AuthorizeSecurityGroup	Normal logic	Normal logic
CreateDisk	Error	Error
CreateImage	Normal logic	Normal logic
CreateInstance	Error	Normal logic
CreateSecurityGroup	Normal logic	Normal logic

Actions	Instance Payment Overdue	Instance Normal
CreateSnapshot	Normal logic	Normal logic
DeleteDisk	Normal logic	Normal logic
DeleteImage	Normal logic	Normal logic
DeleteInstance	Normal logic	Normal logic
DeleteSecurityGroup	Normal logic	Normal logic
DeleteSnapshot	Normal logic	Normal logic
DescribeAutoSnapshot Policy	Normal logic	Normal logic
DescribeDisks	Normal logic	Normal logic
DescribeImages	Normal logic	Normal logic
DescribeInstanceStatus	Normal logic	Normal logic
DescribeInstanceMonitorData	Normal logic	Normal logic
DescribeRegions	Normal logic	Normal logic
DescribeSecurityGroupAttribute	Normal logic	Normal logic
DescribeSecurityGroups	Normal logic	Normal logic
DescribeSnapshotAttribute	Normal logic	Normal logic
DescribeSnapshots	Normal logic	Normal logic
DescribeZones	Normal logic	Normal logic
DetachDisk	Normal logic	Normal logic
JoinSecurityGroup	Normal logic	Normal logic
LeaveSecurityGroup	Normal logic	Normal logic
ModifyAutoSnapshotPolicy	Normal logic	Normal logic
ModifyDiskAttribute	Normal logic	Normal logic
ModifyInstanceAttribute	Error	Normal logic
ModifyInstanceSpec	Error	Normal logic
RebootInstance	-	-
ReInitDisk	Error	Normal logic
ReplaceSystemDisk	Error	Normal logic
ResetDisk	Error	Error

Actions	Instance Payment Overdue	Instance Normal
RevokeSecurityGroup	Normal logic	Normal logic
StartInstance	Error	Normal logic
StopInstance	-	-

25.9 API behavior when an instance is locked for security reasons

This topic provides the API request consequence when your resource is frozen due to security concerns.

API request consequence

When a security lock is indicated, the `OperationLocks` in the outgoing parameters returned by the `DescribeInstances` will include `LockReason : security`.



Note:

Disk-related activities in the `In_use` status reference the instance `OperationLocks`. Otherwise, the instance `OperationLocks` may be ignored.

In the following table, "Normal Logic" indicates that the interface is executed and result returned based on the normal logic of the interface.

Interface	Behavior
AllocatePublicIpAddress	Error
AttachDisk	Error
AuthorizeSecurityGroup	Normal logic
CreateDisk	Normal logic
CreateImage	Normal logic
CreateInstance	Normal logic
CreateSecurityGroup	Normal logic
CreateSnapshot	Error (Only for disks attached on this instance in the <code>In_use</code> status)
DeleteDisk	Normal logic
DeleteImage	Normal logic

Interface	Behavior
DeleteInstance	Normal logic
DeleteSecurityGroup	Normal logic
DeleteSnapshot	Normal logic
DescribeAutoSnapshotPolicy	Normal logic
DescribeDisks	Normal logic
DescribeImages	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	Error
JoinSecurityGroup	Error
LeaveSecurityGroup	Error
ModifyAutoSnapshotPolicy	Normal logic
ModifyDiskAttribute	Normal logic
ModifyInstanceAttribute	Error
RebootInstance	Error
ReInitDisk	- When the disk is in the <code>In_use</code> : - When the disk is in the other status: Normal Logic
ReplaceSystemDisk	Normal logic
ResetDisk	Error
RevokeSecurityGroup	Normal logic
StartInstance	Error
StopInstance	Error

25.10 How to ensure idempotence

If a request timeout or internal server error is encountered when calling the `CreateInstance` interface to create an ECS in the ECS, the client might try to resend the request. At this time, the client can prevent the server from creating more instances than expected by providing the optional `ClientToken` parameter. Providing the `ClientToken` parameter will also ensure the idempotence of the request.

`ClientToken` is a unique, case sensitive string generated by the client that cannot exceed 64 ASCII characters.

If a user uses the same `ClientToken` value to call the `CreateInstance` interface, the server will return identical request results, including the same `InstanceId`. Therefore, when the user encounters an error and tries again, providing the same `ClientToken` value can ensure that the ECS creates only one instance and obtains this `InstanceId`.

If the user provides a `ClientToken` that has already been used, but with different request parameters, the ECS will return the `IdempotentParameterMismatch` error code. However, you must note that the `SignatureNonce`, `Timestamp`, and `Signature` parameters must be changed when trying to submit the request again. Because the ECS uses `SignatureNonce` to prevent replay attacks and `Timestamp` to mark the time of each request, the duplicate request must provide different `SignatureNonce` and `Timestamp` parameter values. This will also produce a different `Signature` value.

Generally, clients will only need to retry an operation if they encounter a 500 (`InternalServerError`) or (`ServiceUnavailable`) error or cannot receive a response. When 200 is returned, retrying the operation will give you the same results as the last time, but will not have any effect on the server status. When a 4xx error code is returned, unless the message explicitly indicates "try it later", retrying the operation will usually not be successful.

25.11 Call API actions from within an intranet environment

This topic describes how to configure PrivateZone so that you can call API actions for ECS instances in a VPC through the provided domain name system (DNS) service of PrivateZone.

Background information

The endpoints provided by Alibaba Cloud ECS can be used to send API calls over the Internet. However, if your ECS instance is not assigned an Internet bandwidth package or a public IP address, the instance cannot initiate an API action request by using the Alibaba Cloud CLI or corresponding SDK. To ensure that your instance can send API requests from Alibaba Cloud intranet, Alibaba Cloud provides the PrivateZone solution. You can use PrivateZone to associate the VPC with the region to which your ECS instance belongs.

Limits

- You can configure PrivateZone only for the region where your VPC-connected ECS instances are located. You cannot configure PrivateZone across multiple regions.
- We recommend that you create instances by using custom images that have been deployed with Alibaba Cloud CLI or SDK. This allows your ECS instances to load relevant dependencies even when they have no access to the Internet.
- Currently, only the following ECS endpoints support PrivateZone.

Alibaba Cloud region	Region ID	CNAME record value	Internet endpoint
China (Beijing)	cn-beijing	popunify-vpc.cn-beijing.aliyuncs.com	ecs.cn-beijing.aliyuncs.com
China (Hangzhou)	cn-hangzhou	popunify-vpc.cn-hangzhou.aliyuncs.com	ecs.cn-hangzhou.aliyuncs.com
China (Shanghai)	cn-shanghai	popunify-vpc.cn-shanghai.aliyuncs.com	ecs.cn-shanghai.aliyuncs.com
China (Shenzhen)	cn-shenzhen	popunify-vpc.cn-shenzhen.aliyuncs.com	ecs.cn-shenzhen.aliyuncs.com
China (Hohhot)	cn-huhehaote	popunify-vpc.cn-huhehaote.aliyuncs.com	ecs.cn-huhehaote.aliyuncs.com

Alibaba Cloud region	Region ID	CNAME record value	Internet endpoint
China (Zhangjiakou-Beijing Winter Olympics)	cn-zhangjiakou	popunify-vpc.cn-zhangjiakou.aliyuncs.com	ecs.cn-zhangjiakou.aliyuncs.com
China (Hong Kong)	cn-hongkong	popunify-vpc.cn-hongkong.aliyuncs.com	ecs.cn-hongkong.aliyuncs.com
Singapore	ap-southeast-1	popunify-vpc.ap-southeast-1.aliyuncs.com	ecs.ap-southeast-1.aliyuncs.com
Germany (Frankfurt)	eu-central-1	popunify-vpc.eu-central-1.aliyuncs.com	ecs.eu-central-1.aliyuncs.com

Procedure

1. Log on to the [Alibaba Cloud DNS console](#).
2. In the left-side navigation pane, click PrivateZone.
3. Click Add Zone.
4. In the displayed dialog box, set the parameters as needed, and then click OK.
 - Zone Name: Set an ECS endpoint that supports PrivateZone. In this example, set the zone name to `ecs.cn-hangzhou.aliyuncs.com`.
 - Subdomain recursive resolution proxy: If you select this option, the name resolved on the Internet is used when DNS detects a domain name with the suffix `Zone` that is not included in the `Zone` file.

Add PrivateZone

×

* Zone Name:

ecs.cn-hangzhou.aliyuncs.com

☒ Subdomain recursive resolution proxy

?

Cancel

OK

5. Locate the created PrivateZone, and then click Configure in the Actions column.
6. On the displayed Resolution Settings page, click Add Record.
7. In the displayed dialog box, set the parameters as needed, and then click OK.
 - Record Type: Select CNAME.
 - Resource Records: Enter @ to resolve the @. *example* . *com* domain name.
 - Record Value: Set it to the CNAME record value of the corresponding region. For more information, see [Limits](#).
 - TTL Value: The time to live value. In this example, select 1 minute(s).

Add Record [X]

Record Type: CNAME Canonical name [v]

Resource Records: @ .ecs.cn-hangzhou.aliyuncs.com

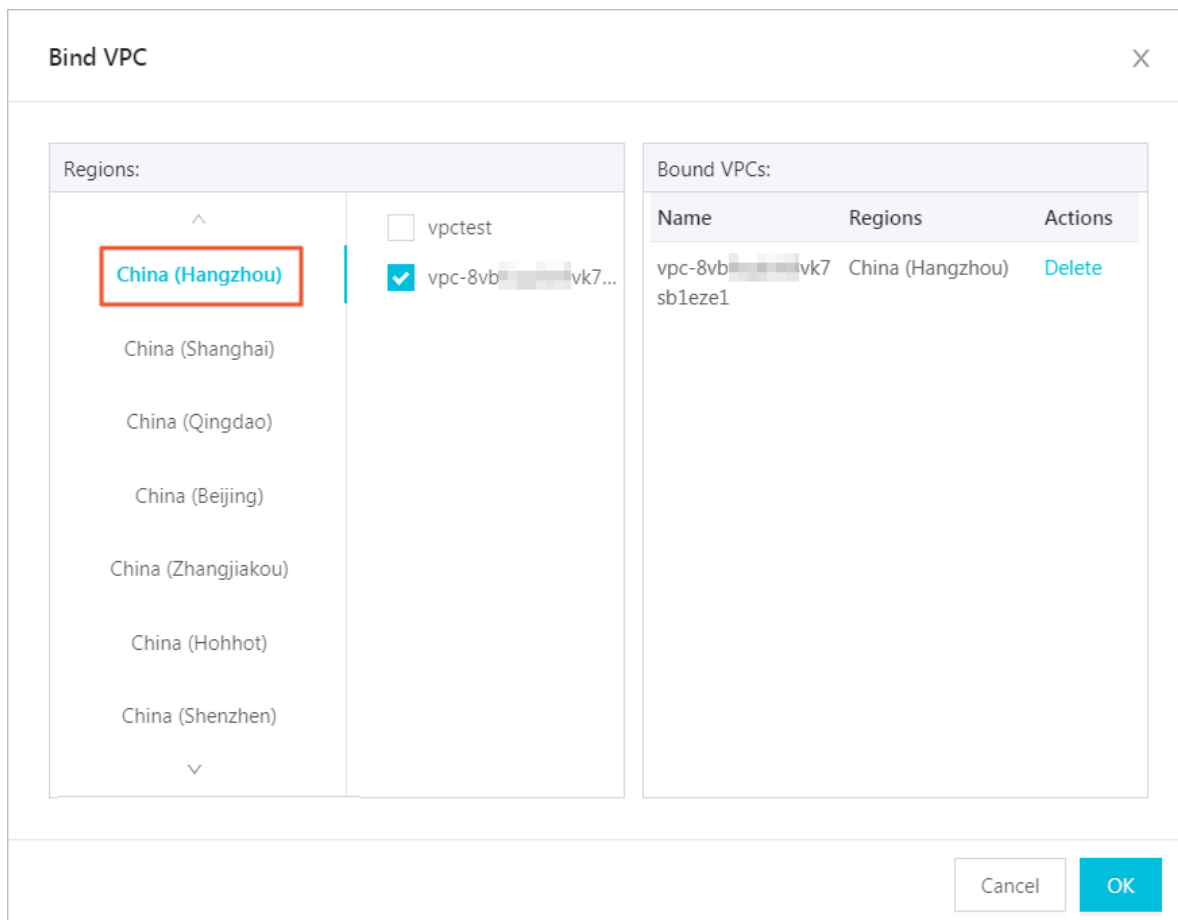
* Record Value: popunity-vpc.cn-hangzhou.aliyuncs.com

TTL Value: 1 minute(s) [v]

[Cancel] [OK]

8. Go back to the PrivateZone page, locate the created PrivateZone, and then click Bind VPC in the Actions column.

9. In the displayed dialog box, select the region where the PrivateZone is located, select one or more VPCs to which your ECS instance belongs, and then click OK.



What to do next

After you associate a VPC with your PrivateZone, you can log on to your ECS instance to check whether the instance can access the endpoint of the corresponding region. For more information, see [#unique_400](#). For example, if the zone name is `ecs.cn-hangzhou.aliyuncs.com`, you can:

- Conduct a `ping` test to check whether data packets can be properly transmitted and received.

```
ping ecs . cn - hangzhou . aliyuncs . com
```

```
[root@localhost ~]# ping ecs.cn-hangzhou.aliyuncs.com
PING popunify-vpc.cn-hangzhou.aliyuncs.com (100.100.100.28) 56(84) bytes of data:
64 bytes from 100.100.100.28 (100.100.100.28): icmp_seq=1 ttl=64 time=1.51 ms
64 bytes from 100.100.100.28 (100.100.100.28): icmp_seq=2 ttl=64 time=1.55 ms
64 bytes from 100.100.100.28 (100.100.100.28): icmp_seq=3 ttl=64 time=1.53 ms
64 bytes from 100.100.100.28 (100.100.100.28): icmp_seq=4 ttl=64 time=1.50 ms
64 bytes from 100.100.100.28 (100.100.100.28): icmp_seq=5 ttl=64 time=1.48 ms
^C
--- popunify-vpc.cn-hangzhou.aliyuncs.com ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4005ms
rtt min/avg/max/mdev = 1.480/1.517/1.550/0.049 ms
[root@localhost ~]#
```

- Use Alibaba Cloud CLI to call [#unique_401](#), and change the endpoint in the `--endpoint` field.

```
aliyun ecs DescribeRegions --endpoint ecs . cn - hangzhou . aliyuncs . com
```

```
[root@localhost ~]# aliyun ecs DescribeRegions --endpoint ecs.cn-hangzhou.aliyuncs.com
{"RequestId": "11AFA006-30E4-49F2-94A1-520209680280", "Regions": [{"Region": {"RegionId": "cn-hangzhou", "LocalName": "杭州"}, {"RegionId": "cn-hangzhou-test-307", "RegionEndpoint": "ecs.aliyuncs.com", "LocalName": "杭州"}, {"RegionId": "cn-hangzhou-test-308", "RegionEndpoint": "ecs.aliyuncs.com", "LocalName": "杭州"}, {"RegionId": "cn-beijing", "RegionEndpoint": "ecs.aliyuncs.com", "LocalName": "北京"}, {"RegionId": "cn-zhangjiakou", "RegionEndpoint": "ecs.cn-zhangjiakou.aliyuncs.com", "LocalName": "张家口"}, {"RegionId": "cn-huhehaote", "RegionEndpoint": "ecs.cn-huhehaote.aliyuncs.com", "LocalName": "呼和浩特"}, {"RegionId": "cn-shanghai", "RegionEndpoint": "ecs.aliyuncs.com", "LocalName": "上海"}, {"RegionId": "cn-shenzhen", "RegionEndpoint": "ecs.aliyuncs.com", "LocalName": "深圳"}]}
```

25.12 Why only ten entries are returned for query request by using APIs or SDK

For some APIs query request, where returns a large amount of information, the returned data is usually displayed in pages for readability. Take the `DescribeImages` as an example, if 39 entries are returned, the result is displayed on four pages by default, with 10 entries on each page. Thus, the returned data looks incomplete.

Cause analysis

For example, when you query the available official public images in the region of Asia Pacific SE 1 (Singapore) by `DescribeImages`, if 39 entries of data is returned, the result in `TotalCount` is split into four pages by default. You can add the parameter `PageSize` in your request, and set it to a value greater than 39. If Java SDK is used, `PageSize` can be set to a value greater than 39 by the `setPageSize` method in the `Request` object. Then the data about 39 images is returned once.

To display more data, you can add the `PageSize` and `PageNumber` parameters in your query request according to the following table.

Parameter	Type	Required	Description
PageNumber	Integer	No	Page number of the resource status list. Initial value: 1. Default value: 1.
PageSize	Integer	No	Number of query entries on each page, configured during pagination query. Maximum value: 100. Default value: 10.

Default display setting sample in Java SDK

By default, the value of `PageSize` is 10 . If the value of `PageSize` is not added in a request, null is returned by `getPageSize` . The API server sets `PageSize` to 10 by default.

See the following Java SDK snippet for example:

```
DescribeImagesRequest describe = new DescribeImagesRequest();
// describe.setPageSize(); // By default value of
// PageSize is 10.
describe.setRegionId("cn-hangzhou");
describe.setImageOwnerAlias("system");
System.out.println("PageSize of the current
request:" + describe.getPageSize());
DescribeImagesResponse response
    = client.getAcsResponse(describe);

System.out.println("Total number of images:" +
response.getTotalCount());
System.out.println("Number of images in the
returned response =" + response.getImages().size());
```

Customize the display setting in Java SDK

In this sample, we use the `setPageSize()` method in Java SDK to `PageSize` to 50. Then, all images are returned at a time.

See the following Java SDK snippet for example:

```
DescribeImagesRequest describe = new DescribeImagesRequest();
describe.setPageSize(50); // Here in the Request
// , the value of PageSize is set to 50 by the
// setPageSize() method.
```



```
describe . setRegionId (" cn - hangzhou ");
describe . setImageOwnerAlias (" system ");
System . out . println (" PageSize of the current
request :"+ describe . getPageSize ());
try {
    DescribeImagesResponse response
        = client . getAcsResponse ( describe );

    System . out . println (" Total number of images
:"+ response . getTotalCount ());
    System . out . println (" Number of images in the
returned response =" + response . getImages (). size ());
}
```

**Note:**

The maximum value of `PageSize` is 100 . If the query result includes more than 100 entries of data, the data on the last few pages must be obtained by `PageNumber` , namely, multiple requests are submitted to obtain all the returned data, with `PageNumber` setting to 1, 2, 3...respectively. You can also specify the value of `PageNumber` in your request by `setPageNumber ()`.

25.13 API usage Specification

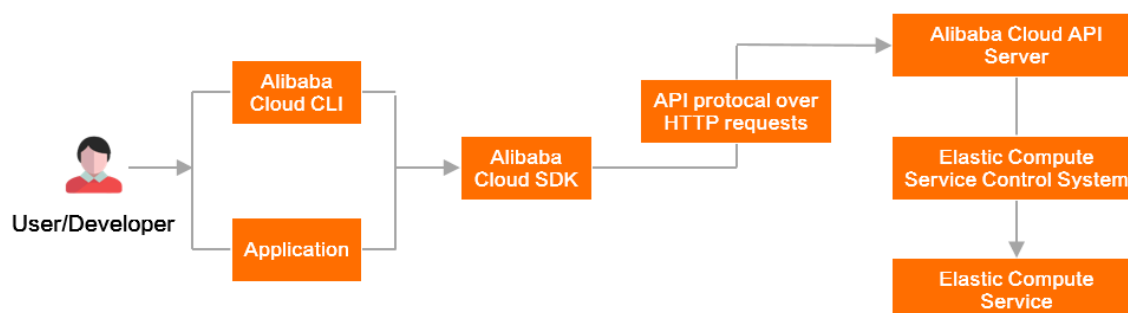
Please check the latest API Terms of Use [here](#).

26 API FAQ

- [What is ECS API?](#)
- [Error code InvalidDataDiskCategory.NotSupported is returned when I try to create an ECS instance. What can I do?](#)
- [How can I create an ECS instance that is assigned a public IP address?](#)
- [I have created an ECS instance by using an ECS API operation. Why can't the public IP address of the instance be pinged?](#)
- [The error message "The specified IP is already in use." is returned when I use an ECS API operation to bind a public IP address to my instance. What can I do?](#)
- [When I modify the public bandwidth configurations of my instance by using an ECS API operation, can I specify an effective period of time for the new bandwidth configurations?](#)
- [Why can't all the security group rules in a security group be displayed when I use an ECS API operation or ECS SDK to query the details of the security group?](#)
- [Why does a query made by using the ECS API, ECS SDK, or Alibaba Cloud CLI return only ten entries?](#)

What is ECS API?

ECS API is an open-source remote procedure call (RPC) API that provides API services to Alibaba Cloud users. You can use this API to manage and use ECS instances. The following figure shows the path along which a request is forwarded to call an API. For more information about how to use the ECS API, see [#unique_406](#).



Error code `InvalidDataDiskCategory.NotSupported` is returned when I try to create an ECS instance. What can I do?

- **Problem description:** After you call the [#unique_407](#) operation to create an ECS instance, the following error information 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 [#unique_408](#) operation to view the resources available in the zone where you want to create the ECS instance and ensure that there are sufficient resources in that zone. 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 <TheSecurityGroupId> -- SystemDiskCategory cloud_efficiency -- ZoneId cn-hangzhou-c
```

How can I create an ECS instance that is assigned a public IP address?

- **Method 1:** Call the [#unique_407](#) operation with `InternetMaxBandwidthOut` set to a value greater than 0 to create an ECS instance. The new ECS instance is automatically assigned a public IP address.
- **Method 2:** Call the [#unique_386](#) operation to create an ECS instance. Then call the [#unique_409](#) operation to assign a public IP address to the instance.

I have created an ECS instance by using an ECS API operation. Why can't the public IP address of the instance be pinged?

- **Problem description:** The new ECS instance that you created by using an ECS API operation cannot connect to the public network, and the public IP address of the instance cannot be pinged.
- **Cause:** You have not added a security group rule to allow the public network to access the instance.
- **Solution:** Call the [#unique_410](#) operation to add an inbound rule to the security group to which the instance belongs to allow the public network to access the instance. 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 any other 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>
```

The error message "The specified IP is already in use." is returned when I use an ECS API operation to bind a public IP address to my instance. What can I do?

- **Problem description:** When you call the [#unique_409](#) operation to assign the public IP address specified by `IpAddress` to your ECS instance, the following error information 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 my instance by using an ECS API operation, can I specify an effective period of time for the new bandwidth configurations?

You can call the [#unique_411](#) operation to modify the public bandwidth configurations of your ECS instance. The new bandwidth configurations take effect on the instance immediately after the modification is completed. If you only want to temporarily modify the bandwidth configurations of your instance, set `StartTime` and `EndTime` to define an effective period of time.

If you are using an Elastic IP Address, you can call the [#unique_412](#) operation to make the modification but you cannot specify an effective period of time.

Why can't all the security group rules in a security group be displayed when I use an ECS API operation or ECS SDK to query the details of the security group?

Security group rules can be distinguished by their NIC types, public NIC (`internet`) and internal NIC (`intranet`). When you call the [DescribeSecurityGroupAttribute](#) operation to query the details of a security group, the `NIC` parameter is not

required. However, if this parameter is not specified, the default value `internet` is used. Therefore, when you run the following CLI command to call the `DescribeSecurityGroupAttribute` operation, only the public security group rules, not all security group rules, in the queried security group are displayed:

```
aliyun ecs DescribeSecurityGroupAttribute -- SecurityGroupID < TheSecurityGroupId > -- RegionId < TheRegionId >
```

If you want to view the internal security group rules in a security group (such as internal security group rules that allow access across internal networks or that are configured for the VPN firewall of Finance Cloud), run the following command with

`NicType` set to `intranet` :

```
aliyun ecs DescribeSecurityGroupAttribute -- SecurityGroupID < TheSecurityGroupId > -- RegionId < TheRegionId > -- NicType intranet
```

Why does a query made by using the ECS API, ECS SDK, or Alibaba Cloud CLI return only ten entries?

For details, see [#unique_414](#).