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Virtual Private Cloud

API reference

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Document conventions

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

Table of Contents

1.Overview 14
2.HTTP Requests 21
2.1. Overview 21
2.2. Request syntax 21
2.3. Common parameters 22
2.4. Signature 23
2.5. Response 26
3.RAM user authorization 27
4.Call API operations over a VPC 33
5.Ensure idempotence 35
6.Use RAM roles to manage VPC permissions 36
7.Virtual Private Cloud (VPC) 40
7.1. CreateVpc 40
7.2. DeleteVpc 43
7.3. DescribeVpcs 45
7.4. ModifyVpcAttribute 51
7.5. DescribeVpcAttribute 53
7.6. DisableVpcClassicLink 57
7.7. EnableVpcClassicLink 59
7.8. GrantInstanceToCen 60
7.9. DeletionProtection 61
7.10. AssociateVpcCidrBlock 63
7.11. UnassociateVpcCidrBlock 65
7.12. DescribeGrantRulesToCen 66
7.13. RevokeInstanceFromCen 68
7.14. MoveResourceGroup 69

8.VSwitch 71
8.1. DescribeVSwitches 71
8.2. ModifyVSwitchAttribute 74
8.3. DescribeVSwitchAttributes 76
8.4. CreateVSwitch 78
8.5. DeleteVSwitch 82
9.VRouter 84
9.1. ModifyVRouterAttribute 84
9.2. DescribeVRouters 85
10.Route table 88
10.1. ModifyRouteTableAttributes 88
10.2. DescribeRouteTableList 89
10.3. CreateRouteTable 92
10.4. AssociateRouteTable 94
10.5. UnassociateRouteTable 95
10.6. DeleteRouteTable 96
10.7. CreateRouteEntry 97
10.8. DeleteRouteEntry 103
10.9. ModifyRouteEntry 105
10.10. DescribeRouteEntryList 107
11.DHCP options sets 111
11.1. CreateDhcpOptionsSet 111
11.2. AttachDhcpOptionsSetToVpc 112
11.3. DetachDhcpOptionsSetFromVpc 114
11.4. ReplaceVpcDhcpOptionsSet 116
11.5. GetDhcpOptionsSet 118
11.6. ListDhcpOptionsSets 120
11.7. UpdateDhcpOptionsSetAttribute 123

11.8. DeleteDhcpOptionsSet 125
12.Regions 127
12.1. DescribeZones 127
12.2. DescribeRegions 128
13.Tags 130
13.1. TagResources 130
13.2. ListTagResources 132
13.3. UnTagResources 134
14.Border Gateway Protocol (BGP) 137
14.1. DescribeBgpNetworks 137
14.2. CreateBgpGroup 138
14.3. DescribeBgpGroups 141
14.4. ModifyBgpGroupAttribute 143
14.5. DeleteBgpGroup 146
14.6. CreateBgpPeer 148
14.7. DescribeBgpPeers 150
14.8. DeleteBgpPeer 154
14.9. AddBgpNetwork 156
14.10. DeleteBgpNetwork 158
14.11. ModifyBgpPeerAttribute 160
15.Virtual Border Router 163
15.1. CreateVbrHa 163
15.2. DescribeVbrHa 165
15.3. DeleteVbrHa 167
15.4. UpdateVirtualBorderBandwidth 168
15.5. CreateVirtualBorderRouter 169
15.6. DeleteVirtualBorderRouter 173
15.7. DescribeVirtualBorderRouters 175

15.8. DescribeVirtualBorderRoutersForPhysicalConnection 183
15.9. ModifyVirtualBorderRouterAttribute 187
15.10. TerminateVirtualBorderRouter 191
15.11. RecoverVirtualBorderRouter 192
15.12. AssociatePhysicalConnectionToVirtualBorderRouter 194
15.13. UnassociatePhysicalConnectionFromVirtualBorderRouter 198
16.Physical connection 200
16.1. OpenPhysicalConnectionService 200
16.2. DescribeAccessPoints 200
16.3. CreatePhysicalConnection 203
16.4. CancelPhysicalConnection 206
16.5. DescribePhysicalConnections 207
16.6. ModifyPhysicalConnectionAttribute 212
16.7. TerminatePhysicalConnection 215
16.8. EnablePhysicalConnection 216
16.9. ConfirmPhysicalConnection 218
16.10. DeletePhysicalConnection 219
16.11. ApplyPhysicalConnectionLOA 220
16.12. CompletePhysicalConnectionLOA 222
16.13. CreatePhysicalConnectionOccupancyOrder 223
16.14. CreatePhysicalConnectionSetupOrder 225
16.15. DescribePhysicalConnectionLOA 227
16.16. CreateVirtualPhysicalConnection 230
16.17. GetPhysicalConnectionServiceStatus 233
16.18. RecoverPhysicalConnection 234
16.19. UpdateVirtualPhysicalConnection 236
16.20. ListVirtualPhysicalConnections 237
16.21. CreateVpconnFromVbr 243

16.22. AttachVbrToVpconn 245
17.VPN Gateway 248
17.1. CreateVpnGateway 248
17.2. DescribeVpnGateways 250
17.3. DescribeVpnGateway 255
17.4. DeleteVpnGateway 259
17.5. CreateCustomerGateway 260
17.6. DescribeCustomerGateways 263
17.7. DescribeCustomerGateway 265
17.8. DeleteCustomerGateway 266
17.9. ModifyCustomerGatewayAttribute 268
17.10. DescribeVpnConnection 270
17.11. DeleteVpnConnection 274
17.12. DownloadVpnConnectionConfig 276
17.13. CreateSslVpnServer 279
17.14. DescribeSslVpnServers 282
17.15. DeleteSslVpnServer 285
17.16. ModifySslVpnServer 286
17.17. DeleteSslVpnClientCert 289
17.18. ModifySslVpnClientCert 291
17.19. ModifyVpnGatewayAttribute 292
17.20. CreateVpnConnection 295
17.21. DescribeVpnConnections 299
17.22. ModifyVpnConnectionAttribute 306
17.23. CreateSslVpnClientCert 313
17.24. DescribeSslVpnClientCerts 315
17.25. DeleteVpnPbrRouteEntry 318
17.26. DeleteVpnRouteEntry 319

17.27. CreateVpnPbrRouteEntry 321
17.28. DescribeVpnRouteEntries 324
17.29. ModifyVpnRouteEntryWeight 325
17.30. PublishVpnRouteEntry 327
17.31. DescribeVpnPbrRouteEntries 329
17.32. ModifyVpnPbrRouteEntryWeight 331
17.33. CreateVpnRouteEntry 333
17.34. DescribeVpnSslServerLogs 335
17.35. DescribeSslVpnClientCert 337
18.NAT Gateway 340
18.1. CreateNatGateway 340
18.2. ListEnhanhcedNatGatewayAvailableZones 344
18.3. UpdateNatGatewayNatType 346
18.4. GetNatGatewayConvertStatus 349
18.5. ModifyNatGatewayAttribute 352
18.6. ModifyNatGatewaySpec 354
18.7. DescribeNatGateways 356
18.8. GetNatGatewayAttribute 363
18.9. DeleteNatGateway 369
18.10. CreateForwardEntry 371
18.11. DescribeForwardTableEntries 375
18.12. ModifyForwardEntry 378
18.13. DeleteForwardEntry 381
18.14. CreateSnatEntry 383
18.15. DescribeSnatTableEntries 387
18.16. ModifySnatEntry 389
18.17. DeleteSnatEntry 392
18.18. ConvertBandwidthPackage 393

18.19. EnableNatGatewayEcsMetric 395
18.20. ListNatGatewayEcsMetric 396
18.21. DisableNatGatewayEcsMetric 399
18.22. CreateNatIpCidr 400
18.23. DeleteNatIpCidr 402
18.24. ModifyNatIpCidrAttribute 404
18.25. ListNatIpCidrs 405
18.26. CreateNatIp 408
18.27. ModifyNatIpAttribute 410
18.28. DeleteNatIp 412
18.29. ListNatIps 414
19.EIP bandwidth plan 418
19.1. CreateCommonBandwidthPackage 418
19.2. DescribeCommonBandwidthPackages 420
19.3. ModifyCommonBandwidthPackageAttribute 424
19.4. AddCommonBandwidthPackageIp 425
19.5. DeleteCommonBandwidthPackage 426
19.6. ModifyCommonBandwidthPackageSpec 427
19.7. RemoveCommonBandwidthPackageIp 429
19.8. CancelCommonBandwidthPackageIpBandwidth 430
19.9. ModifyCommonBandwidthPackageIpBandwidth 431
20.Elastic IP Address (EIP) 433
20.1. AllocateEipAddress 433
20.2. AllocateEipAddressPro 437
20.3. AssociateEipAddress 441
20.4. AllocateEipSegmentAddress 444
20.5. DescribeEipSegment 447
20.6. ReleaseEipSegmentAddress 449

20.7. ModifyEipAddressAttribute 451
20.8. DescribeEipAddresses 452
20.9. UnassociateEipAddress 461
20.10. ReleaseEipAddress 463
20.11. DescribeEipMonitorData 465
20.12. DescribeEipGatewayInfo 467
20.13. DescribePublicIpAddress 469
20.14. DescribeHighDefinitionMonitorLogAttribute 471
21.Flow log API 473
21.1. CreateFlowLog 473
21.2. ModifyFlowLogAttribute 475
21.3. DescribeFlowLogs 476
21.4. ActiveFlowLog 479
21.5. DeactiveFlowLog 480
21.6. DeleteFlowLog 481
22.Monitoring 483
23.High-availability virtual IP addresses 484
23.1. CreateHaVip 484
23.2. DescribeHaVips 486
23.3. AssociateHaVip 489
23.4. UnassociateHaVip 491
23.5. ModifyHaVipAttribute 493
23.6. DeleteHaVip 494
24.Network ACL 496
24.1. CreateNetworkAcl 496
24.2. AssociateNetworkAcl 500
24.3. ModifyNetworkAclAttributes 501
24.4. DescribeNetworkAcls 502

24.5. UpdateNetworkAclEntries 507
24.6. DescribeNetworkAclAttributes 509
24.7. UnassociateNetworkAcl 513
24.8. CopyNetworkAclEntries 514
24.9. DeleteNetworkAcl 515
25.IPv6 gateways 517
25.1. CreateIpv6Gateway 517
25.2. DeleteIpv6Gateway 518
25.3. ModifyIpv6GatewaySpec 519
25.4. DescribeIpv6EgressOnlyRules 521
25.5. CreateIpv6EgressOnlyRule 523
25.6. DeleteIpv6EgressOnlyRule 524
25.7. DeleteIpv6InternetBandwidth 525
25.8. DescribeIpv6GatewayAttribute 526
25.9. DescribeIpv6Addresses 528
25.10. AllocateIpv6InternetBandwidth 533
25.11. ModifyIpv6InternetBandwidth 534
25.12. ModifyIpv6GatewayAttribute 536
25.13. ModifyIpv6AddressAttribute 537
25.14. DescribeIpv6Gateways 538
26.Traffic mirroring 542
26.1. OpenTrafficMirrorService 542
26.2. GetTrafficMirrorServiceStatus 543
26.3. CreateTrafficMirrorFilter 543
26.4. DeleteTrafficMirrorFilter 547
26.5. UpdateTrafficMirrorFilterAttribute 548
26.6. ListTrafficMirrorFilters 550
26.7. CreateTrafficMirrorFilterRules 554

26.8. DeleteTrafficMirrorFilterRules 558
26.9. UpdateTrafficMirrorFilterRuleAttribute 559
26.10. CreateTrafficMirrorSession 561
26.11. DeleteTrafficMirrorSession 565
26.12. UpdateTrafficMirrorSessionAttribute 566
26.13. ListTrafficMirrorSessions 569
26.14. RemoveSourcesFromTrafficMirrorSession 572
26.15. AddSourcesToTrafficMirrorSession 574

1.Overview

The following tables list API operations available for use in Virtual Private Cloud (VPC).

VPC management

API	Description
CreateVpc	Creates a VPC.
DeleteVpc	Deletes a VPC.
DescribeVpcs	Queries VPCs in a region.
ModifyVpcAttribute	Modifies the name and description of a VPC.
DescribeVpcAttribute	Queries detailed information about a VPC.
GrantInstanceToCen	Grants permissions to a Cloud Enterprise Network (CEN) instance.
RevokeInstanceFromCen	Revokes the permissions from a network instance that is attached to a CEN instance.
DisableVpcClassicLink	Disables ClassicLink for a VPC.
EnableVpcClassicLink	Enables ClassicLink for a VPC.
DeletionProtection	Enables deletion protection for an instance.
AssociateVpcCidrBlock	Adds a secondary IPv4 CIDR block to a VPC.
UnassociateVpcCidrBlock	Deletes a secondary IPv4 CIDR block from a VPC.
DescribeGrantRulesToCen	Queries the permissions that allow you to attach a network instance to a CEN instance that belongs to another Alibaba Cloud account. The network instance can be a VPC, a virtual border router (VBR), or a Cloud Connect Network (CCN) instance.
MoveResourceGroup	Modifies the resource group to which a cloud resource belongs.

vRouter management

API	Description
DescribeVRouters	Queries vRouters in a region.
ModifyVRouterAttribute	Modifies the name and description of a vRouter.

vSwitch management

API	Description
CreateVSwitch	Creates a vSwitch.
DeleteVSwitch	Deletes a vSwitch.
DescribeVSwitches	Queries vSwitches in a VPC.
ModifyVSwitchAttribute	Modifies the name and description of a vSwitch.
DescribeVSwitchAttributes	Queries detailed information about a vSwitch.

Route table management

API	Description
CreateRouteEntry	Creates a custom route entry in the route table of a vRouter or a VBR.
DeleteRouteEntry	Deletes a custom route entry from a route table.

API	Description
CreateRouteTable	Creates a custom route table.
AssociateRouteTable	Associates a custom route table with a vSwitch in the same VPC.
DeleteRouteTable	Deletes a custom route table.
DescribeRouteTableList	Queries the list of route tables.
ModifyRouteTableAttributes	Modifies the name and description of a route table.
UnassociateRouteTable	Disassociates a route table from a vSwitch.
ModifyRouteEntry	Modifies the name of a custom route entry.
DescribeRouteEntryList	Queries information about route entries in a route table.

DHCP options set management

API	Description
CreateDhcpOptionsSet	Creates a DHCP options set.
AttachDhcpOptionsSetToVpc	Associates a DHCP options set with a VPC.
DetachDhcpOptionsSetFromVpc	Disassociates a DHCP options set from a VPC.
ReplaceVpcDhcpOptionsSet	Modifies the association of a DHCP options set with a VPC.
GetDhcpOptionsSet	Queries a DHCP options set.
ListDhcpOptionsSets	Queries DHCP options sets.
UpdateDhcpOptionsSetAttribute	Modifies the configuration information about a DHCP options set.
DeleteDhcpOptionsSet	Deletes a DHCP options set.

Flow log management

API	Description
CreateFlowLog	Creates a flow log.
ModifyFlowLogAttribute	Modifies the name and description of a flow log.
DescribeFlowLogs	Queries flow logs.
ActiveFlowLog	Enables flow logs. After flow logs are enabled, traffic information about a resource is captured.
DeactiveFlowLog	Disables flow logs. After flow logs are disabled, traffic information about a resource is no longer captured.
DeleteFlowLog	Deletes a flow log.

Network ACL management

API	Description
CreateNetworkAcl	Creates a network access control list (ACL).
AssociateNetworkAcl	Associates a network ACL with a vSwitch.
ModifyNetworkAclAttributes	Modifies the attributes of a network ACL.
DescribeNetworkAcls	Queries network ACLs.

API	Description
UpdateNetworkAclEntries	Updates the rules of a network ACL.
DescribeNetworkAclAttributes	Queries details about a network ACL.
UnassociateNetworkAcl	Disassociates a network ACL from a vSwitch.
CopyNetworkAclEntries	Copies rules of a network ACL.
DeleteNetworkAcl	Deletes a network ACL.

HAVIP management

API	Description
CreateHaVip	Creates a high-availability virtual IP address (HAVIP).
DescribeHaVips	Queries HAVIPs in a region.
AssociateHaVip	Associates an HAVIP with an Elastic Compute Service (ECS) instance in a VPC.
UnassociateHaVip	Disassociates an HAVIP from an ECS instance in a VPC.
ModifyHaVipAttribute	Modifies the name and description of an HAVIP.
DeleteHaVip	Deletes an HAVIP.

Tag management

API	Description
TagResources	Creates tags and adds them to a resource.
ListTagResources	Queries tags that are added to one or more instances.
UnTagResources	Removes tags from resources.

EIP management

API	Description
AllocateEipAddress	Applies for an elastic IP address (EIP).
AllocateEipAddressPro	Applies for a specific EIP.
AllocateEipSegmentAddress	Applies for contiguous EIPs.
AssociateEipAddress	Associates an EIP with a cloud resource that is deployed in the same region.
UnassociateEipAddress	Disassociates an EIP from a cloud resource.
DescribeEipAddresses	Queries EIPs in a region.
DescribeEipSegment	Queries contiguous EIP groups.
ModifyEipAddressAttribute	Modifies the name, description, and maximum bandwidth value of an EIP.
ReleaseEipAddress	Releases an EIP.
ReleaseEipSegmentAddress	Releases contiguous EIPs.
DescribeEipMonitorData	Queries monitoring information about an EIP.
DescribeEipGatewayInfo	Queries information about the gateway and subnet mask of an EIP.

Express Connect circuit management

API	Description
CancelPhysicalConnection	Cancels an Express Connect circuit.
DescribePhysicalConnections	Queries Express Connect circuits in a region.
ModifyPhysicalConnectionAttribute	Modifies the configuration of an Express Connect circuit.
TerminatePhysicalConnection	Disables an Express Connect circuit after it is enabled.
EnablePhysicalConnection	Enables an Express Connect circuit that is in the Confirmed state.
DeletePhysicalConnection	Deletes a connection over an Express Connect circuit.
DescribeAccessPoints	Queries the access points of an Express Connect circuit in a specific region.
ApplyPhysicalConnectionLOA	Applies for letter of authorization (LOA) for an Express Connect circuit.
CompletePhysicalConnectionLOA	Generates a report for an installed Express Connect circuit.
CreatePhysicalConnectionOccupancyOrder	Creates an order for resource occupation of one or more Express Connect circuits.
CreatePhysicalConnectionSetupOrder	Creates an order for initial installation of an Express Connect circuit.
DescribePhysicalConnectionLOA	Queries LOA information about an Express Connect circuit.

VBR management

API	Description
CreateVirtualBorderRouter	Creates a virtual border router (VBR).
DeleteVirtualBorderRouter	Deletes a VBR.
DescribeVirtualBorderRouters	Queries VBRs.
DescribeVirtualBorderRoutersForPhysicalConnection	Queries VBRs that are associated with an Express Connect circuit. The VBRs can be created by the owner of the Express Connect circuit and by other Alibaba Cloud accounts.
ModifyVirtualBorderRouterAttribute	Modifies the configuration of a VBR.
TerminateVirtualBorderRouter	Disables a VBR.
RecoverVirtualBorderRouter	Enables a disabled VBR.
AssociatePhysicalConnectionToVirtualBorderRouter	Associates a VBR with an Express Connect circuit.
UnassociatePhysicalConnectionFromVirtualBorderRouter	Disassociates a VBR from an Express Connect circuit.

BGP

API	Description
CreateBgpGroup	Creates a Border Gateway Protocol (BGP) group for a VBR.
DescribeBgpGroups	Queries BGP groups in a region.
ModifyBgpGroupAttribute	Modifies the configuration of a BGP group.
DeleteBgpGroup	Deletes a BGP group.
CreateBgpPeer	Adds a BGP peer to a BGP group.
DescribeBgpPeers	Queries BGP peers in a region.
DeleteBgpPeer	Deletes a BGP peer.

API	Description
AddBgpNetwork	Advertises a BGP network.
DeleteBgpNetwork	Deletes an advertised BGP network.
DescribeBgpNetworks	Queries advertised BGP networks.
ModifyBgpPeerAttribute	Modifies the configuration of a BGP peer.

NAT gateway management

API	Description
CreateNatGateway	Creates a NAT gateway.
DescribeNatGateways	Queries NAT gateways in a region.
ListEnhanhcedNatGatewayAvailableZones	Queries the zones that support enhanced NAT gateways.
UpdateNatGatewayNatType	Upgrades a standard NAT gateway to an enhanced NAT gateway.
GetNatGatewayConvertStatus	Queries the upgrade state of a NAT gateway.
ModifyNatGatewaySpec	Modifies the specification of a NAT gateway.
ModifyNatGatewayAttribute	Modifies the configuration of a NAT gateway.
DeleteNatGateway	Deletes a NAT gateway.
CreateForwardEntry	Adds a DNAT entry to a DNAT table.
DescribeForwardTableEntries	Queries DNAT entries.
ModifyForwardEntry	Modifies a DNAT entry.
DeleteForwardEntry	Deletes a DNAT entry.
CreateSnatEntry	Adds an SNAT entry to an SNAT table.
DescribeSnatTableEntries	Queries SNAT entries.
ModifySnatEntry	Modifies an SNAT entry.
DeleteSnatEntry	Deletes an SNAT entry.
ConvertBandwidthPackage	Converts a NAT bandwidth plan to an EIP bandwidth plan.
EnableNatGatewayEcsMetric	Enables ECS traffic monitoring.
ListNatGatewayEcsMetric	Views the traffic monitoring data of a NAT gateway.
DisableNatGatewayEcsMetric	Disables traffic monitoring for an ECS instance.

VPN gateway management

API	Description
CreateVpnGateway	Creates a VPN gateway.
DescribeVpnGateways	Queries VPN gateways in a region.
ModifyVpnGatewayAttribute	Modifies the name and description of a VPN gateway.
DeleteVpnGateway	Deletes a VPN gateway.
CreateCustomerGateway	Creates a customer gateway.

API	Description
DescribeCustomerGateways	Queries customer gateways in a region.
DescribeCustomerGateway	Queries details of a customer gateway.
DeleteCustomerGateway	Deletes a customer gateway.
ModifyCustomerGatewayAttribute	Modifies the name and description of a customer gateway.
CreateVpnConnection	Creates an IPsec-VPN connection.
DescribeVpnConnections	Queries IPsec-VPN connections.
DescribeVpnConnection	Queries the details of an IPsec-VPN connection.
ModifyVpnConnectionAttribute	Modifies the configuration of an IPsec-VPN connection.
DeleteVpnConnection	Deletes an IPsec-VPN connection.
DownloadVpnConnectionConfig	Queries the configuration of an IPsec-VPN connection.
CreateSslVpnServer	Creates an SSL-VPN server.
DescribeSslVpnServers	Queries SSL-VPN servers.
DeleteSslVpnServer	Deletes an SSL-VPN server.
ModifySslVpnServer	Modifies the configuration of an SSL-VPN server.
CreateSslVpnClientCert	Creates an SSL-VPN client certificate.
DescribeSslVpnClientCerts	Queries SSL-VPN client certificates.
DeleteSslVpnClientCert	Deletes an SSL-VPN client certificate.
ModifySslVpnClientCert	Modifies the name of an SSL-VPN client certificate.
DescribeVpnGateway	Queries details of a VPN gateway.
DeleteVpnPbrRouteEntry	Deletes a policy-based route from a VPN gateway.
DeleteVpnRouteEntry	Deletes a destination-based route entry from a VPN gateway.
CreateVpnPbrRouteEntry	Creates a policy-based route entry for a VPN gateway.
DescribeVpnRouteEntries	Queries destination-based route entries of a VPN gateway.
ModifyVpnRouteEntryWeight	Modifies the weight of a destination-based route of a VPN gateway.
PublishVpnRouteEntry	Advertises a VPN route to a VPC.
DescribeVpnPbrRouteEntries	Queries policy-based route entries of a VPN gateway.
ModifyVpnPbrRouteEntryWeight	Modifies the weight of a policy-based route entry of a VPN gateway.
CreateVpnRouteEntry	Creates a destination-based route entry for a VPN gateway.
DescribeVpnSslServerLogs	Queries the logs of an SSL-VPN server.
DescribeSslVpnClientCert	Queries details of an SSL-VPN client certificate.

EIP bandwidth plan management

API	Description
AddCommonBandwidthPackageIp	Associates an EIP with an EIP bandwidth plan.
CreateCommonBandwidthPackage	Creates an EIP bandwidth plan.

API	Description
DeleteCommonBandwidthPackage	Deletes an EIP bandwidth plan.
DescribeCommonBandwidthPackages	Queries EIP bandwidth plans in a specific region.
ModifyCommonBandwidthPackageAttribute	Modifies the name and description of an EIP bandwidth plan.
ModifyCommonBandwidthPackageSpec	Modifies the maximum bandwidth of an EIP bandwidth plan.
RemoveCommonBandwidthPackageIp	Removes an EIP from an EIP bandwidth plan.
CancelCommonBandwidthPackageIpBandwidth	Removes the bandwidth limit configured for an EIP that is associated with an EIP bandwidth plan.
ModifyCommonBandwidthPackageIpBandwidth	Sets a bandwidth limit for an EIP that is associated with an EIP bandwidth plan.

Region management

API	Description
DescribeRegions	Queries regions.
DescribeZones	Queries zones within a region.

2.HTTP Requests

2.1. Overview

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

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

The request URL consists of different parameters and has a fixed syntax. The URL contains common request parameters, your signature, and operation-specific parameters. Unencoded sample URL requests for every operation are provided for your reference. You must encode your URL before you submit a request. After the the request is verified based on your signature, the results are returned to you. Response parameters are returned if the call is successful, whereas error messages are returned if the call fails. You can troubleshoot issues based on the common error codes and operation-specific error codes.

2.2. Request syntax

To send a Virtual Private Cloud (VPC) API request, you must send an HTTP GET request to the VPC endpoint. You must add the request parameters that correspond to the API operation being called. After you call the API, the system returns a response. The request and response are encoded in UTF-8.

Request example

VPC API operations use the RPC protocol. You can call VPC API operations by sending HTTP GET requests.

This topic uses the CreateVpc operation as an example to describe an unencoded URL request:

```
https://vpc.aliyuncs.com/?Action=CreateVpc
&RegionId=cn-hangzhou
&<Common Request Parameters>
```

where:

- `https` specifies the protocol for transmitting the request.

  VPC API operations support communication over the HTTP or HTTPS protocol. For security purposes, we recommend that you send requests over HTTPS.

- `vpc.aliyuncs.com` specifies the endpoint of VPC.

  To minimize network latency, we recommend that you specify the endpoint based on the region where you call API operations. The following table lists the endpoints of the VPC API.

  > **Note** For regions that are not listed in the following table, use `vpc.aliyuncs.com`.

Region	Endpoint
Default	vpc.aliyuncs.com
China (Zhangjiakou-Beijing Winter Olympic)	vpc.cn-zhangjiakou.aliyuncs.com
China (Hohhot)	vpc.cn-huhehaote.aliyuncs.com
China (Ulanqab)	vpc.cn-wulanchabu.aliyuncs.com
China (Chengdu)	vpc.cn-chengdu.aliyuncs.com
China (Heyuan)	vpc.cn-heyuan.aliyuncs.com
China (Guangzhou)	vpc.cn-guangzhou.aliyuncs.com
Japan (Tokyo)	vpc.ap-northeast-1.aliyuncs.com
Germany (Frankfurt)	vpc.eu-central-1.aliyuncs.com
UAE (Dubai)	vpc.me-east-1.aliyuncs.com

Region	Endpoint
Australia (Sydney)	vpc.ap-southeast-2.aliyuncs.com
Malaysia (Kuala Lumpur)	vpc.ap-southeast-3.aliyuncs.com
India (Mumbai)	vpc.ap-south-1.aliyuncs.com
Indonesia (Jakarta)	vpc.ap-southeast-5.aliyuncs.com
UK (London)	vpc.eu-west-1.aliyuncs.com

Note VPC endpoints use public service addresses. If the Elastic Compute Service (ECS) instance in your VPC cannot access the Internet, you cannot call API operations by using Alibaba Cloud CLI or SDKs. To call API operations over VPCs, see Call API operations over a VPC.

- `Action=CreateVpc` specifies the operation that is being called. `RegionId=cn-hangzhou` is a required parameter of the CreateVpc operation.
- `<Common request parameters>` are common parameters defined in the system.

  For more information, see Common parameters.

2.3. Common parameters

Common parameters include common request parameters and common response parameters.

Common request parameters

Common request parameters must be included in all VPC API requests. The following table lists the common request parameters.

Parameter	Type	Required	Description
Format	String	No	The format in which the response is returned. Valid value: *JSON and XML. Default value: JSON.*
Version	String	Required	The version number of the API. Format: `YYYY-MM-DD`. Set the value to *2016-04-28*.
AccessKeyId	String	Required	The AccessKey ID provided to you by Alibaba Cloud.
Signature	String	Required	The signature string of the current request.
SignatureMethod	String	Required	The encryption method of the signature string. Set the value to *HMAC-SHA1*.
Timestamp	String	Required	The timestamp of the request. Specify the time in the ISO 8601 standard in the `YYYY-MM-DDThh:mm:ssZ` format. The time must be in UTC. For example, you can set this parameter to 2013-01-10T12:00:00Z, which indicates 20:00:00 on January 10, 2013 (UTC+8).
SignatureVersion	String	Required	The version of the signature encryption algorithm. Set the value to *1.0*.
SignatureNonce	String	Required	A unique, random number used to prevent replay attacks. You must use different numbers for different requests.

Common response parameters

API responses use the HTTP response format where a 2xx status code indicates a successful call and a 4xx or 5xx status code indicates a failed call. Responses can be returned in the JSON or XML format. The default response format is JSON. You can specify the response format when you call an operation.

Every response returns a unique RequestId regardless of whether the call is successful.

- XML format

```
<? xml version="1.0" encoding="utf-8"? >
  <!--Result root node-->
  <Operation name+Response>
    <!--Returned request tag-->
    <RequestId>4C467B38-3910-447D-87BC-AC049166F216</RequestId>
    <!--Returned data-->
  </Operation name+Response>
```

- JSON format

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

2.4. Signature

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

> **Note**
> - The AccessKey pair serves as logon credentials that are used to call API operations, and the username and password are used to log on to the Elastic Compute Service (ECS) console. The AccessKey ID is used to verify identities of users, and the AccessKey secret is used to encrypt and verify signature strings. You must keep your AccessKey secret strictly confidential. For more information, see Create an AccessKey pair.
> - ECS provides SDKs in multiple programming languages, including third-party SDKs, to facilitate complex signature calculation. Download the SDK package.

Step 1: Create a canonicalized query string

1. Create a canonicalized query string by arranging the request parameters (including all common and operation-specific parameters except `Signature`) in alphabetical order.

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

2. Encode the canonicalized query string in UTF-8. Use UTF-8 to encode the names and values of the request parameters based on RFC 3986.

   Encoding rules:

   - Uppercase letters, lowercase letters, digits, and some special characters such as `hyphens (-), underscores (_), periods (.), and tilde s (~)` do not need to be encoded.
   - Other characters must be percent encoded in `%XY` format. `XY` represents the ASCII code of the characters in hexadecimal notation. For example, double quotation marks (`"`) are encoded as `%22` .
   - Extended UTF-8 characters are encoded in `%XY%ZA...` format.
   - Spaces must be encoded as `%20` . Do not encode spaces as plus signs (`+`).

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

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

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

3. Connect the encoded parameter names and values with equal signs (`=`).
4. Connect the encoded request parameters with ampersands (`&`).

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

Step 2: Create a string-to-sign from the encoded canonicalized query string

1. Create `StringToSign`.

   You can also use `percentEncode` to encode the canonicalized query string created in the previous step. Take the following steps to create a string-to-sign:

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

2. Calculate the hash-based message authentication code (HMAC) value of the `StringToSign`, as defined in RFC 2104. Use the Secure Hash Algorithm 1 (SHA-1) algorithm to calculate the HMAC value. Encode the HMAC value in Base64 to obtain the signature string as shown below.

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

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

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

Example 1: Concatenate parameters

The DescribeRegions operation is called to query Alibaba Cloud regions in the following example. This example shows the signature process when `AccessKeyID` is set to testid and `AccessKeySecret` is set to testsecret:

1. Compose and encode a string-to-sign.

   ```
   http://vpc.aliyuncs.com/?Timestamp=2016-02-23T12%3A46%3A24Z&Format=XML&AccessKeyId=testid&Action=DescribeRegions&Signa
   tureMethod=HMAC-SHA1&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf&Version=2016-04-28&SignatureVersion=1.0
   ```

2. Create a string-to-sign.

   ```
   GET&%2F&AccessKeyId%3Dtestid%26Action%3DDescribeRegions%26Format%3DXML%26SignatureMethod%3DHMAC-SHA1%26Signat
   ureNonce%3D3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf%26SignatureVersion%3D1.0%26Timestamp%3D2016-02-23T12%253A46%253A24
   Z%26Version%3D2016-04-28
   ```

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

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

4. Add the `Signature=OLeaidS1JvxuMvnyHOwuJ%2BuX5qY%3D` string that has been encoded based on RFC 3986 to the URL.

   ```
   http://vpc.aliyuncs.com/?SignatureVersion=1.0&Action=DescribeRegions&Format=XML&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0
   ad82fd6cf&Version=2016-04-28&AccessKeyId=testid&Signature=OLeaidS1JvxuMvnyHOwuJ%2BuX5qY%3D&SignatureMethod=HMAC-S
   HA1&Timestamp=2016-02-23T12%253A46%253A24Z
   ```

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

Example 2: Use the standard library of the programming language

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

1. Predefine an encoding method.

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

2. Predefine the time format for the `Timestamp` parameter. The `Timestamp` parameter must conform to the ISO8601 specification and must be in UTC+0.

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

3. Create a query string.

```
final String HTTP_METHOD = "GET";
Map parameters = new HashMap();
//Specify request parameters.
parameters.put("Action", "DescribeRegions");
parameters.put("Version", "2016-04-28");
parameters.put("AccessKeyId", "testid");
parameters.put("Timestamp", formatIso8601Date(new Date()));
parameters.put("SignatureMethod", "HMAC-SHA1");
parameters.put("SignatureVersion", "1.0");
parameters.put("SignatureNonce", UUID.randomUUID().toString());
parameters.put("Format", "XML");
// Arrange request parameters.
String[] sortedKeys = parameters.keySet().toArray(new String[]{});
Arrays.sort(sortedKeys);
final String SEPARATOR = "&";
// Create a string-to-sign.
StringBuilder stringToSign = new StringBuilder();
stringToSign.append(HTTP_METHOD).append(SEPARATOR);
stringToSign.append(percentEncode("/")).append(SEPARATOR);
StringBuilder canonicalizedQueryString = new StringBuilder();
for(String key : sortedKeys) {
// Encode the key and the value.
  canonicalizedQueryString.append("&")
  .append(percentEncode(key)).append("=")
  .append(percentEncode(parameters.get(key)));
}
// Encode the canonicalized query string.
stringToSign.append(percentEncode(
  canonicalizedQueryString.toString().substring(1)));
```

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

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

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

```
http://vpc.aliyuncs.com/?SignatureVersion=1.0&Action=DescribeRegions&Format=XML&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf&Version=2016-04-28&AccessKeyId=testid&Signature=OLeaidS1JvxuMvnyHOwuJ%2BuX5qY%3D&SignatureMethod=HMAC-SHA1&Timestamp=2016-02-23T12%253A46%253A24Z
```

5. Send HTTP requests by using a browser, cURL, or wget.

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

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

2.5. Response

Responses are returned in the JSON or XML format. The default response format is XML. To change the format, you can set the `Format` parameter in requests. Sample responses provided in API reference are formatted with line breaks and indentations for better readability and clarity. However, the actual responses are not formatted with line breaks or indentations.

Sample success responses

After an API operation is successfully called, success responses including response parameters and the request ID are returned. The HTTP status code is 2xx.

- XML format

```
<? xml version="1.0" encoding="UTF-8"? > <! --Result Root Node-->
<ActionResponse> <! --Return Request Tag-->
  <RequestId>4C467B38-3910-447D-87BC-AC049166F216</RequestId> <! --Return Result Data-->
</ActionResponse>
```

- JSON format

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

Sample error response

If an API call fails, error responses including error codes, error messages, and the request ID are returned. The HTTP status code is 4xx or 5xx.

For a list of error codes,visit the VPC API error center.

- XML format

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

- JSON format

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

3.RAM user authorization

Before you call the Virtual Private Cloud (VPC) API operations by using a Resource Access Management (RAM) user, you must use an Alibaba Cloud account to create a permission policy and grant required permissions to the RAM user. In the permission policy, Alibaba Cloud Resource Names (ARNs) are used to specify resources.

VPC resources

The following table lists the VPC resources that can be authorized and the ARN formats of the VPC resources. `$regionid/accoutid/vrouterid...` specifies the ID of a specific resource, and `*` specifies all VPC resources.

Resource type	ARN
VPC	acs:vpc:$regionid:$accountid:vpc/$vpcid
	acs:vpc:$regionid:$accountid:vpc/*
	acs:vpc:*:$accountid:vpc/*
VRouter	acs:vpc:$regionid:$accountid:vrouter/$vrouterid
	acs:vpc:$regionid:$accountid:vrouter/*
	acs:vpc:*:$accountid:vrouter/*
VSwitch	acs:vpc:$regionid:$accountid:vswitch/$vswitchid
	acs:vpc:$regionid:$accountid:vswitch/*
	acs:vpc:*:$accountid:vswitch/*
Route table	acs:vpc:$regionid:$accountid:routetable/$routetableid
	acs:vpc:$regionid:$accountid:routetable/*
	acs:vpc:*:$accountid:routetable/*
DHCP options set	acs:vpc:$regionid:$accountid:dhcpoptionsset/$dhcpoptionssetid
	acs:vpc:$regionid:$accountid:dhcpoptionsset/*
	acs:vpc:*:$accountid:dhcpoptionsset/*
High-availability virtual IP address (HAVIP)	acs:vpc:$regionid:$accountid:havip/$havipid
	acs:vpc:$regionid:$accountid:havip/*
	acs:vpc:*:$accountid:havip/*
Elastic IP address (EIP)	acs:vpc:$regionid:$accountid:eip/$allocationid
	acs:vpc:$regionid:$accountid:eip/*
	acs:vpc:*:$accountid:eip/*
NAT gateway	acs:vpc:$regionid:$accountid:natgateway/$natgatewayid
	acs:vpc:$regionid:$accountid:natgateway/*
	acs:vpc*:$accountid:vpc/*
NAT service plan	acs:vpc:$regionid:$accountid:bandwidthpackage/$bandwidthpackageid
	acs:vpc:$regionid:$accountid:bandwidthpackage/*
	aacs:vpc:*:$accountid:vpc/*
	acs:vpc:$regionid:$accountid:forwardtable/$forwardtableid

Resource type	ARN
Forward table	acs:vpc:$regionid:$accountid:forwardtable/*
	acs:vpc:*:$accountid:vpc/*
SNAT table	acs:vpc:$regionid:$accountid:snattable/$snattableid
	acs:vpc:$regionid:$accountid:snattable/*
	acs:vpc:*:$accountid:vpc/*
Customer gateway	acs:vpc:$regionid:$accountid:customergateway/$customergatewayid
	acs:vpc:$regionid:$accountid:customergateway/*
	acs:vpc:*:$accountid:customergateway/*
IPsec-VPN connection	acs:vpc:$regionid:$accountid:vpnconnection/$vpnconnectionid
	acs:vpc:$regionid:$accountid:vpnconnection/*
	acs:vpc:*:$accountid:vpnconnection/*
VPN gateway	acs:vpc:$regionid:$accountid:vpngateway/$vpngatewayid
	acs:vpc:$regionid:$accountid:vpngateway/*
	acs:vpc:*:$accountid:vpngateway/*
Global Accelerator instance	acs:vpc:$regionid:$accountid:globalaccelerationinstance /$globalaccelerationinstanceid
	acs:vpc:$regionid:$accountid:globalaccelerationinstance /*
	acs:vpc::$accountid:globalaccelerationinstance /*
Network access control list (ACL)	acs:vpc:$regionid:$accountid:networkacl/$networkaclid
	acs:vpc:$regionid:$accountid:networkacl/*
	acs:vpc:*:$accountid:networkacl/*
Secondary CIDR block	acs:vpc:$regionid:$accountid:vpc/$vpcid
General resources	acs:vpc:$regionid:$accountid:*
	acs:vpc:*:$accountid:*

VPC API operations

The following table lists the API operations that can be used to authorize resources in VPCs. `$regionid/accoutid/vrouterid...` is the resource ID, and `*` represents the corresponding resources.

API	ARN
CreateVpc	acs:vpc:$regionid:$accountid:vpc/*
DeleteVpc	acs:vpc:$regionid:$accountid:vpc/$vpcid
DescribeVpcs	acs:vpc:$regionid:$accountid:vpc/*
ModifyVpcAttribute	acs:vpc:$regionid:$accountid:vpc/$vpcid
DescribeVRouters	acs:vpc:$regionid:$accountid:vrouter/*
	Specifies the VRouter ID that you want to query: "vpc:Vpc":"acs:vpc:$regionid:$accountid:vpc/$vpcid"

API	ARN
	Specifies the VRouter ID that you want to query: "vpc:Vpc":"acs:vpc:$regionid:$accountid:vpc/*"
ModifyVRouterAttribute	acs:vpc:*:$accountid:*
CreateVSwitch	acs:vpc:$regionid:$accountid:vswitch/*
DescribeVSwitchAttributes	acs:vpc:$regionid:$accountid:vpc/$vpcid
DeleteVSwitch	acs:vpc:$regionid:$accountid:vswitch/$vswitchid
DescribeVSwitches	acs:vpc:$regionid:$accountid:vswitch/*
	"vpc:Vpc":"acs:vpc:$regionid:$accountid:vpc/$vpcid"
ModifyVSwitchAttribute	acs:vpc:$regionid:$accountid:vswitch/$vswitchid
CreateRouteEntry	acs:vpc:$regionid:$accountid:routetable/$routetableid
DeleteRouteEntry	acs:vpc:$regionid:$accountid:routetable/$routetableid
DescribeRouteTables	acs:vpc:$regionid:$accountid:routetable/*
	"vpc:VRouter":"acs:vpc$regionid:$accountid:vrouter/$vrouterid"
CreateDHCPOptionsSet	acs:vpc:$regionid:$accountid:dhcpoptionsset/*
DescribeCreateDHCPOptionsSets	acs:vpc:$regionid:$accountid:dhcpoptionsset/*
ModifyDHCPOptionsSetAttributes	acs:vpc:$regionid:$accountid:dhcpoptionsset/$dhcpoptionssetid
DeleteDHCPOptionsSet	acs:vpc:$regionid:$accountid:dhcpoptionsset/$dhcpoptionssetid
AssociatedDHCPOptionsSet	acs:vpc:$regionid:$accountid:dhcpoptionsset/$dhcpoptionssetid
	acs:vpc:$regionid:$accountid:vpc/$vpcid
UnassociateDHCPOptionsSet	acs:vpc:$regionid:$accountid:dhcpoptionsset/$dhcpoptionssetid
	acs:vpc:$regionid:$accountid:vpc/$vpcid
CreateHaVip	acs:vpc:$regionid:$accountid:havip/*
	acs:vpc:$regionid:$accountid:vswitch/$vswitchid
DeleteHaVip	acs:vpc:$regionid:$accountid:havip/$havipid
AssociateHaVip	acs:vpc:$regionid:$accountid:havip/$havipid
	acs:vpc:%s:%s:certificate/%
	acs:ecs:$regionid:$accountid:instance/$instanceid
UnassociateHaVip	acs:vpc:$regionid:$accountid:havip/$havipid
	acs:ecs:$regionid:$accountid:instance/$instanceid
DescribeHaVips	acs:vpc:$regionid:$accountid:havip/*
AllocateEipAddress	acs:vpc:$regionid:$accountid:eip/*
	acs:vpc:$regionid:$accountid:eip/*

API	ARN

AssociateEipAddres	Associates an EIP with a specified ECS instance
	`acs:vpc:$regionid:$accountid:eip/$allocationid`
	`acs:ecs:$regionid:$accountid:instance/$instanceid`

	Associates an EIP with an HAVIP.
	`acs:vpc:$regionid:$accountid:eip/$allocationid`
	`acs:vpc:$regionid:$accountid:havip/$havipid`

DescribeEipAddresses	`acs:vpc:$regionid:$accountid:eip/*`

UnassociateEipAddress	Associates an EIP with a specified ECS instance.
	`acs:vpc:$regionid:$accountid:eip/$allocationid`
	`acs:ecs:$regionid:$accountid:instance/$instanceid`

	Associates an EIP with an HAVIP.
	`acs:vpc:$regionid:$accountid:eip/$allocationid`
	`acs:vpc:$regionid:$accountid:havip/$havipid`

ReleaseEipAddress	`acs:vpc:$regionid:$accountid:eip/$allocationid`
DescribeEipMonitorData	`acs:vpc:$regionid:$accountid:eip/$allocationid`
	`acs:ecs:$regionid:$accountid:instance/$instanceid`
CreateNatGateway	`acs:vpc:$regionid:$accountid:natgateway/*`
DescribeNatGateways	`acs:vpc:$regionid:$accountid:natgateway/$natgatewayid`
	`acs:vpc:$regionid:$accountid:natgateway/*`
ModifyNatGatewaySpec	`acs:vpc:$regionid:$accountid:natgateway/$natgatewayid`
ModifyNatGatewayAttribute	`acs:vpc:$regionid:$accountid:natgateway/$natgatewayid`
	`acs:ecs:$regionid:$accountid:instance/$instanceid`
DeleteNatGateway	`acs:vpc:$regionid:$accountid:natgateway/$natgatewayid`
	`acs:ecs:$regionid:$accountid:instance/$instanceid`
CreateBandwidthPackage	`acs:vpc:$regionid:$accountid:bandwidthpackage/*`
DescribeBandwidthPackages	`acs:vpc:$regionid:$accountid:bandwidthpackage/$bandwidthpackageid`
	`acs:vpc:$regionid:$accountid:bandwidthpackage/*`
ModifyBandwidthPackageSpec	`acs:vpc:$regionid:$accountid:bandwidthpackage/$bandwidthpackageid`
ModifyBandwidthPackageAttribute	`acs:vpc:$regionid:$accountid:bandwidthpackage/$bandwidthpackageid`
AddBandwidthPackageIps	`acs:vpc:$regionid:$accountid:bandwidthpackage/$bandwidthpackageid`
RemoveBandwidthPackageIps	`acs:vpc:$regionid:$accountid:bandwidthpackage/$bandwidthpackageid`
DeleteBandwidthPackage	`acs:vpc:$regionid:$accountid:bandwidthpackage/$bandwidthpackageid`
CreateForwardEntry	`acs:vpc:$regionid:$accountid:forwardtable/$forwardtableid`
DeleteForwardEntry	`acs:vpc:$regionid:$accountid:forwardtable/$forwardtableid`
ModifyForwardEntry	`acs:vpc:$regionid:$accountid:forwardtable/$forwardtableid`

API	ARN
DescribeForwardTableEntries	acs:vpc:$regionid:$accountid:forwardtable/$forwardtableid
CreateSnatEntry	acs:vpc:$regionid:$accountid:snattable/*
ModifySnatEntry	acs:vpc:$regionid:$accountid:snattable/$snattableid
DescribeSnatTableEntries	acs:vpc:$regionid:$accountid:snattable/$snattableid
DeleteSnatEntry	acs:vpc:$regionid:$accountid:snattable/$snattableid
CreateCustomerGateway	acs:vpc:$regionid:$accountid:customergateway/*
DeleteCustomerGateway	acs:vpc:$regionid:$accountid:customergateway/$customergatewayid
DescribeCustomerGateway	acs:vpc:$regionid:$accountid:customergateway/$customergatewayid
DescribeCustomerGateways	acs:vpc:$regionid:$accountid:customergateway/*
ModifyCustomerGatewayAttribute	acs:vpc:$regionid:$accountid:customergateway/$customergatewayid
CreateVpnConnection	acs:vpc:$regionid:$accountid:vpnconnection/*
DeleteVpnConnection	acs:vpc:$regionid:$accountid:vpnconnection/$vpnconnectionid
DescribeVpnConnection	acs:vpc:$regionid:$accountid:vpnconnection/$vpnconnectionid
DescribeVpnConnections	acs:vpc:$regionid:$accountid:vpnconnection/*
ModifyVpnConnectionAttribute	acs:vpc:$regionid:$accountid:vpnconnection/$vpnconnectionid
DownloadVpnConnectionConfig	acs:vpc:$regionid:$accountid:vpnconnection/$vpnconnectionid
DeleteVpnGateway	acs:vpc:$regionid:$accountid:vpngateway/$vpngatewayid
DescribeVpnGateway	acs:vpc:$regionid:$accountid:vpngateway/$vpngatewayid
DescribeVpnGateways	acs:vpc:$regionid:$accountid:vpngateway/*
ModifyVpnGatewayAttribute	acs:vpc:$regionid:$accountid:vpngateway/$vpngatewayid
CreateGlobalAccelerationInstance	acs:vpc:$regionid:$accountid:globalaccelerationinstance/*
AssociateGlobalAccelerationInstance	acs:vpc:$regionid:$accountid:globalaccelerationinstance/$globalaccelerationinstanceid
	acs:ecs:$regionid:$accountid:instance/$instanceid
UnassociateGlobalAccelerationInstance	acs:ecs:$regionid:$accountid:instance/$instanceid
ModifyGlobalAccerlationInstanceSpec	acs:ecs:$regionid:$accountid:instance/$instanceid
ModifyGlobalAccerlationInstanceAttributes	acs:ecs:$regionid:$accountid:instance/$instanceid
DeleteGlobalAccelerationInstance	acs:ecs:$regionid:$accountid:instance/$instanceid
DescribeGlobalAccelerationInstances	acs:vpc:$regionid:$accountid:globalaccelerationinstance/*
AddGlobalAccelerationInstanceIp	acs:vpc:$regionid:$accountid:globalaccelerationinstance/$globalaccelerationinstanceid
	acs:vpc:$regionid:$accountid:eip/$allocationid
RemoveGlobalAccelerationInstanceIp	acs:vpc:$regionid:$accountid:globalaccelerationinstance/$globalaccelerationinstanceid
	acs:vpc:$regionid:$accountid:eip/$allocationid

API	ARN
DescribeServerRelatedGlobalAccelerationInstances	acs:vpc:$regionid:$accountid:globalaccelerationinstance/*
	acs:ecs:$regionid:$accountid:instance/$instanceid
CreateNetworkAcl	acs:vpc:$regionid:$accountid: networkacl/*
DeleteNetworkAcl	acs:vpc:$regionid:$accountid: networkacl/$networkaclid
DescribeNetworkAcls	acs:vpc:$regionid:$accountid: networkacl/*
DescribeNetworkAclAttributes	acs:vpc:$regionid:$accountid: networkacl/$networkaclid
ModifyNetworkAclAttributes	acs:vpc:$regionid:$accountid: networkacl/$networkaclid
AccosicateNetworkAcl	acs:vpc:$regionid:$accountid: networkacl/$networkaclid
	acs:vpc:$regionid:$accountid:vswitch/$vswitchid
UnassociateNetworkAcl	acs:vpc:$regionid:$accountid: networkacl/$networkaclid
	acs:vpc:$regionid:$accountid:vswitch/$vswitchid
UpdateNetworkAclEntries	acs:vpc:$regionid:$accountid: networkacl/$networkaclid
CopyNetworkAclEntries	acs:vpc:$regionid:$accountid: networkacl/$networkaclid
AssociateVpcCidrBlock	acs:vpc:$regionid:$accountid: vpc/$vpcid
UnassociateVpcCidrBlock	acs:vpc:$regionid:$accountid: vpc/$vpcid

4.Call API operations over a VPC

If the Elastic Compute Service (ECS) instance in a virtual private cloud (VPC) cannot access the Internet, you cannot call API operations on the ECS instance over the Internet. This topic describes how to call API operations over a VPC by modifying the endpoint field.

Background

VPC endpoints use public service addresses. If the ECS instance in your VPC cannot access the Internet, you cannot call API operations by using Alibaba Cloud CLI or SDKs. For more information about VPC endpoints, see Request syntax.

You can call API operations over a VPC by modifying the endpoint field. The following table lists the available endpoints when you call API operations over a VPC. Make sure that you use an endpoint listed in the table.

> **Note** To call API operations over a VPC, the region of the VPC-connected ECS instance must be the same as that of the endpoint. Cross-region operations are not supported.

Alibaba Cloud region	Region ID	Endpoint
China (Hangzhou)	cn-hangzhou	vpc-vpc.cn-hangzhou.aliyuncs.com
China (Shanghai)	cn-shanghai	vpc-vpc.cn-shanghai.aliyuncs.com
China (Qingdao)	cn-qingdao	vpc-vpc.cn-qingdao.aliyuncs.com
China (Beijing)	cn-beijing	vpc-vpc.cn-beijing.aliyuncs.com
China (Zhangjiakou-Beijing Winter Olympic)	cn-zhangjiakou	vpc-vpc.cn-zhangjiakou.aliyuncs.com
China (Hohhot)	cn-huhehaote	vpc-vpc.cn-huhehaote.aliyuncs.com
China (Ulanqab)	cn-wulanchabu	vpc-vpc.cn-wulanchabu.aliyuncs.com
China (Shenzhen)	cn-shenzhen	vpc-vpc.cn-shenzhen.aliyuncs.com
China (Heyuan)	cn-heyuan	vpc-vpc.cn-heyuan.aliyuncs.com
China (Chengdu)	cn-chengdu	vpc-vpc.cn-chengdu.aliyuncs.com
China (Hong Kong)	cn-hongkong	vpc-vpc.cn-hongkong.aliyuncs.com
Singapore (Singapore)	ap-southeast-1	vpc-vpc.ap-southeast-1.aliyuncs.com
Australia (Sydney)	ap-southeast-2	vpc-vpc.ap-southeast-2.aliyuncs.com
Malaysia (Kuala Lumpur)	ap-southeast-3	vpc-vpc.ap-southeast-3.aliyuncs.com
Indonesia (Jakarta)	ap-southeast-5	vpc-vpc.ap-southeast-5.aliyuncs.com
Japan (Tokyo)	ap-northeast-1	vpc-vpc.ap-northeast-1.aliyuncs.com
Germany (Frankfurt)	eu-central-1	vpc-vpc.eu-central-1.aliyuncs.com
UK (London)	eu-west-1	vpc-vpc.eu-west-1.aliyuncs.com
US (Silicon Valley)	us-west-1	vpc-vpc.us-west-1.aliyuncs.com
US (Virginia)	us-east-1	vpc-vpc.us-east-1.aliyuncs.com
India (Mumbai)	ap-south-1	vpc-vpc.ap-south-1.aliyuncs.com
UAE (Dubai)	me-east-1	vpc-vpc.me-east-1.aliyuncs.com

Call an operation over a VPC by using Alibaba Cloud CLI

To call an operation over a VPC by using Alibaba Cloud CLI, set the Endpoint field to the **corresponding endpoint of a specific region**. Example:

```
aliyun vpc DescribeRegions --endpoint vpc-vpc.cn-hangzhou.aliyuncs.com
```

Call an operation over a VPC by using Alibaba Cloud SDKs

To call an operation over a VPC by using Alibaba Cloud SDKs, set the Endpoint field to the **corresponding endpoint of a specific region**. Example in Java:

```
DefaultProfile profile = DefaultProfile.getProfile("cn-hangzhou", "<AccessKeyId>", "<AccessKeySecret>");
IAcsClient client = new DefaultAcsClient(profile);
// The configuration takes effect globally. where:
// <product> specifies the service name and Vpc is used in this example. <Endpoint> specifies the endpoint of the specific region.
DefaultProfile.addEndpoint("cn-hangzhou", "vpc", "vpc-vpc.cn-hangzhou.aliyuncs.com");
// The configuration takes effect only for this request. For example, when you call the DescribeRegions operation:
DescribeRegionsRequest regionsRequest = new DescribeRegionsRequest();
// If you set productNetwork, you do not need to set SysEndpoint.
regionsRequest.setSysEndpoint("<Endpoint>");
// Configure the network. Valid values of productNetwork: vpc and public.
// Set the parameter to vpc when you call the operation over a VPC. Set the parameter to public when you call the operation over the Interne
t. Default value: public.
regionsRequest.productNetwork = "vpc";
DescribeRegionsResponse regionsResponse = client.getAcsResponse(regionsRequest);
```

5.Ensure idempotence

This topic describes how to ensure idempotence by specifying the ClientToken parameter. When you make VPC API calls, operations might time out or encounter server issues before they complete, and thus lead to multiple retries. You can specify the ClientToken parameter when you make a request to avoid subsequent retries.

What is idempotence?

In mathematics and computer science, idempotence is the property of certain operations that allows you to retry a request multiple times while only performing the action once. Idempotence plays an important role in the design of distributed systems.

Ensure idempotence

Generally, a client will make a retry when a 500 (`InternalError`) or 503 (`ServiceUnAvailable`) error occurs or it does not receive a response. You can make Alibaba Cloud VPC API calls for the client to generate a string of up to 64 ASCII characters, which is assigned to ClientToken to ensure idempotence.

ClientToken

The details of ClientToken are described as follows:

- A ClientToken is a unique, case-sensitive string of up to 64 ASCII characters. For example, `ClientToken=123e4567-e89b-12d3-a456-426655440000` .
- If you make an API request with the same ClientToken that is already specified for another API request, even if with other parameters being different, the VPC returns the error `IdempotentParameterMismatch` .

  > **Note** The values for the parameters including SignatureNonce, TimeStamp, and Signature cannot be the same each time a request is resent. SignatureNonce is included to mitigate potential replay attacks. Timestamp marks the sending time of a request. Therefore, the values of SignatureNonce and Timestamp must be different if you retry a request. This also changes the value of Signature.

- After specifying the ClientToken parameter:
  - When the HTTP status code 200 is returned, any subsequent retries return the result from the original successful request and they have no additional effect.
  - However, when the HTTP status code 4xx is returned, the retry will fail if `try it later` or similar errors do not occur. You must troubleshoot the error according to the error message and try again.

6.Use RAM roles to manage VPC permissions

This topic describes how to manage Virtual Private Cloud (VPC) permissions of a Resource Access Management (RAM) user. In the RAM console, you can create custom permission policies and attach them to the RAM user.

Prerequisites

An Alibaba Cloud account is created. To create an Alibaba Cloud account, go to the Alibaba Cloud official website. For more information, see Create an Alibaba Cloud account.

Common permission policies

The following table describes some common permission policies that can be used in the RAM console to manage VPC permissions.

Permission policy	Description
AliyunVPCFullAccess	Grants a RAM user the permissions to manage VPCs.
AliyunVPCReadOnlyAccess	Grants a RAM user the read-only permission on VPCs.

Note For more information about VPC permissions, see RAM user authorization.

Attach a custom permission policy to a RAM user

1. Create a custom permission policy.

   For more information, see Create a custom policy and Examples of VPC permission policies.
2. On the **Policies** page, click the name of the permission policy.
3. On the **References** tab, click **Grant Permission**.
4. In the **Add Permissions** panel, enter the name or ID of the user in the **Principal** field, and then click **OK**.

   Note You can also attach existing permission policies to a RAM user or RAM user group. For more information, see Grant permissions to a RAM user and Grant permissions to a RAM user group.

Examples of VPC permission policies

- Example 1: Authorize a RAM user to manage all VPCs.

  To authorize a RAM user to manage all VPCs in the Alibaba Cloud account 1234567, use the following sample script:

```
{
  "Version": "1",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "vpc:*"
      ],
      "Resource": [
        "acs:vpc:*:1234567:*/*"
      ]
    },
    {
      "Effect": "Allow",
      "Action": [
        "ecs:*Describe*"
      ],
      "Resource": [
        "*"
      ]
    }
  ]
}
```

- Example 2: Authorize a RAM user to manage the vSwitches in a VPC.

You can use the following sample script to authorize a RAM user to manage the vSwitches of the VPCs in the China (Qingdao) region. Then, the RAM user can create, delete, associate, or disassociate subnet routes of the vSwitches in the VPCs. The RAM user can also view the vSwitches in other regions.

```
{
  "Version": "1",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "vpc:*Describe*",
        "vpc:*VSwitch*",
        "vpc:*RouteTable*"
      ],
      "Resource": [
        "acs:vpc:cn-qingdao:*:*/*"
      ]
    },
    {
      "Effect": "Allow",
      "Action": [
        "ecs:*Describe*"
      ],
      "Resource": [
        "*"
      ]
    }
  ]
}
```

- Example 3: Authorize a RAM user to manage the route tables and route entries in a specified region.

  To authorize RAM user 11111111 to manage the VPCs in the China (Hangzhou) region, use the following sample script. After the RAM user is authorized, the RAM user can add or delete route entries, create subnet routes, associate vSwitches in this region. The RAM user can only view the cloud services in other regions.

```
{
  "Version": "1",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "ecs:*Describe*"
      ],
      "Resource": [
        "*"
      ],
      "Condition": {}
    },
    {
      "Effect": "Allow",
      "Action": [
        "slb:*Describe*"
      ],
      "Resource": [
        "*"
      ],
      "Condition": {}
    },
    {
      "Effect": "Allow",
      "Action": [
        "rds:*Describe*"
      ],
      "Resource": [
        "*"
      ],
      "Condition": {}
    },
    {
      "Effect": "Allow",
      "Action": [
        "vpc:*Describe*",
        "vpc:*RouteEntry*",
        "vpc:*RouteTable*"
      ],
      "Resource": [
"acs:vpc:cn-hangzhou:11111111:*/*"
      ],
      "Condition": {}
    }
  ]
}
```

- Example 4: Authorize a RAM user to add or delete the route entries in a specified route table.

  To authorize a RAM user to add or delete the route entries in a specified route table, use the following sample script:

```
{
  "Version": "1",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "vpc:*RouteEntry*"
      ],
      "Resource": [
        "acs:vpc:cn-qingdao:*:routetable/vtb-m5e64ujkb7xn5zlq0xxxx"
      ]
    },
    {
      "Effect": "Allow",
      "Action": [
        "vpc:*Describe*"
      ],
      "Resource": [
        "*"
      ]
    },
    {
      "Effect": "Allow",
      "Action": [
        "ecs:*Describe*"
      ],
      "Resource": [
        "*"
      ]
    }
  ]
}
```

7.Virtual Private Cloud (VPC)

7.1. CreateVpc

Creates a virtual private cloud (VPC).

Descriptions

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

- You can specify only one CIDR block for a VPC. The CIDR block must be 10.0.0.0/8, 172.16.0.0/12, 192.168.0.0/16, or their subnets, and the subnet mask must be 8 to 24 bits in length. The default CIDR block is 172.16.0.0/12.
- After you create a VPC, you cannot modify its CIDR block.
- Each VPC can use at most 60,000 private IP addresses. The quota cannot be increased.
- After you create a VPC, a vRouter and a route table are automatically created.
- At most three user CIDR blocks can be added to a VPC. If a user CIDR block includes another user CIDR block, the one with the shorter subnet mask takes effect. For example, if both 10.0.0.0/8 and 10.1.0.0/16 are specified, only 10.0.0.0/8 takes effect.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateVpc	The operation that you want to perform. Set the value to **CreateVpc**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the VPC is deployed. You can call the DescribeRegions operation to query the most recent region list.
CidrBlock	String	No	172.16.0.0/12	The CIDR block of the VPC. You can use one of the following CIDR blocks or their subnets as the CIDR block of your VPC: • **172.16.0.0/12** (default). • **10.0.0.0/8**. • **192.168.0.0/16**.
Ipv6CidrBlock	String	No	2408:XXXX:0:6a::/56	The IPv6 CIDR block of the VPC.
EnableIpv6	Boolean	No	false	Specifies whether to enable the IPv6 CIDR block. Valid values: • **false** (default) disabled • **true**: enabled
VpcName	String	No	abc	The name of the VPC. The name must be 2 to 128 characters in length, and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with `http://` or `https://`.
Description	String	No	This is my first Vpc	The description of the VPC. The description must be 2 to 256 characters in length. It must start with a letter and cannot start with `http://` or `https://`.

Parameter	Type	Required	Example	Description
ResourceGroupId	String	No	rg-acfmxazb4ph6aiy****	The ID of the resource group.
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: sends a check request without creating a VPC. The system prechecks the required parameters, request format, and service limits. If the request fails the precheck, the corresponding error code is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the request. This is the default value. If the request passes the precheck, a 2XX HTTP status code is returned and a VPC is created.
UserCidr	String	No	192.16.0.0/12	The user CIDR block. Separate multiple CIDR blocks with commas (,). At most three CIDR blocks are supported. For more information, see What is a user CIDR block? in **CIDR block FAQ**.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The `ClientToken` value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How can I ensure idempotence?
Ipv6Isp	String	No	BGP	The Internet service provider (ISP) for IPv6 addresses of the VPC. Valid values: • **BGP**(default): Alibaba Cloud BGP IPv6 • **ChinaMobile**: China Mobile (single line) • **ChinaUnicom**: China Unicom (single line) • **ChinaTelecom**: China Telecom (single line) **Note** If your Alibaba Cloud account is allowed to activate single-ISP bandwidth, you can set the parameter to **ChinaTelecom**, **ChinaUnicom**, and **ChinaMobile**.

Response parameters

Parameter	Type	Example	Description
VpcId	String	vpc-bp15zckdt37pq72zv****	The ID of the created VPC.
VRouterId	String	vrt-bp1lhl0taikrteen8****	The ID of the vRouter that is automatically created by the system after the VPC is created.
RouteTableId	String	vtb-bp145q7glnuzdv****	The ID of the route table that is automatically created by the system after the VPC is created.

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.
ResourceGroupId	String	rg-acfmxazb4ph6aiy****	The ID of the resource group.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateVpc
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateVpcResponse>
 <VRouterId>vrt-bp1lhl0taikrteen8****</VRouterId>
 <RouteTableId>vtb-bp145q7glnuzdv****</RouteTableId>
 <ResourceGroupId>rg-acfmxazb4ph6aiy****</ResourceGroupId>
 <VpcId>vpc-bp15zckdt37pq72zv****</VpcId>
 <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</CreateVpcResponse>
```

`JSON` format

```
{
  "CreateVpcResponse": {
    "VRouterId": "vrt-bp1lhl0taikrteen8****",
    "RouteTableId": "vtb-bp145q7glnuzdv****",
    "ResourceGroupId": "rg-acfmxazb4ph6aiy****",
    "VpcId": "vpc-bp15zckdt37pq72zv****",
    "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	Specified value of "regionId" is not supported.	The error message returned because the specified region ID does not exist. Check whether the region ID is valid.
400	InvalidParameter	Specified CIDR block is not valid	The error message returned because the specified CIDR block is invalid.
400	ResourceNotAvailable	Resource you requested is not available in this region or zone.	The error message returned because you cannot create a vSwitch in the current region or zone.
400	InvalidVpcName.Malformed	Specified VPC name is not valid.	The error message returned because the format of the VPC name is invalid. Enter a valid VPC name and try again.
400	InvalidVpcDiscription.Malformed	Specified VPC description is not valid.	The error message returned because the format of the VPC description is invalid.
403	Forbbiden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform this operation on the specified resource. You can apply for the permissions and try again.

HttpCode	Error code	Error message	Description
400	QuotaExceeded.Vpc	VPC quota exceeded.	The error message returned because the number of VPCs under the Apsara Stack tenant account has reached the upper limit. You can submit a ticket to request a quota increase.
400	ResourceNotAvailable.Vpc	Resource you requested is not available in this region or zone.	The error message returned because the resource you requested is not available in this region or zone.
400	InvalidParameter	Specified UserCidr invalid format.	The error message returned because the format of the user CIDR block is invalid.
400	InvalidParameter	Specified UserCidr Subnet mask is not valid .	The error message returned because the subnet mask of the user CIDR block is invalid.
400	InvalidUserCidr.Quota	Specified UserCidr number is greater than 3.	The error message returned because the UserCidr value has reached the upper limit.
400	InvalidUserCidr.Malformed	Specified UserCidr overlapping in of 100.64.0.0/10.	The error message returned because the UserCidr value overlaps with 100.64.0.0/10.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because unknown errors have occurred.
400	InvalidResourceGroupId	The specified ResourceGroupId does not exist.	The error message returned because the specified resource group ID is invalid.
400	OperationUnsupported.ResourceGroupId	ResourceGroup is not supported in this region.	The error message returned because the resource group feature is not enabled.

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

7.2. DeleteVpc

Deletes a VPC.

API description

Note the following before you call this API action:

- You must release or remove all resources in the VPC, such as VSwitches, cloud instances, and High-Availability Virtual IP Addresses (HaVips).
- You can only delete the VPCs that are in the Available status.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DeleteVpc	The name of this action. Value: **DeleteVpc**
VpcId	String	Yes	vpc-bp1m7v25emi1h5mtc****	The ID of the VPC to be deleted.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the VPC belongs.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=DeleteVpc
&VpcId=vpc-bp1m7v25emi1h5mtc****
&RegionId=cn-hangzhou
&<CommonParameters>
```

Response example

`XML` format

```
<DeleteVpcResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</DeleteVpcResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Errors

HTTP status code	Error code	Error message	Description
403	OperationDenied	The operation is not supported in this status.	This operation cannot be performed in this status.
403	OperationDenied	The snapshot creation for the specified disk is not finished yet.	The snapshot creation for the specified disk is not completed.
400	IncorrectVpcStatus	Current VPC status does not support this operation.	The VPC does not support the action in the current status.
400	DependencyViolation.RouteEntry	Specified object has dependent resources	Custom route rules still exist for the current VPC. VPC deletion failed.
400	DependencyViolation.Instance	Specified object has dependent resources	The specified object has associated resources.
400	DependencyViolation.VSwitch	Specified object has dependent resources	This VPC has existing VSwitches and cannot be deleted. Delete all VSwitches in the VPC first.
400	DependencyViolation.SecurityGroup	Specified object has dependent resources SecurityGroup.	This VPC has existing security groups and cannot be deleted. Delete all security groups in the VPC first.
404	InvalidVpcId.NotFound	Specified VPC does not exist.	The specified VPC does not exist.
400	DependencyViolation.RouteInterface	Specified object has dependent route interface .	The specified VSwitch is connected to a VRouter interface and cannot be deleted.
400	DependencyViolation.Tunnel	Specified object has dependent tunnel.	This specified object has an associated tunnel.
500	InternalError	The request processing has failed due to some unknown error.	The request failed to be processed due to unknown errors.

HTTP status code	Error code	Error message	Description
400	DependencyViolation.NatGateway	Specified object has dependent resources NatGateway.	This VPC has an existing NAT Gateway and cannot be deleted. Delete the NAT Gateway in the VPC first.
400	DependencyViolation.RouterInterface	Specified object has dependent resources RouterInterface.	The specified object has associated router interfaces.
400	Forbidden.VpcNotFound	Specified VPC can not found.	The specified VPC does not exist.
400	Forbbiden	Active custom route in vpc.	You must add a custom route entry in the VPC.

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

7.3. DescribeVpcs

Queries virtual private clouds (VPCs) in a region.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeVpcs	The operation that you want to perform. Set the value to **DescribeVpcs**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the VPC is deployed. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	No	vpc-bp1b1xjllp3ve5yze****	The ID of the VPC. You can specify up to 20 VPC IDs. Separate multiple IDs with commas (,).
VpcName	String	No	Vpc-1	The name of the VPC.
IsDefault	Boolean	No	false	Specifies whether to query the default VPC in the specified region. Valid values: • **true**(default): queries all VPCs in the specified region. • **false**: does not query the default VPC.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: prechecks the API request. Resources are not queried. The system checks whether your AccessKey pair is valid, whether the RAM user is authorized, and whether required parameters are set. If the request fails the precheck, the corresponding error code is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the request. This is the default value. If the request passes the precheck, a 2XX HTTP status code is returned and the resource is queried.
ResourceGroupId	String	No	rg-acfmxvfvazb4p****	The ID of the resource group to which the VPC to be queried belongs.
PageNumber	Integer	No	1	The number of the page to return. Default value: **1**.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: **50**. Default value: **10**.
VpcOwnerId	Long	No	12345678	The ID of the Alibaba Cloud account to which the VPC belongs.
DhcpOptionsSetId	String	No	dopt-o6w0df4epg9zo8isy****	The ID of the DHCP options set.

Response parameters

Parameter	Type	Example	Description
Vpcs	Array of Vpc		The detailed information about the VPC.
Vpc			
CenStatus	String	Attached	The state of the Cloud Enterprise Network (CEN) instance to which the VPC is attached. **Attached** is returned only when the VPC is associated with a CEN instance.
CidrBlock	String	192.168.0.0/16	The IPv4 CIDR block of the VPC.
CreationTime	String	2018-04-18T15:02:37Z	The time when the VPC was created.
Description	String	This is my VPC.	The description of the VPC.
DhcpOptionsSetId	String	dopt-o6w0df4epg9zo8isy****	The ID of the DHCP options set.

Parameter	Type	Example	Description
DhcpOptionsSetStatus	String	Available	The state of the DHCP options set. Valid values: • **Available**: The DHCP options set is available for use. • **InUse**: The DHCP options set is being used. • **Deleted**:The DHCP options set is deleted. • **Pending**: The DHCP options set is being configured.
Ipv6CidrBlock	String	2408:XXXX:0:a600::/56	The IPv6 CIDR block of the VPC.
Ipv6CidrBlocks	Array of Ipv6CidrBlock		The IPv6 CIDR block of the VPC.
Ipv6CidrBlock			
Ipv6CidrBlock	String	2408:XXXX:0:a600::/56	The IPv6 CIDR block of the VPC.
Ipv6Isp	String	BGP	The Internet service provider (ISP) for IPv6 addresses of the VPC. Valid values: • **BGP**(default): Alibaba Cloud BGP IPv6 • **ChinaMobile**: China Mobile (single line) • **ChinaUnicom**: China Unicom (single line) • **ChinaTelecom**: China Telecom (single line) **Note** If your Alibaba Cloud account is allowed to activate single-ISP bandwidth, you can set the parameter to **ChinaTelecom**, **ChinaUnicom**, and **ChinaMobile**.
IsDefault	Boolean	false	Indicates whether the VPC is the default one in the region. • **true**: yes • **false**: no
NatGatewayIds	List	nat-245xxxftwt45bg****	The ID of the NAT gateway.
OwnerId	Long	1234567	The ID of the Alibaba Cloud account to which the VPC belongs.
RegionId	String	cn-hangzhou	The ID of the region where the VPC is deployed.
ResourceGroupId	String	rg-acfmxazb4ph****	The ID of the resource group to which the VPC belongs.
RouterTableIds	List	vtb-bp1krxxzp0c29fmon****	The ID of the route table.
SecondaryCidrBlocks	List	192.168.20.0/24	The secondary IPv4 CIDR block of the VPC.
Status	String	Available	The status of the VPC. Valid values: • **Pending**: being configured • **Available**: available
Tags	Array of Tag		The tag information about the VPC.
Tag			

Parameter	Type	Example	Description
Key	String	env	The keys of the tags that are added to the VPC.
Value	String	internal	The values of the tags that are added to the VPC.
UserCidrs	List	10.0.0.0/8	The list of customer-side CIDR blocks.
VRouterId	String	vrt-bp1jcg5cmxjbl9xgc****	The ID of the vRouter.
VSwitchIds	List	vsw-bp1nhbnpv2blyz8dl****	The list of vSwitches in the VPC.
VpcId	String	vpc-bp1qpo0kug3a20qqe****	The ID of the VPC.
VpcName	String	vpc1	The name of the VPC.
TotalCount	Integer	2	The total number of entries returned.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	C6532AA8-D0F7-497F-A8EE-094126D441F5	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeVpcs
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeVpcsResponse>
 <TotalCount>2</TotalCount>
 <Vpcs>
    <Vpc>
       <IsDefault>false</IsDefault>
       <Status>Available</Status>
       <CenStatus>Attached</CenStatus>
       <DhcpOptionsSetStatus>Available</DhcpOptionsSetStatus>
       <Description>This is my VPC.</Description>
       <ResourceGroupId>rg-acfmxazb4ph****</ResourceGroupId>
       <CidrBlock>192.168.0.0/16</CidrBlock>
       <VRouterId>vrt-bp1jcg5cmxjbl9xgc****</VRouterId>
       <DhcpOptionsSetId>dopt-o6w0df4epg9zo8isy****</DhcpOptionsSetId>
       <OwnerId>1234567</OwnerId>
       <VpcId>vpc-bp1qpo0kug3a20qqe****</VpcId>
       <CreationTime>2018-04-18T15:02:37Z</CreationTime>
       <VpcName>vpc1</VpcName>
       <RegionId>cn-hangzhou</RegionId>
       <Ipv6CidrBlock>2408:XXXX:0:a600::/56</Ipv6CidrBlock>
       <Ipv6CidrBlocks>
          <Ipv6CidrBlock>
             <Ipv6Isp>BGP</Ipv6Isp>
             <Ipv6CidrBlock>2408:XXXX:0:a600::/56</Ipv6CidrBlock>
          </Ipv6CidrBlock>
       </Ipv6CidrBlocks>
       <Tags>
          <Tag>
             <Value>internal</Value>
             <Key>env</Key>
          </Tag>
       </Tags>
       <VSwitchIds>
          <VSwitchId>vsw-bp1nhbnpv2blyz8dl****</VSwitchId>
       </VSwitchIds>
       <UserCidrs>
          <UserCidr>10.0.0.0/8</UserCidr>
       </UserCidrs>
       <NatGatewayIds>
          <NatGatewayIds>nat-245xxxftwt45bg****</NatGatewayIds>
       </NatGatewayIds>
       <RouterTableIds>
          <RouterTableIds>vtb-bp1krxxzp0c29fmon****</RouterTableIds>
       </RouterTableIds>
       <SecondaryCidrBlocks>
          <SecondaryCidrBlock>192.168.20.0/24</SecondaryCidrBlock>
       </SecondaryCidrBlocks>
    </Vpc>
 </Vpcs>
 <PageSize>10</PageSize>
 <RequestId>C6532AA8-D0F7-497F-A8EE-094126D441F5</RequestId>
 <PageNumber>1</PageNumber>
</DescribeVpcsResponse>
```


`JSON` format

```
{
  "DescribeVpcsResponse": {
    "TotalCount": 2,
    "Vpcs": {
      "Vpc": {
        "IsDefault": false,
        "Status": "Available",
        "CenStatus": "Attached",
        "DhcpOptionsSetStatus": "Available",
        "Description": "This is my VPC.",
        "ResourceGroupId": "rg-acfmxazb4ph****",
        "CidrBlock": "192.168.0.0/16",
        "VRouterId": "vrt-bp1jcg5cmxjbl9xgc****",
        "DhcpOptionsSetId": "dopt-o6w0df4epg9zo8isy****",
        "OwnerId": 1234567,
        "VpcId": "vpc-bp1qpo0kug3a20qqe****",
        "CreationTime": "2018-04-18T15:02:37Z",
        "VpcName": "vpc1",
        "RegionId": "cn-hangzhou",
        "Ipv6CidrBlock": "2408:XXXX:0:a600::/56",
        "Ipv6CidrBlocks": {
          "Ipv6CidrBlock": {
            "Ipv6Isp": "BGP",
            "Ipv6CidrBlock": "2408:XXXX:0:a600::/56"
          }
        },
        "Tags": {
          "Tag": {
            "Value": "internal",
            "Key": "env"
          }
        },
        "VSwitchIds": {
          "VSwitchId": "vsw-bp1nhbnpv2blyz8dl****"
        },
        "UserCidrs": {
          "UserCidr": "10.0.0.0/8"
        },
        "NatGatewayIds": {
          "NatGatewayIds": "nat-245xxxftwt45bg****"
        },
        "RouterTableIds": {
          "RouterTableIds": "vtb-bp1krxxzp0c29fmon****"
        },
        "SecondaryCidrBlocks": {
          "SecondaryCidrBlock": "192.168.20.0/24"
        }
      }
    },
    "PageSize": 10,
    "RequestId": "C6532AA8-D0F7-497F-A8EE-094126D441F5",
    "PageNumber": 1
  }
}
```


Error codes

HttpCode	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because unknown errors have occurred.
400	InvalidResourceGroupId	The specified ResourceGroupId does not exist.	The error message returned because the specified resource group ID is invalid.

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

7.4. ModifyVpcAttribute

Modifies the name and description of a virtual private cloud (VPC).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyVpcAttribute	The operation that you want to perform. Set the value to **ModifyVpcAttribute**.
VpcId	String	Yes	vpc-bp1qtbach57ywecf****	The ID of the VPC that you want to modify.
Description	String	No	This is my VPC.	The new description of the VPC. The description must be 2 to 256 characters in length. It must start with a letter but cannot start with `http://` or `https://`.
VpcName	String	No	Vpc-1	The new name of the VPC. The name must be 2 to 128 characters in length, and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with `http://` or `https://`.
CidrBlock	String	No	192.168.0.0/24	The IPv4 CIDR block of the VPC. The CIDR block can be 10.0.0.0/8, 172.16.0.0/12, 192.168.0.0/16, and their subnets. The subnet mask must be 8 to 24 bits in length.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the VPC is deployed.
EnableIPv6	Boolean	No	false	Specifies whether to enable IPv6 CIDR blocks. Valid values: • **true**: enables IPv6 CIDR blocks. • **false**(default): disables IPv6 CIDR blocks.
Ipv6CidrBlock	String	No	2408:XXXX:0:6a::/56	The IPv6 CIDR block of the VPC.
Ipv6Isp	String	No	BGP	The Internet service provider (ISP) for IPv6 addresses of the VPC. Valid values: • **BGP**(default): Alibaba Cloud BGP IPv6 • **ChinaMobile**: China Mobile (single line) • **ChinaUnicom**: China Unicom (single line) • **ChinaTelecom**: China Telecom (single line) **Note** If your Alibaba Cloud account is allowed to activate single-ISP bandwidth, you can set the parameter to **ChinaTelecom**, **ChinaUnicom**, and **ChinaMobile**.

Response parameters

Parameter	Type	Example	Description
RequestId	String	43B72D30-25E1-4FA3-96A8-89374A521D1A	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=ModifyVpcAttribute
&RegionId=cn-hangzhou
&VpcId=vpc-bp1qtbach57ywecf****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyVpcAttributeResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</ModifyVpcAttributeResponse>
```

`JSON` format

```
{
  "RequestId": "43B72D30-25E1-4FA3-96A8-89374A521D1A"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidVpcId.NotFound	Specified VPC does not exist.	The error message returned because the specified VPC does not exist.
400	InvalidVpcName.Malformed	Specified VPC name is not valid.	The error message returned because the format of the VPC name is invalid. Enter a valid VPC name and try again.
400	InvalidVpcDiscription.Malformed	Specified VPC description is not valid.	The error message returned because the format of the VPC description is invalid.
400	InvalidParameter	Specified UserCidr invalid format.	The error message returned because the format of the user CIDR block is invalid.
400	InvalidParameter	Specified UserCidr Subnet mask is not valid .	The error message returned because the subnet mask of the user CIDR block is invalid.
400	InvalidUserCidr.Quota	Specified UserCidr number is greater than 3.	The error message returned because the UserCidr value has reached the upper limit.
400	InvalidUserCidr.Malformed	Specified UserCidr overlapping in of 100.64.0.0/10.	The error message returned because the UserCidr value overlaps with 100.64.0.0/10.
400	IncorrectVpcStatus	Current VPC status does not support this operation.	The error message returned because the state of the VPC does not support this operation.
400	InvalidCidrBlock.Malformed	Specified CIDR block is not valid.	The error message returned because the format of the specified CIDR block is invalid.
400	OperationFailed.Ipv6GatewayInUse	The IPv6 gateway is in use.	The error message returned because the IPv6 gateway is still in use.

HttpCode	Error code	Error message	Description
400	OperationFailed.QueryCenIpv6Status	Failed to query the IPv6 status of the specified VPC in CEN.	The error message returned because the system failed to query the IPv6 status of the VPC in Cloud Enterprise Network (CEN).
400	OperationUnsupported.CenIpv6Enabled	The IPv6 feature is enabled in CEN.	The error message returned because the IPv6 feature is already enabled in CEN.

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

7.5. DescribeVpcAttribute

Queries detailed information about a virtual private cloud (VPC).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeVpcAttribute	The operation that you want to perform. Set the value to **DescribeVpcAttribute**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the VPC is deployed.
VpcId	String	Yes	vpc-bp18sth14qii3pnv****	The ID of the VPC that you want to query.
DryRun	Boolean	No	false	Specifies whether to precheck the request. • **true**: prechecks the API request. Resources are not queried. The system checks whether your AccessKey pair is valid, whether the RAM user is authorized, and whether required parameters are set. If the request fails the precheck, the corresponding error code is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the request. This is the default value. If the request passes the precheck, a 2XX HTTP status code is returned and the resource is queried.
IsDefault	Boolean	No	false	Specifies whether the VPC is the default one. Valid values: • **false**: no (default) • **true**: yes

Response parameters

Parameter	Type	Example	Description
AssociatedCens	Array of AssociatedCen		The list of Cloud Enterprise Network (CEN) instances that are associated with the VPC. If the VPC is not associated with a CEN instance, no value is returned.
AssociatedCen			

Parameter	Type	Example	Description
CenId	String	cen-7qthudw0ll6jmc****	The ID of the CEN instance that is associated with the VPC.
CenOwnerId	Long	111111111111	The ID of the Alibaba Cloud account to which the CEN instance belongs.
CenStatus	String	Attached	The state of the associated CEN instance. **Attached** is returned only when the VPC is associated with a CEN instance.
CidrBlock	String	192.168.0.0/16	The IPv4 CIDR block of the VPC.
ClassicLinkEnabled	Boolean	false	Indicates whether the ClassicLink feature is enabled. Valid values: • **true**: enabled • **false** (default) disabled
CloudResources	Array of CloudResourceSetType		The list of resources deployed in the VPC.
CloudResourceSetType			
ResourceCount	Integer	1	The number of resources deployed in the VPC.
ResourceType	String	VSwitch	The type of resources deployed in the VPC. Valid values: • **VSwitch**: vSwitches • **VRouter**: vRouters • **RouteTable**: route tables
CreationTime	String	2020-10-16T07:31:09Z	The time when the VPC was created.
Description	String	VPC	The description of the VPC.
DhcpOptionsSetId	String	dopt-o6w0df4epg9zo8isy****	The ID of the DHCP options set.
DhcpOptionsSetStatus	String	Available	The state of the DHCP options set. Valid values: • **Available**: The DHCP options set is available for use. • **InUse**: The DHCP options set is being used. • **Deleted**:The DHCP options set is deleted. • **Pending**: The DHCP options set is being configured.
Ipv6CidrBlock	String	2408:XXXX:0:a600::/56	The IPv6 CIDR block of the VPC.
Ipv6CidrBlocks	Array of Ipv6CidrBlock		The IPv6 CIDR block of the VPC.
Ipv6CidrBlock			
Ipv6CidrBlock	String	2408:XXXX:0:6a::/56	The IPv6 CIDR block of the VPC.

Parameter	Type	Example	Description
Ipv6Isp	String	BGP	The Internet service provider (ISP) for IPv6 addresses of the VPC. Valid values: • **BGP**(default): Alibaba Cloud BGP IPv6 • **ChinaMobile**: China Mobile (single line) • **ChinaUnicom**: China Unicom (single line) • **ChinaTelecom**: China Telecom (single line) **Note** If your Alibaba Cloud account is allowed to activate single-ISP bandwidth, you can set the parameter to **ChinaTelecom**, **ChinaUnicom**, and **ChinaMobile**.
IsDefault	Boolean	false	Indicates whether the VPC is the default one. Valid values: • **true**: yes • **false**: no (default)
OwnerId	Long	12345678	The ID of the Alibaba Cloud account to which the VPC belongs.
RegionId	String	cn-hangzhou	The ID of the region where the VPC is deployed.
RequestId	String	7486AE4A-129D-43DB-A714-2432C074BA04	The ID of the request.
ResourceGroupId	String	rg-acfmxazbvgb4ph****	The ID of the resource group.
SecondaryCidrBlocks	List	192.168.0.0/16	The secondary IPv4 CIDR block of the VPC.
Status	String	Available	The state of the VPC. Valid values: • **Available**: The VPC is available. • **Pending**: The VPC is being configured.
UserCidrs	List	172.16.0.1/24	The user CIDR block. Separate multiple CIDR blocks with commas (,). You can specify at most three CIDR blocks.
VRouterId	String	vrt-bp1jso6ng1at0ajsc****	The ID of the vRouter that belongs to the VPC.
VSwitchIds	List	{"VSwitchId": ["vsw-bp14cagpfysr29feg****"]}	The list of vSwitches deployed in the VPC.
VpcId	String	vpc-bp18sth14qii3pnvo****	The ID of the virtual private cloud (VPC).
VpcName	String	doctest2	The name of the VPC.

Examples

Sample requests

```
http(s)://vpc.aliyuncs.com/?Action=DescribeVpcAttribute
&RegionId=cn-hangzhou
&VpcId=vpc-bp18sth14qii3pnv****
&<Common request parameters>
```

Sample success responses

`XML` format


```
<DescribeVpcAttributeResponse>
 <IsDefault>false</IsDefault>
 <Status>Available</Status>
 <DhcpOptionsSetStatus>Available</DhcpOptionsSetStatus>
 <Description>VPC</Description>
 <ResourceGroupId>rg-acfmxazbvgb4ph****</ResourceGroupId>
 <ClassicLinkEnabled>false</ClassicLinkEnabled>
 <RequestId>7486AE4A-129D-43DB-A714-2432C074BA04</RequestId>
 <VSwitchIds>
    <VSwitchId>{"VSwitchId": [ "vsw-bp14cagpfysr29feg****" ]}</VSwitchId>
 </VSwitchIds>
 <SecondaryCidrBlocks>
    <SecondaryCidrBlock>192.168.0.0/16</SecondaryCidrBlock>
 </SecondaryCidrBlocks>
 <CidrBlock>192.168.0.0/16</CidrBlock>
 <UserCidrs>
    <UserCidr>172.16.0.1/24</UserCidr>
 </UserCidrs>
 <VRouterId>vrt-bp1jso6ng1at0ajsc****</VRouterId>
 <DhcpOptionsSetId>dopt-o6w0df4epg9zo8isy****</DhcpOptionsSetId>
 <OwnerId>12345678</OwnerId>
 <VpcId>vpc-bp18sth14qii3pnvo****</VpcId>
 <AssociatedCens>
    <AssociatedCen>
       <CenStatus>Attached</CenStatus>
       <CenOwnerId>111111111111</CenOwnerId>
       <CenId>cen-7qthudw0ll6jmc****</CenId>
    </AssociatedCen>
 </AssociatedCens>
 <CreationTime>2020-10-16T07:31:09Z</CreationTime>
 <VpcName>doctest2</VpcName>
 <RegionId>cn-hangzhou</RegionId>
 <Ipv6CidrBlock>2408:XXXX:0:a600::/56</Ipv6CidrBlock>
 <Ipv6CidrBlocks>
    <Ipv6CidrBlock>
       <Ipv6Isp>BGP</Ipv6Isp>
       <Ipv6CidrBlock>2408:XXXX:0:6a::/56</Ipv6CidrBlock>
    </Ipv6CidrBlock>
 </Ipv6CidrBlocks>
 <CloudResources>
    <CloudResourceSetType>
       <ResourceCount>1</ResourceCount>
       <ResourceType>VSwitch</ResourceType>
    </CloudResourceSetType>
 </CloudResources>
</DescribeVpcAttributeResponse>
```


`JSON` format

```
{
  "DescribeVpcAttributeResponse": {
    "IsDefault": false,
    "Status": "Available",
    "DhcpOptionsSetStatus": "Available",
    "Description": "VPC",
    "ResourceGroupId": "rg-acfmxazbvgb4ph****",
    "ClassicLinkEnabled": false,
    "RequestId": "7486AE4A-129D-43DB-A714-2432C074BA04",
    "VSwitchIds": {
      "VSwitchId": "{\"VSwitchId\": [ \"vsw-bp14cagpfysr29feg****\" ]}"
    },
    "SecondaryCidrBlocks": {
      "SecondaryCidrBlock": "192.168.0.0/16"
    },
    "CidrBlock": "192.168.0.0/16",
    "UserCidrs": {
      "UserCidr": "172.16.0.1/24"
    },
    "VRouterId": "vrt-bp1jso6ng1at0ajsc****",
    "DhcpOptionsSetId": "dopt-o6w0df4epg9zo8isy****",
    "OwnerId": 12345678,
    "VpcId": "vpc-bp18sth14qii3pnvo****",
    "AssociatedCens": {
      "AssociatedCen": {
        "CenStatus": "Attached",
        "CenOwnerId": 111111111111,
        "CenId": "cen-7qthudw0ll6jmc****"
      }
    },
    "CreationTime": "2020-10-16T07:31:09Z",
    "VpcName": "doctest2",
    "RegionId": "cn-hangzhou",
    "Ipv6CidrBlock": "2408:XXXX:0:a600::/56",
    "Ipv6CidrBlocks": {
      "Ipv6CidrBlock": {
        "Ipv6Isp": "BGP",
        "Ipv6CidrBlock": "2408:XXXX:0:6a::/56"
      }
    },
    "CloudResources": {
      "CloudResourceSetType": {
        "ResourceCount": 1,
        "ResourceType": "VSwitch"
      }
    }
  }
}
```


Error codes

HttpCode	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because unknown errors have occurred.
400	IncorrectVpcStatus	Current VPC status does not support this operation.	The error message returned because the state of the VPC does not support this operation.
404	InvalidVpcId.NotFound	Specified VPC does not exist.	The error message returned because the specified VPC does not exist.

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

7.6. DisableVpcClassicLink

Disables ClassicLink.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DisableVpcClassicLink	The name of this action. Valid value: **DisableVpcClassicLink**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the target VPC belongs. To query the region ID, call DescribeRegions.
VpcId	String	Yes	vpc-bp1m7v25emi1h5mtc****	The ID of the VPC for which ClassicLink is to be disabled.
ClientToken	String	No	d7d24a21-f4ba-4454-9173-b3828dae492b	The client token that guarantees the idempotence of the request. The value of this parameter is generated by the client and is unique among different requests. The **ClientToken** 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 value	Description
RequestId	String	5BE01CD7-5A50-472D-AC14-CA181C5C03BE	The ID of the request.

Examples

Request example

```
http(s)://vpc.aliyuncs.com/? Action=DisableVpcClassicLink
&RegionId=cn-hangzhou
&VpcId=vpc-bp1m7v25emi1h5mtc****
&<CommonParameters>
```

Response example

`XML` format

```
<DisableVpcClassicLinkResponse>
  <RequestId>AE65530E-8436-4FB1-8217-DCD35712AC89</RequestId>
</DisableVpcClassicLinkResponse>
```

`JSON` format

```
{
 "RequestId":"AE65530E-8436-4FB1-8217-DCD35712AC89"
}
```

Errors

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	Specified value of "regionId" is not supported.	The specified RegionId does not exist.

HTTP status code	Error code	Error message	Description
403	Forbbiden	User not authorized to operate on the specified resource.	You are not authorized to operate on this resource.
500	InternalError	The request processing has failed due to some unknown error.	The request failed to be processed due to unknown errors.
400	IncorrectVpcStatus	Current VPC status does not support this operation.	The current status of the VPC does not support the action.
404	InvalidVpcId.NotFound	Specified VPC does not exist.	The specified VPC does not exist.
404	DependencyViolation.Instance	ClassicLink Instances exist in VPC.	The specified VPC is associated with undeleted cloud instances. VPC deletion failed.

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

7.7. EnableVpcClassicLink

Enables ClassicLink.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	EnableVpcClassicLink	The name of this action. Valid value: **EnableVpcClassicLink**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the target VPC belongs. To query the region ID, call DescribeRegions.
VpcId	String	Yes	vpc-bp1m7v25emi1h5mtc****	The ID of the VPC for which ClassicLink is to be enabled.
ClientToken	String	No	d7d24a21-f4ba-4454-9173-b3828dae492b	The client token that guarantees the idempotence of the request. The value of this parameter is generated by the client and 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 value	Description
RequestId	String	5BE01CD7-5A50-472D-AC14-CA181C5C03BE	The ID of the request.

Examples

Request example

```
http(s)://vpc.aliyuncs.com/? Action=EnableVpcClassicLink
&RegionId=cn-hangzhou
&VpcId=vpc-bp1m7v25emi1h5mtc****
&<CommonParameters>
```

Response example

`XML` format

```
<EnableVpcClassicLinkResponse>
    <RequestId>AE65530E-8436-4FB1-8217-DCD35712AC89</RequestId>
</EnableVpcClassicLinkResponse>
```

`JSON` format

```
{
 "RequestId":"AE65530E-8436-4FB1-8217-DCD35712AC89"
}
```

Errors

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	Specified value of "regionId" is not supported.	The specified region ID does not exist.
400	IncorrectVpcStatus	Current VPC status does not support this operation.	The current status of the VPC does not support the action.
404	InvalidVpcId.NotFound	Specified VPC does not exist.	The specified VPC does not exist.
404	IncorrectClassicLinkStatus	Specified VPC classicLink enabled.	ClassicLink is already enabled for the specified VPC.

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

7.8. GrantInstanceToCen

Grants the permission of a network instance to a CEN instance.

Limits

Before you can attach a network instance under an account to a CEN instance under another account, you must use this API to authorize the CEN instance from the account where the network instance is located.

> **Note** When you call this API, you must use `vpc.aliyuncs.com` as the domain name. The API version is the one released on April 28, 2016.

Debug

Use OpenAPI Explorer to perform debug operations and generate SDK code examples.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	GrantInstanceToCen	The name of this action. Value: **GrantInstanceToCen**.
CenId	String	Yes	cen-7qthudw0ll6jmc****	The ID of the CEN instance to be authorized.
CenOwnerId	Long	Yes	123456789	The UID of the account to which the CEN instance belongs.
InstanceId	String	Yes	vpc-uf6o8d1dj8sjwxi6o****	The ID of the network instance.

Parameter	Type	Required?	Example value	Description
InstanceType	String	Yes	VPC	The type of the network instance. Valid values: • **VPC**: VPC • **VBR**: VBR • **CCN**: CCN
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the network instance belongs.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that guarantees the idempotence of the request. The value of this parameter is generated by the client. The value must be unique among different requests and must be 1 to 64 ASCII characters in length.

Response parameters

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

Examples

Request example

```
http(s)://[Endpoint]/? Action=GrantInstanceToCen
&CenId=cen-7qthudw0ll6jmc****
&CenOwnerId=123456789
&InstanceId=vpc-uf6o8d1dj8sjwxi6o****
&RegionId=cn-hangzhou
&<CommonParameters>
```

Response example

`XML` format

```
<GrantInstanceToCenResponse>
    <RequestId>0C2EE7A8-74D4-4081-8236-CEBDE3BBCF50</RequestId>
</GrantInstanceToCenResponse>
```

`JSON` format

```
{
 "RequestId":"0C2EE7A8-74D4-4081-8236-CEBDE3BBCF50"
}
```

Errors

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

7.9. DeletionProtection

Enables deletion protection for an instance.

Description

After you enable deletion protection for an instance, you cannot delete the instance. You must disable deletion protection before you can delete the instance.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeletionProtection	The operation that you want to perform. Set the value to **DeletionProtection**.
InstanceId	String	Yes	eip-uf6id7gvguruxe41v****	The ID of the instance for which you want to enable deletion protection.
ProtectionEnable	Boolean	Yes	true	Specifies whether to enable deletion protection. Valid values: • **true**: enables deletion protection. • **false**: disables deletion protection.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the instance for which you want to enable deletion protection is deployed. You can call the DescribeRegions operation to query region IDs.
Type	String	Yes	EIP	The type of instance. Valid values: • **EIP**: an elastic IP address (EIP) • **CBWP**: an EIP bandwidth plan • **NATGW**: a NAT gateway
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. **ClientToken** can contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How can I ensure idempotence?

Response parameters

Parameter	Type	Example	Description
RequestId	String	BAAEF103-96C4-4454-9210-066F2405F511	The ID of the request.

Examples

Sample requests

```
http(s)://vpc.aliyuncs.com/?Action=DeletionProtection
&InstanceId=eip-uf6id7gvguruxe41v****
&ProtectionEnable=true
&RegionId=cn-hangzhou
&Type=EIP
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeletionProtectionResponse>
    <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</DeletionProtectionResponse>
```

`JSON` format

```
{
 "RequestId":"CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidAllocationId.NotFound	Specified allocation ID is not found	The error message returned because the specified EIP does not exist. Check whether the specified value of the parameter is valid.

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

7.10. AssociateVpcCidrBlock

Adds a secondary IPv4 CIDR block to a virtual private cloud (VPC).

API limits

By default, you can add only one secondary IPv4 CIDR block to each VPC. To request a quota increase, submit a ticket.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AssociateVpcCidrBlock	The operation that you want to perform. Set the value to **AssociateVpcCidrBlock**.
RegionId	String	Yes	ch-hangzhou	The ID of the region where the VPC is deployed. You can call the DescribeRegions operation to query region IDs.
VpcId	String	Yes	vpc-o6wrloqsdqc9io3mg****	The ID of the VPC.
SecondaryCidrBlock	String	No	192.168.0.0/16	The secondary IPv4 CIDR block. You can specify one of the following standard IPv4 CIDR blocks or their subnets as the secondary IPv4 CIDR block: 192.168.0.0/16, 172.16.0.0/12, and 10.0.0.0/8. To use a public CIDR block as the secondary IPv4 CIDR block, submit a ticket. When you add a secondary IPv4 CIDR block, take note of the following rules: • The CIDR block cannot start with 0. The subnet mask must be 8 to 24 bits in length. • The secondary CIDR block cannot overlap with the primary CIDR block or an existing secondary CIDR block.

Parameter	Type	Required	Example	Description
Ipv6Isp	String	No	BGP	The Internet service provider (ISP) for IPv6 addresses of the VPC. Valid values: • **BGP**(default): Alibaba Cloud BGP IPv6 • **ChinaMobile**: China Mobile (single line) • **ChinaUnicom**: China Unicom (single line) • **ChinaTelecom**: China Telecom (single line) **Note** If your Alibaba Cloud account is allowed to activate single-ISP bandwidth, you can set the ISP field to ChinaTelecom, ChinaUnicom, or ChinaMobile.
IpVersion	String	No	IPV4	The version of the IP address. Valid values: • **IPv4**: IPv4 addresses • **IPV6**: IPv6 addresses. If **IpVersion** is set to **IPV6**, and **SecondaryCidrBlock** is not set. You can assign IPv6 addresses to the VPC.

Response parameters

Parameter	Type	Example	Description
RequestId	String	C1221A1F-2ACD-4592-8F27-474E02883159	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=AssociateVpcCidrBlock
&RegionId=ch-hangzhou
&VpcId=vpc-o6wrloqsdqc9io3mg****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AssociateVpcCidrBlockResponse>
    <RequestId>C1221A1F-2ACD-4592-8F27-474E02883159</RequestId>
</AssociateVpcCidrBlockResponse>
```

`JSON` format

```
{
 "RequestId":"C1221A1F-2ACD-4592-8F27-474E02883159"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidCidrBlock.Malformed	Specified CIDR block is not valid.	The error message returned because the format of the specified CIDR block is invalid.
403	Forbbiden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform this operation on the specified resource. You can apply for the permissions and try again.

HttpCode	Error code	Error message	Description
400	MissingParam.SecondaryCidrBlockOrIpv6CidrBlock	Either SecondaryCidrBlock or Ipv6CidrBlock must be specified.	The error message returned because the secondary IPv4 CIDR block or the IPv6 CIDR block is not set.
400	MissingParam.VpcId	You must specify VpcId.	The error message returned because VpcId is not set.

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

7.11. UnassociateVpcCidrBlock

Deletes a secondary IPv4 CIDR block from a VPC.

API description

Before deleting a secondary IPv4 CIDR block attached to a VPC, you must delete the vSwitch created with the secondary IPv4 CIDR block. For more information, see DeleteVSwitch.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	UnassociateVpcCidrBlock	The name of this action. Valid value: **UnassociateVpcCidrBlock**.
RegionId	String	Yes	ch-hangzhou	The region of the VPC to which the secondary IPv4 CIDR block to be deleted belongs. To query the region ID, call DescribeRegions.
VpcId	String	Yes	vpc-o6wrloqsdqc9io3mg****	The ID of the VPC to which the secondary IPv4 CIDR block to be deleted belongs.
SecondaryCidrBlock	String	No	192.168.0.0/16	The secondary IPv4 CIDR block to be deleted.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	C1221A1F-2ACD-4592-8F27-474E02883159	The ID of the request.

Examples

Request example

```
http(s)://vpc.aliyuncs.com/? Action=UnassociateVpcCidrBlock
&RegionId=ch-hangzhou
&VpcId=vpc-o6wrloqsdqc9io3mg****
&<CommonParameters>
```

Response example

`XML` format

```
<UnassociateVpcCidrBlockResponse>
    <RequestId>C1221A1F-2ACD-4592-8F27-474E02883159</RequestId>
</UnassociateVpcCidrBlockResponse>
```

`JSON` format

```
{
 "RequestId":"C1221A1F-2ACD-4592-8F27-474E02883159"
}
```

Errors

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

7.12. DescribeGrantRulesToCen

Queries one or more CEN instances that are granted cross-account permission of a specified network instance (VPC, VBR, or CCN).

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DescribeGrantRulesToCen	The name of this action. Value: **DescribeGrantRulesToCen**.
InstanceId	String	Yes	vpc-bp18sth14qii3pnvc****	The ID of the target network instance.
InstanceType	String	Yes	VPC	The type of the target network instance. Valid values: • **VPC**: Virtual Private Cloud (VPC). • **VBR**: Virtual Border Router (VBR). • **CCN**: Cloud Connect Network (CCN).
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the network instance belongs.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that guarantees the idempotence of the request. The value of this parameter is generated by the client and is unique among different requests. The **ClientToken** can contain only ASCII characters, and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
ResourceGroupId	String	No	rg-acfmxazb4p****	The ID of the resource group to which the network belongs.

Response parameters

Parameter	Type	Example value	Description
CenGrantRules	Array		The authorization information of the network instance.
CbnGrantRule			The authorization information of the network instance.
CenInstanceId	String	cen-9gsm1q2yh1prpt****	The ID of the authorized CEN instance.
CenOwnerId	Long	1000000000	The UID of the account to which the authorized CEN instance belongs.

Parameter	Type	Example value	Description
CreationTime	String	2019-11-15T09:26:36Z	The time when the instance was created.
PageNumber	Integer	1	The current page number.
PageSize	Integer	10	The number of entries per page.
RequestId	String	F5BB78C8-5F41-464F-B9FF-5E0A7198BA26	The ID of the request.
TotalCount	Integer	1	The total number of entries.

Examples

Request example

```
http(s)://vpc.aliyuncs.com/? Action=DescribeGrantRulesToCen
&InstanceId=vpc-bp18sth14qii3pnvc****
&InstanceType=VPC
&RegionId=cn-hangzhou
&<CommonParameters>
```

Response example

`XML` format

```
<DescribeGrantRulesToCenResponse>
 <PageNumber>1</PageNumber>
 <CenGrantRules>
    <CbnGrantRule>
       <CreationTime>2019-11-15T09:26:36Z</CreationTime>
       <CenInstanceId>cen-9gsm1q2yh1prpt****</CenInstanceId>
       <CenOwnerId>1000000000</CenOwnerId>
    </CbnGrantRule>
 </CenGrantRules>
 <TotalCount>1</TotalCount>
 <PageSize>10</PageSize>
 <RequestId>F5BB78C8-5F41-464F-B9FF-5E0A7198BA26</RequestId>
</DescribeGrantRulesToCenResponse>
```

`JSON` format

```
{
 "PageNumber":1,
 "CenGrantRules":{
 "CbnGrantRule":[
  {
   "CreationTime":"2019-11-15T09:26:36Z",
   "CenInstanceId":"cen-9gsm1q2yh1prpt****",
   "CenOwnerId":"1000000000"
  }
 ]
 },
 "TotalCount":1,
 "PageSize":10,
 "RequestId":"F5BB78C8-5F41-464F-B9FF-5E0A7198BA26"
}
```

Errors

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

7.13. RevokeInstanceFromCen

Revokes the authorization of a network instance from a CEN instance.

Before you begin

When you call this API action, you must use `vpc.aliyuncs.com` as the domain name. The API version is the one released on April 28, 2016.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	RevokeInstanceFromCen	The name of this action. Value: **RevokeInstanceFromCen**.
CenId	String	Yes	cen-7qthudw0ll6jmc****	The ID of the CEN instance from which the authorization is to be revoked.
CenOwnerId	Long	Yes	123456789	The UID of the account to which the target CEN instance belongs.
InstanceId	String	Yes	vpc-uf6o8d1dj8sjwxi6o****	The ID of the network instance.
InstanceType	String	Yes	VPC	The type of the network instance. Valid values: • **VPC**: Virtual Private Cloud (VPC). • **VBR**: Virtual Border Router (VBR). • **CCN**: Cloud Connect Network (CCN).
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the network instance belongs.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that guarantees the idempotence of the request. The value of this parameter is generated by the client and is unique among different requests. The **ClientToken** 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 value	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Request example

```
http(s)://vpc.aliyuncs.com/? Action=RevokeInstanceFromCen
&CenId=cen-7qthudw0ll6jmc****
&CenOwnerId=123456789
&InstanceId=vpc-uf6o8d1dj8sjwxi6o****
&InstanceType=VPC
&RegionId=cn-hangzhou
&<CommonParameters>
```

Response example

`XML` format

```
<RevokeInstanceFromCenResponse>
   <RequestId>0C2EE7A8-74D4-4081-8236-CEBDE3BBCF50</RequestId>
</RevokeInstanceFromCenResponse>
```

`JSON` format

```
{
 "RequestId":"0C2EE7A8-74D4-4081-8236-CEBDE3BBCF50"
}
```

Errors

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

7.14. MoveResourceGroup

You can call the MoveResourceGroup operation to change the resource group of a cloud resource.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	MoveResourceGroup	The operation that you want to perform. Set the value to **MoveResourceGroup**.
NewResourceGroupId	String	Yes	rg-acfm3peow3k****	The ID of the resource group to which the cloud resource instance is to be moved. **Note** You can use resource groups to classify cloud resources under your Alibaba Cloud account to facilitate resource management and permission control. For more information, see What is resource management?.
RegionId	String	Yes	cn-hangzhou	The region ID of the resource. You can call the DescribeRegions operation to obtain the region ID.
ResourceId	String	Yes	vpc-hp31psbg8ec3023s6****	The ID of the cloud resource that you want to move to the specified resource group.

Parameter	Type	Required	Example	Description
ResourceType	String	Yes	vpc	The type of the cloud resources managed by the resource group. Valid values: • **vpc**: Virtual Private Cloud. • **eip**: Elastic IP address. • **bandwidthpackage**: EIP Bandwidth Plan.

Response parameters

Parameter	Type	Example	Description
RequestId	String	F84A05B3-7275-4C8B-8AEE-9088C639C271	The ID of the request.

Examples

Sample request

```
http(s)://[Endpoint]/? Action=MoveResourceGroup
&NewResourceGroupId=rg-acfm3peow3k****
&RegionId=cn-hangzhou
&ResourceId=vpc-hp31psbg8ec3023s6****
&ResourceType=1
&<Common request parameters>
```

Sample success responses

`XML` format

```
<MoveResourceGroupResponse>
    <RequestId>F84A05B3-7275-4C8B-8AEE-9088C639C271</RequestId>
</MoveResourceGroupResponse>
```

`JSON` format

```
{
 "RequestId": "F84A05B3-7275-4C8B-8AEE-9088C639C271"
}
```

Error codes

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

8.VSwitch

8.1. DescribeVSwitches

Queries one or more VSwitches.

API description

This action only verifies the validity of parameters and does not verify the dependency relationship between parameters. The returned result is the intersection of all conditions.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DescribeVSwitches.	The name of this action. Value: **DescribeVSwitches**
VpcId	String	No	vpc-25cdvfeq58pl****	The ID of the VPC to which the VSwitch belongs.
VSwitchId	String	No	vsw-23dscddcffvf3****	The ID of the VSwitch to be queried.
ZoneId	String	No	cn-hangzhou-d	The ID of the zone to which the VSwitch belongs. To query the zone ID, call DescribeZones.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the VSwitch belongs. To query the region ID, call DescribeRegions.
VSwitchName	String	No	VSwitch-1	The name of the VSwitch.
DryRun	Boolean	No	false	Indicates whether to check this request only. Valid values: • **true**: Send a check request without querying the resource status. The system checks whether the AccessKey is valid, whether the RAM user is authorized, and whether the required parameters are set. If the check fails, a corresponding error is returned. If the check succeeds, the error `DryRunOperation` is returned. • **false**(default): Send a request, return the 2XX HTTP status code after the check, and query the resource status directly.
IsDefault	Boolean	No	true	Indicates whether to query the default VSwitches in the specified region. • **true** (default): Query the default VSwitches in the specified region. • **false**: Do not query the default VSwitches in the specified region. If you do not specify this parameter, the system queries all VSwitches in the specified region.
RouteTableId	String	No	vtb-bp145q7glnuzdvzu2****	The ID of the route table.

Parameter	Type	Required?	Example value	Description
ResourceGroupId	String	No	rg-bp67acfmxazb4ph****	The ID of the resource group to which the VSwitch belongs.
PageNumber	Integer	No	1	The page number. Default value: **1**.
PageSize	Integer	No	10	The number of rows per page. Maximum value: **50**. Default value: **10**.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	9A572171-4E27-40D1-BD36-D26C9E71E29E	The ID of the request.
TotalCount	Integer	1	The total number of entries.
PageNumber	Integer	1	The current page number.
PageSize	Integer	10	The number of entries per page.
VSwitches	Array		Details of VSwitches.
VSwitchId	String	vsw-25bcdxs7pv1****	The ID of the VSwitch.
VpcId	String	vpc-257gcdcdq64****	The ID of the VPC to which the VSwitch belongs.
Status	String	Available	The status of the VSwitch. Valid values: • **Pending**: The VSwitch is being configured. • **Available**: The VSwitch is available.
CidrBlock	String	172.16.0.0/24	The IPv4 CIDR block of the VSwitch.
Ipv6CidrBlock	String	2408:4004:0:2900::/64	The IPv6 CIDR block of the VSwitch.
ZoneId	String	cn-hangzhou-b	The zone to which the VSwitch belongs.
AvailableIpAddressCount	Long	1	The number of available IP addresses in the VSwitch.
Description	String	VSwitchDescription	The description of the VSwitch.
VSwitchName	String	VSwitch-1	The name of the VSwitch.
CreationTime	String	2018-01-18T12:43:57Z	The time at which the VSwitch was created.
IsDefault	Boolean	true	Indicates whether the VSwitch is a default VSwitch. • **true**: The specified VSwitch is a default VSwitch. • **false**: The VSwitch is not a default VSwitch.

Parameter	Type	Example value	Description
ResourceGroupId	String	rg-acfmxazb4ph6aiy****	The ID of the resource group to which the VSwitch belongs.
NetworkAclId	String	111	
Tags	Array		The tag information of the VSwitch.
Key	String	department	The tag key associated with the VSwitch.
Value	String	dev	The tag value associated with the VSwitch.
RouteTable	Struct		Details of the route table.
RouteTableId	String	vrt-bp145q7glnuzdv****	The ID of the route table associated with the VSwitch.
RouteTableType	String	System	The type of the route table associated with the VSwitch. Valid values: • **System**: System route table • **Custom**: Custom route table

Examples

Request example

```
http(s)://vpc.aliyuncs.com/? Action=DescribeVSwitches
&RegionId=cn-hangzhou
&<CommonParameters>
```

Response example

`XML` format

```
<DescribeVSwitchesResponse>
  <PageNumber>1</PageNumber>
  <VSwitches>
    <VSwitch>
      <RouteTable>
        <RouteTableId>vtb-hp3hk68xybfogay8g****</RouteTableId>
        <RouteTableType>System</RouteTableType>
      </RouteTable>
      <Description></Description>
      <IsDefault>false</IsDefault>
      <AvailableIpAddressCount>252</AvailableIpAddressCount>
      <ResourceGroupId>rg-acfmxazb4ph****</ResourceGroupId>
      <ZoneId>cn-huhehaote-a</ZoneId>
      <VSwitchId>vsw-hp3l11aj1tx5g8qwt****</VSwitchId>
      <NetworkAclId></NetworkAclId>
      <VpcId>vpc-hp37qeafxj2sfs69s****</VpcId>
      <CreationTime>2019-11-11T03:39:17Z</CreationTime>
      <Status>Available</Status>
      <CidrBlock>192.168.0.0/24</CidrBlock>
      <Ipv6CidrBlock>2408:4004:0:a600::/64</Ipv6CidrBlock>
      <VSwitchName>CL-IPv6-VSW</VSwitchName>
    </VSwitch>
  </VSwitches>
  <TotalCount>1</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>95C297E1-E9F7-4EB8-BE42-82C8CEBF994D</RequestId>
</DescribeVSwitchesResponse>
```

JSON format


```
{
 "PageNumber": 1,
 "VSwitches": {
  "VSwitch": [
   {
    "RouteTable": {
     "RouteTableId": "vtb-hp3hk68xybfogay8g****",
     "RouteTableType": "System"
    },
    "Description": "",
    "IsDefault": false,
    "AvailableIpAddressCount": 252,
    "ResourceGroupId": "rg-acfmxazb4ph****",
    "ZoneId": "cn-huhehaote-a",
    "VSwitchId": "vsw-hp3l11aj1tx5g8qwt****",
    "NetworkAclId": "",
    "VpcId": "vpc-hp37qeafxj2sfs69s****",
    "CreationTime": "2019-11-11T03:39:17Z",
    "Status": "Available",
    "CidrBlock": "192.168.0.0/24",
    "Ipv6CidrBlock": "2408:4004:0:a600::/64",
    "VSwitchName": "CL-IPv6-VSW"
   }
  ]
 },
 "TotalCount": 1,
 "PageSize": 10,
 "RequestId": "95C297E1-E9F7-4EB8-BE42-82C8CEBF994D"
}
```


Errors

HTTP status code	Error code	Error message	Description
404	InvalidVSwitchId.NotFound	VSwitch not exist.	The specified VSwitch does not exist.
400	Forbidden.VpcNotFound	Specified VPC can not found.	The specified VPC does not exist.

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

8.2. ModifyVSwitchAttribute

Modifies the name and description of a vSwitch.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyVSwitchAttribute	The operation that you want to perform. Set the value to **ModifyVSwitchAttribute**.
VSwitchId	String	Yes	vsw-25nacdfvue4****	The ID of the vSwitch.

Parameter	Type	Required	Example	Description
VSwitchName	String	No	VSwitch-1	The new name for the vSwitch. The name must be 2 to 128 characters in length, and can contain letters, digits, periods (.), underscores (_), and hyphens (-). The name must start with a letter. It cannot start with `http://` or `https://`.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the vSwitch is deployed. You can call the DescribeRegions operation to query the most recent region list.
Description	String	No	This is my vswitch.	The new description for the vSwitch. The description must be 2 to 256 characters in length. It must start with a letter but cannot start with `http://` or `https://`.
Ipv6CidrBlock	Integer	No	10	The last eight bits of the IPv6 CIDR block of the vSwitch. Valid values: **0** to **255**. You can set this parameter only when the IPv6 feature is enabled for the virtual private cloud (VPC) to which the vSwitch belongs.
EnableIPv6	Boolean	No	true	Specifies whether to enable the IPv6 feature for the vSwitch. Valid values: • **true**: enables the IPv6 feature. • **false**: disables the IPv6 feature. This is the default value.
VpcIpv6CidrBlock	String	No	2408:XXXX:312:3e00::/56	The IPv6 CIDR block of the VPC to which the vSwitch belongs. You can set this parameter only when the IPv6 feature is enabled for the VPC.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyVSwitchAttribute
&VSwitchId=vsw-25nacdfvue4****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyVSwitchAttributeResponse>
  <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</ModifyVSwitchAttributeResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidVSwitchId.NotFound	The specified virtual switch does not exists.	The error message returned because the specified vSwitch does not exist. Check whether the specified ID is valid.
400	InvalidVSwitchName.Malformed	Specified virtual switch name is not valid.	The error message returned because the format of the name is invalid. Check whether the specified name is valid.
400	InvalidVSwitchDiscription.Malformed	Specified virtual switch description is not valid.	The error message returned because the format of the description is invalid. Check whether the specified description is valid.
400	InvalidVSwitchDiscription.Malformed	Specified virtual switch description is not valid.	The error message returned because the description of the vSwitch is invalid.
400	UnsupportedFeature.CloudBoxIpv6	The IPv6 feature is not supported by cloud box.	The error message returned because cloud boxes do not support creating IPv6 addresses.

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

8.3. DescribeVSwitchAttributes

Queries the configurations of a VSwitch.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DescribeVSwitchAttributes	The name of this action. Value: **DescribeVSwitchAttributes**.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the VSwitch belongs. To query the region ID, call DescribeRegions.
VSwitchId	String	Yes	vsw-25naue4g****	The ID of the VSwitch to be queried.
DryRun	Boolean	No	false	Indicates whether to check this request only. Valid values: • **true**: Sends a check request without querying the resource status. The system checks whether the AccessKey is valid, whether the RAM user is authorized, and whether the required parameters are set. If the check fails, corresponding errors are returned. If the check succeeds, the error code `DryRunOperation` is returned. • **false** (default): Sends a normal request, returns the 2XX HTTP status code after the check, and queries the resource status directly.

Response parameters

Parameter	Type	Example value	Description
AvailableIpAddressCount	Long	12	The number of available IP addresses.
CidrBlock	String	192.168.0.1/24	The IPv4 CIDR block of the VSwitch.
CreationTime	String	2017-08-22T10:40:25Z	The creation time of the VSwitch.
Description	String	abc	The description of the VSwitch.
Ipv6CidrBlock	String	2408:4004:0:6axx::/56	The IPv6 CIDR block of the VSwitch.
IsDefault	Boolean	false	Indicates whether the VSwitch is a default VSwitch. • **true**: The specified VSwitch is a default VSwitch. • **false**: The specified VSwitch is not a default VSwitch.
RequestId	String	7B48B4B9-1EAD-469F-B488-594DAB4B6A1A	The ID of the request.
ResourceGroupId	String	rg-acfmxazb4pbgfh****	The ID of the resource group.
RouteTable			The route table information of the VSwitch.
RouteTableId	String	vtb-bp145q7glnuzdv****	The ID of the route table associated with the VSwitch.
RouteTableType	String	System	The type of the route table associated with the VSwitch. Valid values: • **System**: System route table. • **Custom**: Custom route table.
Status	String	Pending	The status of the VSwitch. Valid values: • **Pending**: The VSwitch is being configured. • **Available**: The VSwitch is available.
VSwitchId	String	vsw-25b7pcdfvv15t****	The ID of the VSwitch.
VSwitchName	String	test	The name of the VSwitch.
VpcId	String	vpc-257gqcfv642n****	The ID of the VPC to which the VSwitch belongs.
ZoneId	String	cn-beijing-a	The zone to which the VSwitch belongs.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=DescribeVSwitchAttributes
&VSwitchId=vsw-25nauecdfv4g****
&<CommonParameters>
```

Response example

`XML` format

```
<DescribeVSwitchAttributesResponse>
  <RouteTable>
    <RouteTableId>vtb-hp3ngu1hkdutfakqn****</RouteTableId>
    <RouteTableType>System</RouteTableType>
  </RouteTable>
  <Description></Description>
  <IsDefault>false</IsDefault>
  <AvailableIpAddressCount>251</AvailableIpAddressCount>
  <ResourceGroupId>rg-acfmy45w7w2****</ResourceGroupId>
  <ZoneId>cn-huhehaote-a</ZoneId>
  <VSwitchId>vsw-hp3lyltb1dosj540y****</VSwitchId>
  <VpcId>vpc-hp34hflqqsjh3a3q7****</VpcId>
  <CreationTime>2019-01-07T04:54:14Z</CreationTime>
  <Status>Available</Status>
  <CidrBlock>192.168.0.0/24</CidrBlock>
  <RequestId>A31F062D-81F0-48BC-9771-915D6622D26A</RequestId>
  <VSwitchName>doc1</VSwitchName>
  <Ipv6CidrBlock>2408:4004:0:2900::/64</Ipv6CidrBlock>
  <CloudResources></CloudResources>
</DescribeVSwitchAttributesResponse>
```

`JSON` format

```
{
 "RouteTable":{
  "RouteTableId":"vtb-hp3ngu1hkdutfakqn****",
  "RouteTableType":"System"
 },
 "Description":"",
 "IsDefault":false,
 "AvailableIpAddressCount":251,
 "ResourceGroupId":"rg-acfmy45w7w2****",
 "ZoneId":"cn-huhehaote-a",
 "VSwitchId":"vsw-hp3lyltb1dosj540y****",
 "VpcId":"vpc-hp34hflqqsjh3a3q7****",
 "CreationTime":"2019-01-07T04:54:14Z",
 "Status":"Available",
 "CidrBlock":"192.168.0.0/24",
 "RequestId":"A31F062D-81F0-48BC-9771-915D6622D26A",
 "Ipv6CidrBlock":"2408:4004:0:2900::/64",
 "VSwitchName":"doc1",
 "CloudResources":{
  "CloudResourceSetType":[]
 }
}
```

Errors

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

8.4. CreateVSwitch

Creates a vSwitch.

Description

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

- You can create at most 150 vSwitches in a virtual private cloud (VPC).
- The first IP address and last three IP addresses of each vSwitch CIDR block are reserved. For example, if the CIDR block of a vSwitch is 192.168.1.0/24, the IP addresses 192.168.1.0, 192.168.1.253, 192.168.1.254, and 192.168.1.255 are reserved.
- The number of instances in a vSwitch cannot exceed the remaining capacity of the VPC. The remaining capacity is the difference between 15,000 and the current number of instances.
- Each instance can belong to only one vSwitch.
- vSwitches do not support broadcasting or multicasting.

- After you create a vSwitch, you cannot modify its CIDR block.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateVSwitch	The operation that you want to perform. Set the value to **CreateVSwitch**.
CidrBlock	String	Yes	172.16.0.0/24	The CIDR block of the vSwitch. The vSwitch CIDR block must meet the following requirements: • The subnet mask of the CIDR block must be 16 to 29 bits in length. • The CIDR block of the vSwitch must fall within the range of the CIDR block of the VPC to which the vSwitch belongs. • The CIDR block of a vSwitch cannot be the same as the destination CIDR block in a route entry of the VPC. However, it can be a subset of the destination CIDR block.
VpcId	String	Yes	vpc-257gqcdfvx6n****	The ID of the VPC where you want to create the vSwitch.
ZoneId	String	Yes	cn-hangzhou-b	The ID of the zone where you want to create the vSwitch. You can call the DescribeZones operation to query the most recent zone list.
RegionId	String	Yes	cn-hangzhou	The ID of the region where you want to create the vSwitch. You can call the DescribeRegions operation to query the most recent region list.
Ipv6CidrBlock	Integer	No	12	The last eight bits of the IPv6 CIDR block of the vSwitch. Valid values: **0** to **255**.
Description	String	No	This is my vswitch.	The description of the vSwitch. The description must be 2 to 256 characters in length and must start with a letter. It cannot start with `http://` or `https://`.
VSwitchName	String	No	VSwitch-1	The name of the vSwitch. The name must be 2 to 128 characters in length and must start with a letter. It cannot start with `http://` or `https://`.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotency of the request. You can use the client to generate the value, but you must make sure 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.
VpcIpv6CidrBlock	String	No	2408:XXXX:0:6a::/56	The IPv6 CIDR block of the VPC.

Response parameters

Parameter	Type	Example	Description
VSwitchId	String	vsw-25navfgbue4g****	The ID of the vSwitch.
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://vpc.aliyuncs.com/?Action=CreateVSwitch
&CidrBlock=172.16.0.0/24
&VpcId=vpc-257gqcdfvx6n****
&ZoneId=cn-hangzhou-b
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateVSwitchResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
    <VSwitchId>vsw-25naue4cdvf****</VSwitchId>
</CreateVSwitchResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0",
  "VSwitchId": "vsw-25naue4cdvf****"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidZoneId.NotFound	Specified zone does not exist.	The error message returned because the ID of the zone is invalid.
404	InvalidVpcId.NotFound	Specified VPC does not exist.	The error message returned because the specified VPC does not exist.
400	InvalidVSwitchName.Malformed	Specified virtual switch name is not valid.	The error message returned because the format of the specified vSwitch name is invalid. Check whether the specified name is valid.
400	InvalidVSwitchDiscription.Malformed	Specified virtual switch description is not valid.	The error message returned because the description of the vSwitch is invalid.
400	ResourceNotAvailable	Resource you requested is not available in this region or zone.	The error message returned because you cannot create a vSwitch in the current region or zone.
400	InvalidParameter	Specified CIDR block is not valid in VPC.	The error message returned because the vSwitch CIDR block does not fall within the VPC CIDR block.

HttpCode	Error code	Error message	Description
400	InvalidCidrBlock.Overlapped	Specified CIDR block overlapped with other subnets.	The error message returned because the vSwitch CIDR block overlaps with another vSwitch CIDR block or the destination CIDR block of a custom route entry. Make sure that the vSwitch CIDR block does not overlap with another vSwitch CIDR block or the destination CIDR block of a route entry.
400	InvalidCidrBlock.Overlapped	Specified CIDR block overlapped with other entry.	The error message returned because the vSwitch CIDR block overlaps with another vSwitch CIDR block or the destination CIDR block of a custom route entry. Make sure that the vSwitch CIDR block does not overlap with another vSwitch CIDR block or the destination CIDR block of a route entry.
400	QuotaExceeded.VSwitch	Virtual switch quota exceeded.	The error message returned because the number of vSwitches has reached the upper limit. Reduce the number of vSwitches and try again later.
400	IncorrectRouteEntryStatus	Some route entry status blocked this operation.	The error message returned because one or more route entries in the current route table are in the Pending or Modifying state.
400	IncorrectVSwitchStatus	Some virtual switch is modifying within the same VPC.	The error message returned because multiple vSwitches are in the Modifying state in the same VPC. Try again later.
400	InvalidCirdrBlock.MaskLength	Specified CIDR block is not valid .	The error message returned because the format of the CIDR block is invalid.
400	IncorrectVpcStatus	Current VPC status does not support this operation.	The error message returned because the state of the VPC does not support this operation.
400	InvalidCidrBlock.Malformed	Specified CIDR block is not valid.	The error message returned because the format of the specified CIDR block is invalid.
400	MissingParameter	Miss mandatory parameter.	The error message returned because the required parameters values are missing. Check whether you have set all the required parameters before you call this operation.
400	IncorrectVSwitchStatus	VSwitch Creation simultaneously is not supported.	The error message returned because the system failed to create the vSwitch and one or more vSwitches that belong to the VPC are in the Creating state.
400	Forbidden.VpcNotFound	Specified VPC can not found.	The error message returned because the specified VPC does not exist. Check whether the specified VPC ID is valid.
400	UnsupportedFeature.CloudBoxIpv6	The IPv6 feature is not supported by cloud box.	The error message returned because cloud boxes do not support creating IPv6 addresses.
400	OperationDenied.VpcPeerExist	The operation is not allowed because the VPC peer exists.	The error message returned because the VPC has a peering connection.
400	OperationDenied.CenAttached	The operation is not allowed because the VPC is attached to CEN.	The error message returned because the VPC is attached to a Cloud Enterprise Network (CEN) instance.
400	OperationDenied.NatgwExist	The operation is not allowed because the NAT gateway exists in VPC.	The error message returned because the VPC has a NAT gateway.

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

8.5. DeleteVSwitch

Deletes a VSwitch from a VPC.

Before you begin

When you call this API action, note the following:

- Before deleting a VSwitch, you must delete all resources in the VSwitch, including ECS instances, SLB instances, and RDS instances.
- If the VSwitch is configured with SNAT entries or HaVips, make sure that the associated resources have been deleted.
- You can only delete the VSwitches that are in the available state.
- A VSwitch cannot be deleted if another VSwitch or a route entry is being created or deleted in the corresponding VPC.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DeleteVSwitch	The name of this action. Value: **DeleteVSwitch**.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the target VSwitch belongs.
VSwitchId	String	Yes	vsw-asdfjcdvflna****	The ID of the VSwitch to be deleted.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Request example

```
http(s)://vpc.aliyuncs.com/? Action=DeleteVSwitch
&VSwitchId=vsw-asdfjcdvflna****
&<CommonParameters>
```

Response example

`XML` format

```
<DeleteVSwitchResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</DeleteVSwitchResponse>
```

`JSON` format

```
{
 "RequestId":"0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Errors

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	IncorrectVSwitchStatus	The current virtual switch status does not support this operation.	The specified VSwitch is in the pending state and cannot be deleted.
400	DependencyViolation	Specified object has dependent resources.	The specified VSwitch cannot be deleted because not all resources under the specified VSwitch have been released.
400	DependencyViolation	Some route entry status blocked this operation.	You cannot perform this operation because one or more route entries in the current route table are in the pending or modifying state.
400	IncorrectRouteEntryStatus	Some route entry status blocked this operation.	You cannot perform this operation because one or more route entries in the current route table are in the pending or modifying state.
400	DependencyViolation.HaVip	VSwitch cannot be deleted when there are some HaVip dependent with it.	The specified VSwitch cannot be deleted because it has an associated HaVip.
400	MissingParameter	Miss mandatory parameter.	One or more mandatory parameters are missing.
404	InvalidVSwitchId.NotFound	VSwitch not exist.	The specified VSwitch does not exist.
404	IncorrectStatus	Vswtich status not stable.	The specified VSwitch is in the pending or modifying state.

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

9.VRouter

9.1. ModifyVRouterAttribute

Modifies the name and description of a VRouter.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyVRouterAttribute	The operation that you want to perform. Set the value to **ModifyVRouterAttribute**.
VRouterId	String	Yes	vrt-bp1lhl0taikrteen8****	The ID of the VRouter.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the VBR is deployed.
VRouterName	String	No	VRouter-1	The name of the VRouter. The name must be 2 to 128 characters in length and start with a letter. The name can contain letters, digits, periods (.), underscores ( ), and hyphens (-). The name cannot start with `http://` or `https://`.
Description	String	No	My VRouter	The description of the VRouter. The description must be 2 to 256 characters in length. The description must start with a letter, but cannot start with `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=ModifyVRouterAttribute
&VRouterId=vrt-bp1lhl0taikrteen8****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyVRouterAttributeResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</ModifyVRouterAttributeResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidVRouterId.NotFound	Specified virtual router does not exist.	The error message returned because the specified VRouter does not exist. You can check whether the configuration of the specified VRouter is valid.
400	InvalidVRouterName.Malformed	Specified virtual router name is not valid.	The error message returned because the name format of the specified VRouter is invalid.
400	InvalidVRouterDiscription.Malformed	Specified virtual router description is not valid.	The error message returned because the description format of the specified VRouter is invalid.
400	MissingParameter	Miss mandatory parameter.	The error message returned because the required parameters are missing. Check whether you have set all required parameters before you call this operation.

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

9.2. DescribeVRouters

Queries the list of VRouters in a region.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DescribeVRouters	The name of this action. Value: **DescribeVRouters**.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the VRouter belongs. To query the region ID, call DescribeRegions.
VRouterId	String	No	vrt-bp1lhl0taikrteen****	The ID of the VRouter to query.
PageNumber	Integer	No	1	The page number. Default value: **1**.
PageSize	Integer	No	10	The number of entries per page in the case of a paged query result. Maximum value: **50**. Default value: **10**

Response parameters

Parameter	Type	Example value	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.
TotalCount	Integer	1	The number of total entries.
PageNumber	Integer	1	The current page number.

Parameter	Type	Example value	Description
PageSize	Integer	10	The number of entries per page.
VRouters	Array		Details of VRouters.
RegionId	String	cn-hangzhou	The region to which the VRouter belongs.
VpcId	String	vpc-rj905wotv6y030t1****	The ID of the VPC to which the VRouter belongs.
VRouterName	String	doctest	The name of the VRouter.
Description	String	abc	The description of the VRouter.
VRouterId	String	vrt-rj98khsezfqpjrxmv****	The ID of the VRouter.
CreationTime	String	2018-03-22T07:46:20Z	The time when the VRouter was created.
RouteTableIds	List	{ "RouteTableId": ["vtb-rj9ybe3y0u41mmjsp****"] }	The ID list of the route tables in the VRouter.

Examples

Request example

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

Response example

`XML` format

```
<DescribeVRoutersResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>2</TotalCount>
  <VRouters>
    <VRouter>
      <VRouterName></VRouterName>
      <RouteTableIds>
        <RouteTableId>vtb-bp1krxxzp0c29fmo****</RouteTableId>
      </RouteTableIds>
      <CreationTime>2018-12-06T06:11:55Z</CreationTime>
      <Description></Description>
      <RegionId>cn-hangzhou</RegionId>
      <VRouterId>vrt-bp1jcg5cmxjbl9xgc****</VRouterId>
      <VpcId>vpc-bp1qpo0kug3a20qqe****</VpcId>
    </VRouter>
    <VRouter>
      <VRouterName></VRouterName>
      <RouteTableIds>
        <RouteTableId>vtb-bp1blq1oh0ybfnpm****</RouteTableId>
      </RouteTableIds>
      <CreationTime>2018-11-08T08:54:03Z</CreationTime>
      <Description></Description>
      <RegionId>cn-hangzhou</RegionId>
      <VRouterId>vrt-bp149ve7yeyvio4nc****</VRouterId>
      <VpcId>vpc-bp1aevy8sofi8mh1q****</VpcId>
    </VRouter>
  </VRouters>
  <PageSize>10</PageSize>
  <RequestId>EE4C2417-9437-4333-BDEB-8493F7AA7258</RequestId>
</DescribeVRoutersResponse>
```

`JSON` format

```
{
  "PageNumber": 1,
  "TotalCount": 1,
  "VRouters": {
    "VRouter": [
      {
        "VRouterName": "",
        "RouteTableIds": {
          "RouteTableId": [
            "vtb-rj9ybe3y0u41mmjsp****"
          ]
        },
        "CreationTime": "2018-03-22T07:46:20Z",
        "Description": "",
        "RegionId": "us-west-1",
        "VRouterId": "vrt-rj98khsezfqpjrxmv****",
        "VpcId": "vpc-rj905wotv6y030t1z****"
      }
    ]
  },
  "PageSize": 10,
  "RequestId": "CB2793A8-845F-444C-8E93-76F1BBDF9C78"
}
```

Errors

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

10.Route table

10.1. ModifyRouteTableAttributes

Modifies the name and description of a route table.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	ModifyRouteTableAttributes	The name of this action. Value: **ModifyRouteTableAttributes**.
RegionId	String	Yes	cn-hangzhou	The region ID of the VPC to which the route table belongs. To query the region ID, call DescribeRegions.
RouteTableId	String	Yes	vtb-bp145q7glnuzdvzu2****	The ID of the target route table.
Description	String	No	The description of the route table.	The description of the route table. The description must be 2 to 256 characters in length. It must start with a letter and cannot start with `http://` or `https://`.
RouteTableName	String	No	doctest	The name of the route table. The name must be 2 to 128 characters in length. It must start with a letter and can contain numbers, periods (.), underscores ( ), and hyphens (-). It cannot start with `http://` or `https://`.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	62172DD5-6BAC-45DF-8D44-cvbd41fg	The ID of the request.

Examples

Request example

```
http(s)://vpc.aliyuncs.com/? Action=ModifyRouteTableAttributes
&RegionId=cn-hangzhou
&RouteTableId=vtb-bp145q7glnuzdvzu2****
&<CommonParameters>
```

Response example

`XML` format

```
<ModifyRouteTableAttributesResponse>
    <RequestId>62172DD5-6BAC-45DF-8D44-cvbd41fg</RequestId>
</ModifyRouteTableAttributesResponse>
```

`JSON` format

```
{
 "RequestId":"62172DD5-6BAC-45DF-8D44-cvbd41fg"
}
```

Errors

HTTP status code	Error code	Error message	Description
403	Forbbiden	User not authorized to operate on the specified resource.	You are not authorized to operate on this resource.

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

10.2. DescribeRouteTableList

Queries the list of route tables.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DescribeRouteTableList	The name of this action. Value: **DescribeRouteTableList**.
RegionId	String	Yes	cn-hangzhou	The region ID of the VPC to which the route table belongs. To query the region ID, call DescribeRegions.
PageNumber	Integer	No	1	The page number. Default value: **1**.
PageSize	Integer	No	10	The number of rows per page. Maximum value: **50**. Default value: **10**.
ResourceGroupId	String	No	rg-acfmxazb4ph****	The ID of the resource group to which the route table belongs.
RouteTableId	String	No	vtb-bp145q7glnuzdvzu2****	The ID of the route table.
RouteTableName	String	No	doctest	The name of the route table.
RouterId	String	No	vrt-bp1lhl0taikrteen8****	The ID of the VRouter to which the route table belongs.
RouterType	String	No	VBR	The type of the VRouter to which the route table belongs. Valid values: • **VRouter** (default): VRouter. • **VBR**: Virtual Border Router (VBR).

Parameter	Type	Required?	Example value	Description
VpcId	String	No	vpc-bp15zckdt37pq72****	The ID of the VRouter to which the route table belongs. The value of the **RouterType** parameter is set to **VRouter** automatically when this parameter is specified.

Response parameters

Parameter	Type	Example value	Description
PageNumber	Integer	1	The current page number.
PageSize	Integer	10	The number of entries per page.
RequestId	String	DC668356-BCB4-42FD-9BC3-FA2B2E04B634	The ID of the request.
RouterTableList	Array		The list of route tables.
RouterTableListType			The list of route tables.
CreationTime	String	2017-08-22T10:40:25Z	The creation time of the route table.
Description	String	This is Route Table.	The description of the route table.
ResourceGroupId	String	rg-acfmxazb4ph****	The ID of the resource group to which the route table belongs.
RouteTableId	String	vtb-bp145q7glnuzdvzu2****	The ID of the route table.
RouteTableName	String	doctest	The name of the route table.
RouteTableType	String	System	The type of the route table. • **Custom**: Custom route table. • **System**: System route table.
RouterId	String	vrt-bp1lhl0taikrteen8****	The ID of the router to which the route table belongs.
RouterType	String	VBR	The type of the router to which the route table belongs. • **VRouter**: VRouter • **VBR**: VBR
Status	String	Available	The status of the route table. • **Pending**: The route table is being configured. • **Available**: The route table is available.
Tags	Array		The list of route table tags.

Parameter	Type	Example value	Description
Tag			The list of route table tags.
Key	String	type	The key of the tag associated with the route table.
Value	String	ingress	The value that matches the tag key associated with the route table.
VSwitchIds	List	vsw-bp12mw1f8k3jgygk9****	The list of VSwitches in the VPC.
VSwitchId			The list of VSwitches in the VPC.
VpcId	String	vpc-bp15zckdt37pq72****	The region ID of the VPC to which the route table belongs.
TotalCount	Integer	1	The total number of entries.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=DescribeRouteTableList
&RegionId=cn-hangzhou
&<CommonParameters>
```

Response example

`XML` format

```
<DescribeRouteTableListResponse>
 <Code>200</Code>
 <Message>successful</Message>
 <PageNumber>1</PageNumber>
 <PageSize>10</PageSize>
 <RequestId>87261511-FEB9-4BEC-85BF-70XXXXXXXXX</RequestId>
 <RouterTableList>
    <RouterTableListType>
       <CreationTime>2018-08-03T08:14:54Z</CreationTime>
       <Description>ddd</Description>
       <RouteTableId>vtb-m5evbtbptnx2bcdfv****</RouteTableId>
       <RouteTableName>aaa1111</RouteTableName>
       <RouteTableType>Custom</RouteTableType>
       <RouterId>vrt-m5egeuhgj52xgnhyg****</RouterId>
       <RouterType>VRouter</RouterType>
       <VSwitchIds>
          <VSwitchId>vsw-m5e3r57pxkgijcdvfcdvf****</VSwitchId>
       </VSwitchIds>
       <VpcId>vpc-bp15zckdt37pq72****</VpcId>
    </RouterTableListType>
 </RouterTableList>
 <Success>true</Success>
 <TotalCount>1</TotalCount>
</DescribeRouteTableListResponse>
```

`JSON` format

```
{
 "PageNumber":1,
 "TotalCount":1,
 "RouterTableList":{
  "RouterTableListType":[
   {
    "CreationTime":"2018-08-03T08:14:54Z",
    "RouterType":"VRouter",
    "Description":"ddd",
    "VSwitchIds":{
     "VSwitchId":[
      "vsw-m5e3r57pxkgijcdvfcdvf****"
     ]
    },
    "RouterId":"vrt-m5egeuhgj52xgnhyg****",
    "RouteTableId":"vtb-m5evbtbptnx2bcdfv****",
    "RouteTableName":"aaa1111",
    "VpcId":"vpc-bp15zckdt37pq72****",
    "RouteTableType":"Custom"
   }
  ]
 },
 "Message":"successful",
 "PageSize":10,
 "RequestId":"87261511-FEB9-4BEC-85BF-70XXXXXXXXX",
 "Success":true,
 "Code":"200"
}
```


Errors

HTTP status code	Error code	Error message	Description
403	Forbbiden	User not authorized to operate on the specified resource.	You are not authorized to operate on this resource.

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

10.3. CreateRouteTable

Creates a custom route table.

Description

Custom route tables apply to all regions except China (Beijing), China (Shenzhen), and China (Hangzhou).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateRouteTable	The operation that you want to perform. Set the value to **CreateRouteTable**.
RegionId	String	Yes	cn-zhangjiakou	The region ID of the virtual private cloud (VPC) to which the route table belongs. You can call the DescribeRegions operation to query region IDs.

Parameter	Type	Required	Example	Description
VpcId	String	Yes	vpc-bp1qpo0kug3a20qqe****	The ID of the VPC to which the custom route table belongs. If a VPC contains an Elastic Compute Service (ECS) instance of the following instance types, you cannot create a custom route table for the VPC: ecs.c1, ecs.c2, ecs.c4, ecs.c5, ecs.ce4, ecs.cm4, ecs.d1, ecs.e3, ecs.e4, ecs.ga1, ecs.gn4, ecs.gn5, ecs.i1, ecs.m1, ecs.m2, ecs.mn4, ecs.n1, ecs.n2, ecs.n4, ecs.s1, ecs.s2, ecs.s3, ecs.se1, ecs.sn1, ecs.sn2, ecs.t1, and ecs.xn4. To create a custom route table, you must upgrade the instance specification. For more information, see Upgrade the instance types of subscription instances and Change the instance type of a pay-as-you-go instance. **Note** If your VPC contains one or more ECS instances of the specified instance types and uses a custom route table, you must upgrade the ECS instances. Otherwise, the custom route table cannot work as expected.
RouteTableName	String	No	myRouteTable	The name of the route table. The name must be 2 to 128 characters in length and start with a letter. The name can contain letters, digits, periods (.), underscores ( ), and hyphens (-). The name cannot start with `http://` or `https://`.
Description	String	No	abc	The description of the route table. The description must be 2 to 256 characters in length and start with a letter. The description cannot start with `http://` or `https://`.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value. Make sure that the client token is unique. The **ClientToken** value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example	Description
RequestId	String	62172DD5-6BAC-45DF-8D44-E11ED28DCAC0	The ID of the request.
RouteTableId	String	vtb-bp145q7glnuzdvzu2****	The ID of the route table.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=CreateRouteTable
&RegionId=cn-zhangjiakou
&VpcId=vpc-bp1qpo0kug3a20qqe****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateRouteTableResponse>
    <RequestId>62172DD5-6BAC-45DF-8D44-E11ED28DCAC0</RequestId>
    <RouteTableId>vtb-bp145q7glnuzdvzu2****</RouteTableId>
</CreateRouteTableResponse>
```

`JSON` format

```
{
  "RequestId": "62172DD5-6BAC-45DF-8D44-E11ED28DCAC0",
  "RouteTableId": "vtb-bp145q7glnuzdvzu2****"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidParameter.Description.Malformed	The specified Description is not valid.	The error message returned because the specified description is invalid.
404	InvalidVpcId.NotFound	Specified VPC does not exist.	The error message returned because the specified VPC does not exist.

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

10.4. AssociateRouteTable

Associates a custom route table with a vSwitch in the same virtual private cloud (VPC).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AssociateRouteTable	The operation that you want to perform. Set the value to **AssociateRouteTable**.
RegionId	String	Yes	cn-hangzhou	The region ID of the VPC to which the route table belongs. You can call the DescribeRegions operation to query the most recent region list.
RouteTableId	String	Yes	vtb-bp145q7glnuzdvzu2****	The ID of the route table.
VSwitchId	String	Yes	vsw-25ncdvfaue4****	The ID of the vSwitch.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to ensure the idempotence of the request. You can use the client to generate the parameter value, but you must ensure that it is unique among different requests. The **ClientToken** value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How can I ensure idempotence?

Response parameters

Parameter	Type	Example	Description
RequestId	String	DC668356-BCB4-42FD-9BC3-FA2B2E04B634	The ID of the request.

Examples

Sample requests

```
http(s)://vpc.aliyuncs.com/?Action=AssociateRouteTable
&RegionId=cn-hangzhou
&RouteTableId=vtb-bp145q7glnuzdvzu2****
&VSwitchId=vsw-25naue4****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AssociateRouteTableResponse>
 <RequestId>DC668356-BCB4-42FD-9BC3-FA2B2E04B634</RequestId>
</AssociateRouteTableResponse>
```

`JSON` format

```
{
  "RequestId": "DC668356-BCB4-42FD-9BC3-FA2B2E04B634"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRouteTableId.NotFound	Specified route table does not exist.	The error message returned because the specified route table does not exist.
400	OperationDenied.CloudBoxVbrEntryExist	The operation is not allowed because the routing table has a route entry for the next hop to the cloud box VBR.	The error message returned because the route table has a route entry that points to the virtual border router (VBR) of the cloud box.
400	OperationDenied.OtherCloudBoxVbrEntryExist	The operation is not allowed because the routing table has a route entry for the next hop that points to a VBR other than this cloud box.	The error message returned because the route table has a route entry that points to the VBR of another cloud box.
400	ResourceAlreadyAssociated.RouteTable	The specified route table is already associated.	The error message returned because the specified route table is already associated.

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

10.5. UnassociateRouteTable

Disassociates a route table from a VSwitch.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	UnassociateRouteTable	The name of this action. Value: **UnassociateRouteTable**

Parameter	Type	Required?	Example value	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the VPC to which the route table belongs. To query the region ID, call DescribeRegions.
RouteTableId	String	Yes	vtb-bp145q7glnuzdvzu2****	The ID of the route table.
VSwitchId	String	Yes	vsw-25naucfvfbgte4****	The ID of the VSwitch from which the route table is to be disassociated.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that guarantees the idempotence of the request. The value of this parameter is generated by the client and is unique among different requests. The **ClientToken** value is 1 to 64 ASCII characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	62172DD5-6BAC-45DF-8D44-62172DD5	The ID of the request.

Examples

Request example

```
http(s)://vpc.aliyuncs.com/? Action=UnassociateRouteTable
&RegionId=cn-hangzhou
&RouteTableId=vtb-bp145q7glnuzdvzu2****
&VSwitchId=vsw-25naucfvfbgte4****
&<CommonParameters>
```

Response example

`XML` format

```
<UnassociateRouteTableResponse>
    <RequestId>62172DD5-6BAC-45DF-8D44-62172DD5</RequestId>
</UnassociateRouteTableResponse>
```

`JSON` format

```
{
 "RequestId":"62172DD5-6BAC-45DF-8D44-62172DD5"
}
```

Errors

HTTP status code	Error code	Error message	Description
404	InvalidRouteTableId.NotFound	Specified route table does not exist.	The specified route table does not exist.

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

10.6. DeleteRouteTable

Deletes a custom route table.

Before you begin

Before deleting a custom route table, you must disassociate the custom route table from the associated VSwitch.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DeleteRouteTable	The name of this action. Value: **DeleteRouteTable**
RegionId	String	Yes	cn-hangzhou	The region ID of the VPC to which the route table belongs. To query the region ID, call DescribeRegions.
RouteTableId	String	Yes	vtb-bp145q7glnuzdvzu2****	The ID of the route table to be deleted.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	DC668356-BCB4-42FD-9BC3-FA2B2E04B634	The ID of the request.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=DeleteRouteTable
&RegionId=cn-hangzhou
&RouteTableId=vtb-bp145q7glnuzdvzu2****
&<CommonParameters>
```

Response example

`XML` format

```
<DeleteRouteTableResponse>
    <RequestId>DC668356-BCB4-42FD-9BC3-FA2B2E04B634</RequestId>
</DeleteRouteTableResponse>
```

`JSON` format

```
{
 "RequestId":"DC668356-BCB4-42FD-9BC3-FA2B2E04B634"
}
```

Errors

HTTP status code	Error code	Error message	Description
400	IncorrectVSwitchStatus	The current virtual switch status does not support this operation.	The specified VSwitch is in the pending state. The route table cannot be deleted.

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

10.7. CreateRouteEntry

Adds a custom route entry to the route table of a vRouter or a virtual border router (VBR).

Descriptions

When you call this operation to add a custom route entry to a route table of a vRouter, take note of the following limits:

- A route table can contain up to 200 custom route entries.
- The destination CIDR block (**DestinationCidrBlock**) of a custom route entry and the CIDR block of a vSwitch in a virtual private cloud (VPC) cannot be the same or be a subset of each other.
- The destination CIDR block (**DestinationCidrBlock**) of a custom route entry cannot be 100.64.0.0/10 or a subset of it.
- The destination CIDR blocks (**DestinationCidrBlock**) of route entries in the same route table cannot be the same.
- If you do not include the mask length when you specify the destination CIDR block (**DestinationCidrBlock**), the destination CIDR block is considered a host IP address whose mask length is 32 bits.
- Multiple custom route entries can be destined for the same next hop (**NextHopId**).
- The next hop (**NextHopId**) of a custom route entry must belong to the same VPC as the route table.
- Equal-cost multi-path (ECMP) routing can be configured by specifying the **NextHopList** parameter.
  - When you add regular route entries, you must specify **DestinationCidrBlock**, **NextHopType**, and **NextHopId**, and you must not specify **NextHopList**.
  - When you add route entries for ECMP routing, you must specify **DestinationCidrBlock** and **NextHopList**, and you must not specify **NextHopType** or **NextHopId**.

When you call this operation to add a custom route entry to the route table of a VBR, take note of the following limits:

- A route table can contain up to 200 custom route entries.
- The **NextHopList** parameter is not supported.
- The destination CIDR block (**DestinationCidrBlock**) of a custom route entry cannot be 100.64.0.0/10 or a subset of it.
- The destination CIDR blocks (**DestinationCidrBlock**) of route entries in the same route table cannot be the same.
- If you do not include the mask length when you specify the destination CIDR block (**DestinationCidrBlock**), the destination CIDR block is considered a host IP address whose mask length is 32 bits.
- Multiple custom route entries can be destined for the same next hop (**NextHopId**).
- The next hop (**NextHopId**) of a custom route entry must be a router interface associated with the VBR.
- You can add route entries only when the VBR is in the **Active** state, and the Express Connect circuit associated with the VBR is in the **Enabled** state and unlocked.
- You cannot add route entries for ECMP routing. When you add regular route entries, you must specify **DestinationCidrBlock**, **NextHopType**, and **NextHopId**, and you must not specify **NextHopList**.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateRouteEntry	The operation that you want to perform. Set the value to **CreateRouteEntry**.
DestinationCidrBlock	String	Yes	192.168.0.1/24	The destination CIDR block of the custom route entry. Both IPv4 and IPv6 CIDR blocks are supported. Make sure that the destination CIDR block meets the following requirements: • The destination CIDR block is not 100.64.0.0/10 or a subset of 100.64.0.0/10. • The destination CIDR block of the custom route entry is different from the destination CIDR blocks of other route entries in the same route table.
RouteTableId	String	Yes	vtb-bp145q7glnuzd****	The ID of the route table to which you want to add a custom route entry.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the route table belongs. You can call the DescribeRegions operation to query the most recent region list.
NextHopId	String	No	i-j6c2fp57q8rr4jlu****	The ID of the next hop.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-001****	The client token that is used to ensure the idempotency of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` can contain only ASCII characters. It cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
RouteEntryName	String	No	test	The name of the custom route entry that you want to add. The name must be 2 to 128 characters in length and can contain letters, digits, underscores (_), and hyphens (-). The name must start with a letter.
Description	String	No	test	The description of the custom route entry.
NextHopType	String	No	RouterInterface	The type of next hop. Valid values: • **Instance**: an Elastic Compute Service (ECS) instance. This is the default value. • **HaVip**: a high-availability virtual IP address (HAVIP). • **RouterInterface**: a router interface. • **NetworkInterface**: an elastic network interface (ENI). • **VpnGateway**: a VPN gateway. • **IPv6Gateway**: an IPv6 gateway. • **NatGateway**: a NAT gateway. • **Attachment**: a transit router.
NextHopList.N.NextHopId	String	No	ri-2zeo3xzyf3cd8r4****	The ID of the next hop for ECMP routing.
NextHopList.N.Weight	Integer	No	10	The weight of the next hop for ECMP routing.
NextHopList.N.NextHopType	String	No	RouterInterface	The type of next hop for ECMP routing. Set the value to **RouterInterface** (router interface).

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.
RouteEntryId	String	rte-sn6vjkioxte1gz83z****	The ID of the custom route entry.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateRouteEntry
&DestinationCidrBlock=192.168.0.1/24
&RouteTableId=vtb-bp145q7glnuzd****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateRouteEntryResponse>
 <RouteEntryId>rte-sn6vjkioxte1gz83z****</RouteEntryId>
 <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</CreateRouteEntryResponse>
```

`JSON` format

```
{
  "CreateRouteEntryResponse": {
    "RouteEntryId": "rte-sn6vjkioxte1gz83z****",
    "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
400	MissingParameter	Miss mandatory parameter.	The error message returned because the required parameters are not specified. Check whether you have set all the required parameters before you call this operation.
400	InvalidCidrBlock.Malformed	Specified CIDR block is not valid.	The error message returned because the format of the specified CIDR block is invalid.
400	InvalidCIDRBlock.Duplicate	Specified CIDR block is already exists.	The error message returned because the specified CIDR block already exists in the route table.
400	IncorrectVpcStatus	Current VPC status does not support this operation.	The error message returned because the status of the VPC does not support this operation.
400	IncorrectInstanceStatus	Current instance status does not support this operation.	The error message returned because this operation cannot be performed while the instance is in the current state.
400	QuotaExceeded	Route entry quota exceeded in this route table.	The error message returned because the number of route entries in the route table has reached the upper limit.
400	IncorrectRouteEntryStatus	Some route entry status blocked this operation.	The error message returned because one or more route entries in the current route table are in the Pending or Modifying state.
400	InvalidCidrBlock	Specified CIDR block is not valid.	The error message returned because of the following reasons: 1.You are unauthorized to use the 10.0.0.0/8 CIDR block. Check whether your account is included in the whitelist to use the CIDR block. 2.The destination CIDR block of the added custom route entry cannot be a subset of the CIDR blocks of the vSwitches in the VPC. 3.The CIDR block cannot be 100.64.0.0/10.
400	InvalidNextHopType	Specified parameter "NextHopType" is not valid	The error message returned because the specified next hop type is invalid.

HttpCode	Error code	Error message	Description
400	InvalidNextHop.NotFound	Specified next hop does not exist.	The error message returned because the IP address of the specified next hop does not exist.
400	InvalidVRouter.NotFound	vRouter not exists.	The error message returned because the specified vRouter does not exist. Check whether the specified vRouter is valid.
400	InvalidVPC.NotFound	vpc not exists.	The error message returned because the specified VPC does not exist. Check whether the specified VPC is valid.
400	InvalidNexthopTypeAndList.BothNull	both nexthopType and nextHopList are null.	The error message returned because the NextHopType and NextHopList parameters are not specified.
400	InvalidNexthopTypeAndList.BothNotNull	both nexthopType and nextHopList are not null.	The error message returned because you cannot leave both the NextHopType and NextHopList parameters empty.
400	InvalidRouterInterface	invalid router interface.	The error message returned because the specified router interface does not exist.
400	InvalidOppositeRouterType	nexthop list cannot only contain router interface whose opposite router interface is on vbr.	The error message returned because the specified next hop is invalid. The peer router of the router interface that you specify as the next hop must be a VBR.
400	InvalidNexthopListSize	nexthop size is illegal. Must be between 2 and 4.	The error message returned because you must specify two to four router interfaces as next hops.
400	InvalidEntryRuleQuota.NotFound	Route entry quota rule not exists.	The error message returned because the number of route entries that you create has reached the upper limit.
400	Forbidden.CheckEntryRuleQuota	Route entry quota rule check error.	The error message returned because an error occurs when the system checks the quota of route entries.
400	InvalidVBRStatus	invalid virtual border router status.	The error message returned because the VBR is in a state that does not support the operation.
400	InvalidPhysicalConnectionBusinessStatus	invalid physical connection business status.	The error message returned because the Express Connect circuit is in a state that does not support the operation.
400	IncorrectHaVipStatus	This operation is denied because satus of the specified HaVip is neither Available nor InUse.	The error message returned because you cannot perform the operation when the specified HAVIP is in the Available or InUse state.
400	CountLimitExceed.HaVipRouteEntry	There can be 5 route entry to HaVip at most in one route table.	The error message returned because the number of route entries that point to the HAVIP reaches the upper limit.
400	InvalidRouteEntry.Duplicate	The route entry already exist.	The error message returned because the specified route entry already exists.
400	IncorrectRouteEntryStatus	Specified routeEntry status error.	The error message returned because one or more route entries in the current route table are in the Pending or Modifying state.
400	IncorrectRouteEntryStatus	VBR has NotStable route entry.	The error message returned because one or more route entries in the current VBR are in the Pending or Modifying state.

HttpCode	Error code	Error message	Description
400	InvalidParam	The Ecmp routerEntry with router interfaces local vgw vip not match.	The error message returned because the route entry does not match the gateway IP address of the router interface.
400	INVALID_WEIGHT_PARAM	Specified value of weight invalid	The error message returned because the specified weight is invalid.
400	FORBIDDEN_USE_VPC_AS_INTERNET_GATEWAY	The Specified CIDR must be in vpc CIDR.	The error message returned because the specified CIDR block must be a subset of the VPC CIDR block.
400	INVALID_VPC_ID	The Specified VpcId not match.	The error message returned because the specified VPC does not exist. Check whether the specified VPC is valid.
400	InvalidRouteEntrySize	The Specified routerEntry size not legal.	The error message returned because you must specify two to four router interfaces as next hops if you want to configure ECMP routing.
400	InvalidRouteEntry	Specified routeEntry not exist.	The error message returned because the specified route entry does not exist.
400	InvalidAttachment.NotFound	The attachment is not found.	The error message returned because the specified transit router does not exist.
400	OperationFailed.ActiveNetworkInterfaceNotFound	No active network interface is found on the attachment.	The error message returned because no ENI is available on the specified transit router.
400	InvalidNetworkInterface.NotFound	The network interface is not found on the attachment.	The error message returned because no ENI is associated with the specified transit router.
400	OperationFailed.QueryAttachmentInfo	Failed to query attachment information.	The error message returned because the system fails to query the transit router.
400	IllegalParam.AttachmentId	The attachment is invalid.	The error message returned because the specified transit router is invalid.
400	OperationFailed.NotSupportIPV6	The specified next hop does not support IPv6.	The error message returned because the specified next hop does not support IPv6.
400	IncorrectStatus.Ipv6Address	The IPv6 address of the specified next hop is being assigned or deleted.	The error message returned because an IPv6 address is being assigned to or removed from the next hop.
400	OperationUnsupported.Ipv6EntryOnPrimaryNetworkInterface	You cannot create IPv6 route entries on a primary network interface.	The error message returned because you cannot create an IPv6 route entry whose next hop is a primary ENI.
400	OperationUnsupported.SpecifyIpOnIpv6Entry	You cannot specify the private IP address when you create IPv6 route entries.	The error message returned because you cannot specify a private IPv6 address as the destination CIDR block.
400	OperationUnsupported.MutipleIpv6Address	You cannot specify a next hop that has bound multiple IPv6 addresses.	The error message returned because you cannot specify a next hop that is assigned multiple IPv6 addresses.
400	OperationDenied.Ipv6EntryOnCustomTable	You cannot create any IPv6 route entry on a custom route table.	The error message returned because you cannot add an IPv6 route entry to a custom route table.
400	OperationDenied.CloudBoxVbrEntryAllowedInCustomRouteTable	The operation is not allowed because only the custom routing table can add a routing entry with the next hop pointing to the cloud box type VBR.	The error message returned because you can add a route entry to a custom route table only if the next hop of the route entry points to a VBR connected to a cloud box.

HttpCode	Error code	Error message	Description
400	OperationDenied.RouteTableAssociateNotCloudBoxVSwitch	The operation is not allowed because of the routing table is bound to a non-cloud box type vswitch, and routing entries pointing to the cloud box VBR cannot be added.	The error message returned because the vSwitch with which the route table is associated is not connected to a cloud box. Therefore, you cannot add a route entry that points to a VBR connected to a cloud box.
400	OperationDenied.VbrMisMatchCloudBox	The operation is not allowed because the routing table is bound to a cloud box vswitch, and routing entries pointing to other cloud box VBRs cannot be added.	The error message returned because the VBR and the vSwitch that is associated with the route table are connected to different cloud boxes.
400	OperationDenied.VbrIdle	The operation is not allowed because the next hop of the added routing entry is a VBR type RI at the opposite end, which cannot be in an idle state.	The error message returned because the router interface that you specify as the next hop is in the Idle state. If the peer router of the next hop router interface is a VBR, the next hop router interface must not be in the Idle state.
400	OperationDenied.RouterInterfaceToDifferentVpc	The operation is not allowed because the router interface is connected to different VPCs.	The error message returned because the router interfaces that you specify as next hops when you configure ECMP routing do not belong to the same VPC.
400	OperationDenied.RouterInterfaceFromDifferentZones	The operation is not allowed because the router interface resides in different zones.	The error message returned because the route interface belongs to a different zone.
400	OperationFailed.PconnTrafficNotEnable	The operation is failed because of PconnTrafficNotEnable.	The error message returned because outbound traffic billing is disabled.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the specified resource is in a state that does not support the operation.
404	InvalidInstanId.NotFound	Specified instance does not exist.	The error message returned because the specified instance does not exist. Check whether the ID of the instance is valid.
404	InvalidNextHopId.NotFound	Specified next hop does not exist.	The error message returned because the specified next hop does not exist.
404	InvalidRouteTableId.NotFound	Specified route table does not exist.	The error message returned because the specified route table does not exist.
404	InvalidHaVipId.NotFound	The specified HaVip does not exist in the specified VPC.	The error message returned because the specified HAVIP does not exist in the VPC.

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

10.8. DeleteRouteEntry

Deletes a custom route entry from a route table.

Before you begin

Note the following before deleting a route entry:

- You can only delete a route entry that is in the available state.
- You cannot delete a route entry from a VPC that is having a VSwitch or route entry created or deleted.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DeleteRouteEntry	The name of this action. Value: **DeleteRouteEntry**
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the route table belongs. To query the region ID, call DescribeRegions.
DestinationCidrBlock	String	No	0.0.0.0/0	The destination CIDR block of the route entry. IPv4 and IPv6 CIDR blocks are supported.
NextHopId	String	No	ngw-bp1vpo4l2vd7zef8o****	The instance ID of the next hop.
NextHopList.N.NextHopId	String	No	ri-2zeo3xzyf38r43cd****	The ID of the next-hop instance of the ECMP route.
NextHopList.N.NextHopType	String	No	RouterInterface	The type of the next hop of the ECMP route. Valid value: **RouterInterface** (router interface).
RouteEntryId	String	No	rte-bp1mnnr2al0naomn****	The ID of the route entry to be deleted.
RouteTableId	String	No	vtb-hp37isva36oj7839j****	The ID of the route table to which the route entry belongs.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=DeleteRouteEntry
&DestinationCidrBlock=0.0.0.0/0
&RouteTableId=trb-2ze3jgygk9bmsj23s****
&<CommonParameters>
```

Response example

`XML` format

```
<DeleteRouteEntryResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</DeleteRouteEntryResponse>
```

`JSON` format

```
{
 "RequestId":"0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Errors

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	MissingParameter	Miss mandatory parameter.	One or more required parameters are missing.
400	IncorrcetRouteEntryStatus	Some route entry status blocked this operation.	You cannot perform this operation because one or more route entries in the current route table are in the pending or modifying state.
400	InvalidCidrBlock.Malformed	Specified CIDR block is not valid.	The specified CIDR format is invalid.
404	InvalidRouteTableId.NotFound	Specified route table does not exist.	The specified route table does not exist.
400	OperationDenied	Specified operation is denied as route entry type is system.	This operation cannot be performed because the route entry is the system route entry.
400	InvalidRouteEntry.NotFound	Route entry not exists.	The specified route entry does not exist.
400	InvalidVRouter.NotFound	vRouter not exists.	The specified VRouter does not exist.
400	IncorrectRouteEntryStatus	Some route entry status blocked this operation.	You cannot perform this operation because one or more route entries in the current route table are in the pending or modifying state.
400	IncorrectRouteEntryStatus	VBR has NotStable route entry.	You cannot perform this operation because one or more route entries in the current VBR are in the pending or modifying state.
404	InvalidVpcId.NotFound	Specified value of VpcId is not found in our record.	The specified VPC does not exist.
400	IncorrectRouteEntryStatus	Specified routeEntry status error.	You cannot perform this operation because one or more route entries in the current route table are in the pending or modifying state.
400	Forbbiden	Specified RouteEntry cannot allowed delete by openApi.	You cannot call this action to delete the specified route entry.
400	InvalidNextHop	Specified nexthop and nexthop list cannot both null.	The next hop and next hop list cannot be empty at the same time.
400	InvalidRouteEntry	Specified routeEntry not exist.	The specified route entry does not exist.
400	IncorrectVpcStatus	Current VPC status does not support this operation.	The current status of the VPC does not support the action.

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

10.9. ModifyRouteEntry

Modifies the name and description of a custom route entry.

Debugging

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

Request parameters

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

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the route entry belongs. You can call the DescribeRegions operation to query region IDs.
RouteEntryId	String	Yes	rte-acfvgfsghfdd****	The ID of the custom route entry.
RouteEntryName	String	No	EntryName	The name of the route entry. The name must be 2 to 128 characters in length and start with a letter. The name can contain letters, digits, periods (.), underscores ( ), and hyphens (-). The name cannot start with `http://` or `https://`.
Description	String	No	EntryDescription	The description of the route entry. The description must be 2 to 256 characters in length. The description must start with a letter but cannot start with `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
RequestId	String	861E6630-AEC0-4B2D-B214-6CB5E44B7F04	The ID of the request.

Examples

Sample requests

```
http(s)://vpc.aliyuncs.com/? Action=ModifyRouteEntry
&RegionId=cn-hangzhou
&RouteEntryId=rte-acfvgfsghfdd****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyRouteEntryResponse>
  <RequestId>861E6630-AEC0-4B2D-B214-6CB5E44B7F04</RequestId>
</ModifyRouteEntryResponse>
```

`JSON` format

```
{
 "RequestId": "861E6630-AEC0-4B2D-B214-6CB5E44B7F04"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden	User not authorized to operate on the specified resource.	The error message returned because you are not authorized to perform this operation on the specified resource. You can apply for the required permissions and try again.

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

10.10. DescribeRouteEntryList

Queries information about route entries in a route table.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeRouteEntryList	The operation that you want to perform. Set the value to **DescribeRouteEntryList**.
RegionId	String	Yes	cn-hangzhou	The region of the route table to which the route entry belongs. You can call the DescribeRegions operation to query the region IDs.
RouteTableId	String	Yes	vtb-bp1r9pvl4xen8s9ju****	The ID of the route table that you want to query.
RouteEntryId	String	No	rte-bp1mnnr2al0naomnp*****	The ID of the route entry that you want to query.
DestinationCidrBlock	String	No	192.168.2.0/24	The destination CIDR block of the route entry. IPv4 and IPv6 CIDR blocks are supported. **Note** Only the Alibaba Cloud China site supports IPv6 CIDR blocks.
RouteEntryName	String	No	abc	The name of the route entry.
IpVersion	String	No	IPv4	The version of the IP protocol. Valid values: • **IPv4** : indicates the IPv4 protocol. • **IPv6**: indicates the IPv6 protocol. **Note** Only the Alibaba Cloud China site supports the IPv6 protocol.
RouteEntryType	String	No	System	The type of the route entry. Valid values: • **Custom**: indicates a custom route entry. • **System** : indicates a system route entry.
NextHopId	String	No	vpn-bp10zyaph5cc8b7c7****	The ID of the next hop.

Parameter	Type	Required	Example	Description
NextHopType	String	No	Instance	The type of the next hop. Valid values: • **Instance**: The next hop is an ECS instance • **HaVip**: The next hop is a highly available virtual IP address (HAVIP). • **VpnGateway**: The next hop is a VPN gateway. • **NatGateway**: The next hop is a NAT gateway. • **NetworkInterface**: The next hop is a secondary elastic network interface (ENI). • **RouterInterface**: The next hop is a router interface. • **IPv6Gateway**: The next hop is an IPv6 gateway. **Note** Only the Alibaba Cloud China site supports IPv6 gateways as next hops.
MaxResult	Integer	No	50	The number of entries to return on each page. Valid values:**20** to **100**. Default value: **50**.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The token that you specify to start the next query.

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token that is returned for the next query.
RequestId	String	14A07460-EBE7-47CA-9757-12CC4761D47A	The ID of the request.
RouteEntrys	Array		The information about the route entry.
RouteEntry			
Description	String	RouteEntryDescription	The description of the VRouter.
DestinationCidrBlock	String	10.0.0.0/24	The destination Classless Inter-Domain Routing (CIDR) block of the route entry.
IpVersion	String	IPv4	The version of the IP protocol. Valid values: • **IPv4** : the IPv4 protocol • **IPv6**: the IPv6 protocol.
NextHops	Array		The information about the next hop.
NextHop			
Enabled	Integer	0	Indicates whether the route entry is available. • **0**: The route entry is unavailable. • **1**: The route entry is available.
NextHopId	String	vpn-bp10zyaph5cc8b7c7****	The ID of the next hop.

Parameter	Type	Example	Description
NextHopRegionId	String	cn-hangzhou	The region where the next hop instance is deployed.
NextHopRelatedInfo	Struct		The information about the next hop.
InstanceId	String	vpc-bp1t36rn9l53iwbsf****	The ID of the instance associated with the next hop.
InstanceType	String	VPC	The type of the instance associated with the next hop. • **VPC**: the next hop is a VPC. • **VBR**: The next hop is a virtual border router (VBR).
RegionId	String	ch-hangzhou	The region of the instance associated with the next hop.
NextHopType	String	Instance	The type of the next hop. Valid values: • **Instance**: The next hop is an ECS instance. • **HaVip**: The next hop is an HAVIP. • **VpnGateway**: The next hop is a VPN gateway. • **NatGateway**: The next hop is a NAT gateway. • **NetworkInterface**: The next hop is a secondary ENI. • **RouterInterface**: The next hop is a router interface. • **IPv6Gateway**: The next hop is an IPv6 gateway. **Note** Only the Alibaba Cloud China site supports IPv6 gateways as next hops.
Weight	Integer	100	The weight of the route entry.
RouteEntryId	String	rte-bp1mnnr2al0naomnp****	The ID of the route entry.
RouteEntryName	String	aaa	The name of the route entry.
RouteTableId	String	vtb-bp15w5q90d2rk3bww****	The ID of the route table.
Status	String	Available	The status of the route entry. • **Pending**: The route entry is being configured. • **Available**: The route entry is available for use. • **Modifying**: The route entry is being modified.
Type	String	Custom	The type of the route entry. • **Custom**: a custom route entry. • **System** : a system route entry.

Examples

Sample requests

```
http(s)://vpc.aliyuncs.com/? Action=DescribeRouteEntryList
&RegionId=cn-hangzhou
&RouteTableId=vtb-bp1r9pvl4xen8s9ju****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeRouteEntryListResponse>
  <NextToken></NextToken>
  <RouteEntrys>
    <RouteEntry>
      <NextHops>
        <NextHop>
          <NextHopId>eni-bp16v0fuhulfl5e1****</NextHopId>
          <NextHopRelatedInfo></NextHopRelatedInfo>
          <NextHopType>NetworkInterface</NextHopType>
        </NextHop>
      </NextHops>
      <Status>Available</Status>
      <RouteEntryName>ENI</RouteEntryName>
      <RouteEntryId>rte-bp1aejenqyg5zcmv4****</RouteEntryId>
      <Type>Custom</Type>
      <IpVersion>ipv4</IpVersion>
      <RouteTableId>vtb-bp15w5q90d2rk3bww****</RouteTableId>
      <DestinationCidrBlock>103.0.0.0/32</DestinationCidrBlock>
    </RouteEntry>
  </RouteEntrys>
  <RequestId>57828ADD-F0C4-4125-AF79-6556D44C5277</RequestId>
</DescribeRouteEntryListResponse>
```

`JSON` format

```
{
 "NextToken": "",
 "RouteEntrys": {
  "RouteEntry": [
   {
    "NextHops": {
     "NextHop": [
      {
       "NextHopId": "eni-bp16v0fuhulfl5e1****",
       "NextHopRelatedInfo": {},
       "NextHopType": "NetworkInterface"
      }
     ]
    },
    "Status": "Available",
    "RouteEntryName": "ENI",
    "RouteEntryId": "rte-bp1aejenqyg5zcmv4****",
    "Type": "Custom",
    "IpVersion": "ipv4",
    "RouteTableId": "vtb-bp15w5q90d2rk3bww****",
    "DestinationCidrBlock": "103.0.0.0/32"
   }
  ]
 },
 "RequestId": "57828ADD-F0C4-4125-AF79-6556D44C5277"
}
```

Error codes

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

11.DHCP options sets

11.1. CreateDhcpOptionsSet

You can call this operation to create a DHCP options set.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateDhcpOptionsSet	The operation that you want to perform. Set the value to **CreateDhcpOptionsSet**.
DomainNameServers	String	Yes	192.xx.xx.123	The DNS server IP addresses. Up to four DNS server IP addresses can be specified. IP addresses must be separated with commas (,). **Note** Before you specify any DNS server IP address, all ECS instances in the associated VPC network use the IP addresses of the Alibaba Cloud DNS servers, which are 100.100.2.136 and 100.100.2.138.
RegionId	String	Yes	cn-hangzhou	The region where the DHCP options set is deployed. You can call the DescribeRegions operation to query region IDs.
DhcpOptionsSetName	String	No	test	The name of the DHCP options set. The name must be 2 to 128 characters in length and can contain letters, Chinese characters, digits, underscores (_), and hyphens (-). It must start with a letter or a Chinese character.
DhcpOptionsSetDescription	String	No	test	The description of the DHCP options set. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.
DomainName	String	No	example.com	The root domain, for example, example.com. After a DHCP options set is associated with a Virtual Private Cloud (VPC) network, the root domain in the DHCP options set is automatically synchronized to the ECS instances in the VPC network.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate a value that is unique among different requests. **ClientToken** supports only ASCII characters. It can contain up to 64 ASCII characters.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to precheck this request only. Valid values: **true**: Runs a precheck without creating the DHCP options set. The system checks the format of the request, whether the required parameters are specified, and whether the limits of DHCP options sets are reached. An error message is returned if the request fails the precheck. If the request passes the precheck, the `DryRunOperation` error code is returned. **false** (default value): The DHCP options set is created after the request passes the precheck.

Response parameters

Parameter	Type	Example	Description
DhcpOptionsSetId	String	dopt-o6w0df4epg9zo8isy****	The ID of the DHCP options set that is created.
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=CreateDhcpOptionsSet
&DomainNameServers=192.xx.xx.123
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateDhcpOptionsSetResponse>
    <RequestId>8B2F5262-6B57-43F2-97C4-971425462DFE</RequestId>
    <DhcpOptionsSetId>dopt-o6w0df4epg9zo8isy****</DhcpOptionsSetId>
</CreateDhcpOptionsSetResponse>
```

`JSON` format

```
{
  "DhcpOptionsSetId":"dopt-o6w0df4epg9zo8isy****",
  "RequestId":"0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

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

11.2. AttachDhcpOptionsSetToVpc

You can call this operation to associate a DHCP options set with a VPC network.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachDhcpOptionsSetToVpc	The operation that you want to perform. Set the value to **AttachDhcpOptionsSetToVpc**.
DhcpOptionsSetId	String	Yes	dopt-o6w0df4epg9zo8isy****	The ID of the DHCP options set.
RegionId	String	Yes	cn-hangzhou	The region where the DHCP options set is deployed. You can call the DescribeRegions operation to query region IDs.
VpcId	String	Yes	vpc-sfdkfdjkdf****	The ID of the VPC network that is to be associated with the DHCP options set.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate a value that is unique among different requests. **ClientToken** supports only ASCII characters. It can contain up to 64 ASCII characters.
DryRun	Boolean	No	false	Specifies whether to precheck this request only. Valid values: **true**: Runs a precheck without associating the DHCP options set with the VPC network. The system checks whether your AccessKey pair is valid, whether the RAM user is authorized, and whether required parameters are specified. An error message is returned if the request fails the precheck. If the request passes the precheck, the `DryRunOperation` error code is returned. **false** (default value): Runs a precheck and returns a 2XX HTTP status code. After the request passes the precheck, the DHCP options set is associated with the VPC network.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=AttachDhcpOptionsSetToVpc
&DhcpOptionsSetId=dopt-o6w0df4epg9zo8isy****
&RegionId=0ED8D006-F706-4D23-88ED-E11ED28DCAC0
&VpcId=vpc-sfdkfdjkdf****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AttachDhcpOptionsSetToVpcResponse>
    <RequestId>4DAD3F76-2DB8-4336-B847-D7C0446C7952</RequestId>
</AttachDhcpOptionsSetToVpcResponse>
```

`JSON` format

```
{
 "RequestId": "4DAD3F76-2DB8-4336-B847-D7C0446C7952"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	Forbidden.OperateShareResource	You cannot operate shared resources.	The error message returned because shared resources do not support this operation.
400	InvalidDhcpOptionsSetId.NotFound	The specified dhcpOptionsSetId does not exist.	The error message returned because the DHCP options set does not exist. Check whether the parameter is correct.
400	IncorrectStatus.DhcpOptionsSet	The DhcpOptionsSet status does not support this operation.	The error message returned because the DHCP options set that is associated with the VPC network is being configured. As a result, the DHCP options set does not support this operation. You can perform the operation after the DHCP options set becomes available or in use.
400	InvalidVpcId.NotFound	Specified value of VpcId is not found in our record.	The error message returned because the specified VPC network does not exist. Check whether the specified VPC network ID is valid.
400	IncorrectStatus.VpcDhcpOptionsSet	The dhcpOptionsSet status of VPC does not support this operation.	The error message returned because the DHCP options set that is associated with the VPC network is being configured. As a result, the DHCP options set does not support this operation.
400	OperationFailed.AttachmentExist	The current VPC is already attached to a DHCP options set.	The error message returned because the VPC network has been associated with a DHCP options set. You can associate a VPC network with only one DHCP options set.
400	QuotaExceeded.AttachVpcNumber	The maximum number of VPCs that can be attached to a DHCP options set is exceeded.	The error message returned because the number of VPC networks that can be associated with a DHCP options set exceeds the quota limit.
400	TaskConflict	The operation is too frequent. Please wait a moment and try again.	The error message returned because the system is busy. Try again later.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified region ID does not exist. Check whether the region ID is valid.

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

11.3. DetachDhcpOptionsSetFromVpc

You can call this operation to disassociate a DHCP options set from a VPC network.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	DetachDhcpOptionsSetFromVpc	The operation that you want to perform. Set the value to **DetachDhcpOptionsSetFromVpc**.
DhcpOptionsSetId	String	Yes	dopt-o6w0df4epg9zo8isy****	The ID of the DHCP options set to be disassociated from the VPC network.
RegionId	String	Yes	cn-hangzhou	The region where the DHCP options set is deployed. You can call the DescribeRegions operation to query region IDs.
VpcId	String	Yes	vpc-dfdgrgthhy****	The ID of the VPC network to be disassociated from the DHCP options set.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate a value that is unique among different requests. **ClientToken** supports only ASCII characters. It can contain up to 64 ASCII characters.
DryRun	Boolean	No	false	Specifies whether to precheck this request only. Valid values: **true**: Runs a precheck without disassociating the DHCP options set from the VPC network. The system checks whether your AccessKey pair is valid, whether RAM users are authorized, and whether required parameters are specified. An error message is returned if the request fails the precheck. If the request passes the precheck, the `DryRunOperation` error code is returned. **false** (default value): Runs a precheck and returns a 2XX HTTP status code. After request passes the precheck, the DHCP options set is disassociated from the VPC network.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=DetachDhcpOptionsSetFromVpc
&DhcpOptionsSetId=dopt-o6w0df4epg9zo8isy****
&RegionId=cn-hangzhou
&VpcId=vpc-dfdgrgthhy****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DetachDhcpOptionsSetFromVpcResponse>
    <RequestId>4DAD3F76-2DB8-4336-B847-D7C0446C7952</RequestId>
</DetachDhcpOptionsSetFromVpcResponse>
```

`JSON` format

```
{
 "RequestId": "4DAD3F76-2DB8-4336-B847-D7C0446C7952"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidVpcId.NotFound	Specified value of VpcId is not found in our record.	The error message returned because the specified VPC network does not exist. Check whether the specified VPC network ID is valid.

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

11.4. ReplaceVpcDhcpOptionsSet

You can call this operation to modify the association of a DHCP options set with a VPC network.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ReplaceVpcDhcpOptionsSet	The operation that you want to perform. Set the value to **ReplaceVpcDhcpOptionsSet**.
DhcpOptionsSetId	String	Yes	dopt-o6w0df4epg9zo8isy****	The ID of the DHCP options set to be modified.
RegionId	String	Yes	cn-hangzhou	The region where the DHCP options set is deployed. You can call the DescribeRegions operation to query region IDs.
VpcId	String	Yes	vpc-dsfergghthth****	The ID of the associated VPC network to be modified.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate a value that is unique among different requests. **ClientToken** supports only ASCII characters. It can contain up to 64 ASCII characters.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to precheck this request only. Valid values: • **true**: Runs a precheck without changing the association of the DHCP options set with the VPC network. The system checks whether your AccessKey pair is valid, whether the RAM user is authorized, and whether required parameters are specified. An error message is returned if the request fails the precheck. If the request passes the precheck, the DryRunOperation error code is returned. • **false** (default value): Runs a precheck and returns a 2XX HTTP status code. After the precheck is complete, the association is modified.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=ReplaceVpcDhcpOptionsSet
&DhcpOptionsSetId=dopt-o6w0df4epg9zo8isy****
&RegionId=cn-hangzhou
&VpcId=vpc-dsfergghthth****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ReplaceVpcDhcpOptionsSetResponse>
    <RequestId>4DAD3F76-2DB8-4336-B847-D7C0446C7952</RequestId>
</ReplaceVpcDhcpOptionsSetResponse>
```

`JSON` format

```
{
 "RequestId": "4DAD3F76-2DB8-4336-B847-D7C0446C7952"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	OperationFailed.AttachmentNotExist	The current VPC is not attached to a DHCP options set.	The error message returned because the VPC network is not associated with a DHCP options set. You cannot modify the association.
400	IncorrectStatus.VpcDhcpOptionsSet	The dhcpOptionsSet status of VPC does not support this operation.	The error message returned because the DHCP options set that is associated with the VPC network is being configured. As a result, the DHCP options set does not support this operation.

HTTP status code	Error code	Error message	Description
400	AttrMismatching.VpcDhcpOptionsSetId	The dhcpOptionsSetId does not match the VPC.	The ID of the DHCP options set does not match the VPC network. Verify that the specified DHCP options set is the one associated with the VPC network.
400	TaskConflict	The operation is too frequent. Please wait a moment and try again.	The error message returned because the system is busy. Try again later.
400	InvalidVpcId.NotFound	Specified value of VpcId is not found in our record.	The error message returned because the specified VPC network does not exist. Check whether the specified VPC network ID is valid.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified region ID does not exist. Check whether the specified region ID is valid.
400	InvalidDhcpOptionsSetId.NotFound	The specified dhcpOptionsSetId does not exist.	The error message returned because the DHCP options set does not exist. Check whether the parameter is valid.

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

11.5. GetDhcpOptionsSet

You can call this operation to query a DHCP options set.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetDhcpOptionsSet	The operation that you want to perform. Set the value to **GetDhcpOptionsSet**.
DhcpOptionsSetId	String	Yes	dopt-o6w0df4epg9zo8isy****	The ID of the DHCP options set to be queried.
RegionId	String	Yes	cn-hangzhou	The region where the DHCP options set to be queried is deployed. You can call the DescribeRegions operation to query region IDs.

Response parameters

Parameter	Type	Example	Description
AssociateVpcs	Array		The information of the VPC network that is associated with the DHCP options set.
AssociateStatus	String	InUse	The status of the VPC network that is associated with the DHCP options set. Valid values: • **InUse**: The VPC network is in use. • **Pending**: The VPC network is being configured.

Parameter	Type	Example	Description
VpcId	String	vpc-eb3b54r6otues4tjj****	The ID of the VPC network that is associated with the DHCP options set.
DhcpOptions	Struct		The configuration information of the DHCP options set.
DomainName	String	example.com	The root domain.
DomainNameServers	String	192.xx.xx.123	The DNS server IP addresses.
DhcpOptionsSetDescription	String	test	The description of the DHCP options set.
DhcpOptionsSetId	String	dopt-o6w0df4epg9zo8isy****	The ID of the DHCP options set.
DhcpOptionsSetName	String	test	The name of the DHCP options set.
OwnerId	Long	12345678	The ID of the account to which the DHCP options set belongs.
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.
Status	String	Available	The status of the DHCP options set. Valid values: • **Available**: The DHCP options set is available for use. • **InUse**: The DHCP options set is in use. • **Deleted**: The DHCP options set is deleted. • **Pending**: The DHCP options set is being configured.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=GetDhcpOptionsSet
&DhcpOptionsSetId=dopt-o6w0df4epg9zo8isy****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<GetDhcpOptionsSetResponse>
    <Status>InUse</Status>
    <DhcpOptionsSetId>dopt-eb3h8s3g21rujtc7z****</DhcpOptionsSetId>
    <DhcpOptions>
        <DomainNameServers>100.100.2.136,100.100.2.138</DomainNameServers>
    </DhcpOptions>
    <RequestId>80B26920-51E9-429D-9FC1-D1CF14967B9A</RequestId>
    <OwnerId>12345678</OwnerId>
    <DhcpOptionsSetName>jj</DhcpOptionsSetName>
    <AssociateVpcs>
        <VpcId>vpc-eb3b54r6otues4tjj****</VpcId>
        <AssociateStatus>InUse</AssociateStatus>
    </AssociateVpcs>
</GetDhcpOptionsSetResponse>
```

JSON format

```
{
  "Status": "InUse",
  "DhcpOptionsSetId": "dopt-eb3h8s3g21rujtc7z****",
  "DhcpOptions": {
    "DomainNameServers": "100.100.2.136,100.100.2.138"
  },
  "RequestId": "80B26920-51E9-429D-9FC1-D1CF14967B9A",
  "OwnerId": "12345678",
  "DhcpOptionsSetName": "jj",
  "AssociateVpcs": [
    {
      "VpcId": "vpc-eb3b54r6otues4tjj****",
      "AssociateStatus": "InUse"
    }
  ]
}
```

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 the region ID is valid.

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

11.6. ListDhcpOptionsSets

You can call this operation to query one or more DHCP options sets.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListDhcpOptionsSets	The operation that you want to perform. Set the value to **ListDhcpOptionsSets**.
NextToken	String	Yes	caeba0bbb2be03f84eb48b699f0a4883	The query token. Set this parameter to the NextToken parameter value that is returned in the last API call. If no subsequent queries are to be sent, you can leave the parameter empty.
RegionId	String	Yes	cn-hangzhou	The region of the DHCP options sets that you want to query. You can call the DescribeRegions operation to query region IDs.
MaxResults	Integer	No	50	The maximum number of results to be returned with a single call when the NextToken parameter is used in the call. Valid values: **1** to **50**. Default value: **50**.

Parameter	Type	Required	Example	Description
DomainName	String	No	example.com	The root domain, for example, example.com. After a DHCP options set is associated with a Virtual Private Cloud (VPC) network, the root domain in the DHCP options set is automatically synchronized to the ECS instances in the VPC network.
DhcpOptionsSetId.N	RepeatList	No	dopt-o6w0df4epg9zo8isy****	The IDs of the DHCP options sets to be queried. You can specify up to 20 IDs of DHCP options sets.
DhcpOptionsSetName	String	No	test	The name of the DHCP options set. The name must be 2 to 128 characters in length and can contain letters, Chinese characters, digits, underscores (_), and hyphens (-). It must start with a letter or a Chinese character.

Response parameters

Parameter	Type	Example	Description
DhcpOptionsSets	Array		The list of the DHCP options sets.
AssociateVpcCount	Integer	2	The number of VPC networks that are associated with the DHCP options set.
DhcpOptions	Struct		The configuration information of the DHCP options set.
DomainName	String	example.com	The root domain.
DomainNameServers	String	192.xx.xx.123	The DNS server IP addresses.
DhcpOptionsSetDescription	String	test	The description of the DHCP options set.
DhcpOptionsSetId	String	dopt-o6w0df4epg9zo8isy****	The ID of the DHCP options set.
DhcpOptionsSetName	String	test	The name of the DHCP options set.
OwnerId	Long	12345678	The ID of the account to which the DHCP options set belongs.
Status	String	Available	The status of the DHCP options set. Valid values: • **Available**: The DHCP options set is available for use. • **InUse**: The DHCP options set is in use. • **Deleted**:The DHCP options set is deleted. • **Pending**: The DHCP options set is being configured.
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token required by the next query. If the NextToken parameter is empty, this indicates that no subsequent query will be sent.

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=ListDhcpOptionsSets
&NextToken=caeba0bbb2be03f84eb48b699f0a4883
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ListDhcpOptionsSetsResponse>
 <DhcpOptionsSets>
    <Status>Available</Status>
    <DhcpOptionsSetId>dopt-o6w0df4epg9zo8isy****</DhcpOptionsSetId>
    <DhcpOptions>
       <DomainNameServers></DomainNameServers>
    </DhcpOptions>
    <OwnerId>119059297981xxxx</OwnerId>
    <DhcpOptionsSetName>df</DhcpOptionsSetName>
    <AssociateVpcCount>0</AssociateVpcCount>
 </DhcpOptionsSets>
 <DhcpOptionsSets>
    <Status>Available</Status>
    <DhcpOptionsSetId>dopt-o6wia340xes2gipi5****</DhcpOptionsSetId>
    <DhcpOptions>
       <DomainName>test.com</DomainName>
       <DomainNameServers>1.xx.xx.1</DomainNameServers>
    </DhcpOptions>
    <OwnerId>119059297981xxxx</OwnerId>
    <DhcpOptionsSetName>new</DhcpOptionsSetName>
    <AssociateVpcCount>0</AssociateVpcCount>
 </DhcpOptionsSets>
 <RequestId>4DAD3F76-2DB8-4336-B847-D7C0446C7952</RequestId>
</ListDhcpOptionsSetsResponse>
```

`JSON` format

```
{
 "DhcpOptionsSets": [
  {
   "Status": "Available",
   "DhcpOptionsSetId": "dopt-o6w0df4epg9zo8isy****",
   "DhcpOptions": {
    "DomainNameServers": ""
   },
   "OwnerId": "119059297981xxxx",
   "DhcpOptionsSetName": "df",
   "AssociateVpcCount": 0
  },
  {
   "Status": "Available",
   "DhcpOptionsSetId": "dopt-o6wia340xes2gipi5****",
   "DhcpOptions": {
    "DomainName":"test.com",
    "DomainNameServers": "1.xx.xx.1"
   },
   "OwnerId": "119059297981xxxx",
   "DhcpOptionsSetName": "new",
   "AssociateVpcCount": 0
  }
 ],
 "RequestId": "4DAD3F76-2DB8-4336-B847-D7C0446C7952"
}
```


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 the region ID is valid.
400	IllegalParam.NextToken	The specified NextToken is invalid.	The error message returned because the specified NextToken is invalid.

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

11.7. UpdateDhcpOptionsSetAttribute

You can call this operation to modify the configuration information of a DHCP options set.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UpdateDhcpOptionsSetAttribute	The operation that you want to perform. Set the value to **UpdateDhcpOptionsSetAttribute**.
DhcpOptionsSetId	String	Yes	dopt-o6w0df4epg9zo8isy****	The ID of the DHCP options set to be modified.
RegionId	String	Yes	cn-hangzhou	The region of the DHCP options set to be modified. You can call the DescribeRegions operation to query region IDs.

Parameter	Type	Required	Example	Description
DomainNameServers	String	No	192.xx.xx.123	The DNS server IP addresses. Up to four DNS server IP addresses can be specified. IP addresses must be separated with commas (,). **Note** Before you specify any DNS server IP address, all ECS instances in the associated VPC network use the IP addresses of the Alibaba Cloud DNS servers, which are 100.100.2.136 and 100.100.2.138.
DomainName	String	No	example.com	The root domain, for example, example.com. After a DHCP options set is associated with a VPC network, the root domain in the DHCP options set is automatically synchronized to the ECS instances in the VPC network.
DhcpOptionsSetName	String	No	test	The name of the DHCP options set. The name must be 2 to 128 characters in length and can contain letters, Chinese characters, digits, underscores (_), and hyphens (-). It must start with a letter or a Chinese character.
DhcpOptionsSetDescription	String	No	test	Enter a description for the DHCP options set. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate a value that is unique among different requests. **ClientToken** supports only ASCII characters. It can contain up to 64 ASCII characters.
DryRun	Boolean	No	false	Specifies whether to precheck this request only. Valid values: **true**: Runs a precheck without changing the configuration information of the DHCP options set. The system checks the format of the request, whether the required parameters are specified, and whether the limits of DHCP options sets are reached. An error message is returned if the request fails the precheck. If the request passes the precheck, the `DryRunOperation` error code is returned. **false** (default value): The request is checked, and the configuration information of the DHCP options set is modified.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=UpdateDhcpOptionsSetAttribute
&DhcpOptionsSetId=dopt-o6w0df4epg9zo8isy****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<UpdateDhcpOptionsSetAttributeResponse>
    <RequestId>8B2F5262-6B57-43F2-97C4-971425462DFE</RequestId>
</UpdateDhcpOptionsSetAttributeResponse>
```

`JSON` format

```
{
  "RequestId": "8B2F5262-6B57-43F2-97C4-971425462DFE"
}
```

Error codes

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

11.8. DeleteDhcpOptionsSet

You can call this operation to delete a DHCP options set.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteDhcpOptionsSet	The operation that you want to perform. Set the value to **DeleteDhcpOptionsSet**.
DhcpOptionsSetId	String	Yes	dopt-o6w0df4epg9zo8isy****	The ID of the DHCP options set to be deleted.
RegionId	String	Yes	cn-hangzhou	The region of the DHCP options set to be deleted. You can call the DescribeRegions operation to query region IDs.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate a value that is unique among different requests. **ClientToken** supports only ASCII characters. It can contain up to 64 ASCII characters.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to precheck this request only. Valid values: **true**: Runs a precheck without deleting the configuration information of the DHCP options set. The system checks the format of the request, whether the required parameters are specified, and whether the limits of DHCP options sets are reached. An error message is returned if the request fails the precheck. If the request passes the precheck, the `DryRunOperation` error code is returned. **false** (default value): sends a deletion request. If the request passes the precheck, the DHCP options set is deleted.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=DeleteDhcpOptionsSet
&DhcpOptionsSetId=dopt-o6w0df4epg9zo8isy****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteDhcpOptionsSetResponse>
  <RequestId>8B2F5262-6B57-43F2-97C4-971425462DFE</RequestId>
<DeleteDhcpOptionsSetResponse>
```

`JSON` format

```
{
  "RequestId": "8B2F5262-6B57-43F2-97C4-971425462DFE"
}
```

Error codes

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

12.Regions

12.1. DescribeZones

Queries zones in a specified region.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeZones	The operation that you want to perform. Set the value to **DescribeZones**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where zones are queried. You can call the DescribeRegions operation to query the most recent region list.
ZoneType	String	No	AvailabilityZone	The type of the zones to be queried. Default value: **AvailabilityZone**. This value indicates Alibaba Cloud zones.
AcceptLanguage	String	No	zh-cn	The language used in the **LocalName** parameter to display the zone names. Valid values: • **zh-cn**: Chinese • **en-us**: English • **ja**: Japanese

Response parameters

Parameter	Type	Example	Description
Zones	Array of Zone		The zones that are returned.
Zone			
LocalName	String	Hangzhou Zone B	The name of the zone.
ZoneId	String	cn-hangzhou-b	The ID of the zone.
ZoneType	String	AvailabilityZone	The type of the zones to be queried. Default value: **AvailabilityZone**. This value indicates Alibaba Cloud zones.
RequestId	String	6FEA0CF3-D3B9-43E5-A304-D217037876A8	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeZones
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeZonesResponse>
 <RequestId>6FEA0CF3-D3B9-43E5-A304-D217037876A8</RequestId>
 <Zones>
    <Zone>
       <ZoneId>cn-hangzhou-b</ZoneId>
       <ZoneType>AvailabilityZone</ZoneType>
       <LocalName>Hangzhou Zone B</LocalName>
    </Zone>
 </Zones>
</DescribeZonesResponse>
```

`JSON` format

```
{
  "DescribeZonesResponse": {
    "RequestId": "6FEA0CF3-D3B9-43E5-A304-D217037876A8",
    "Zones": {
      "Zone": {
        "ZoneId": "cn-hangzhou-b",
        "ZoneType": "AvailabilityZone",
        "LocalName": "Hangzhou Zone B"
      }
    }
  }
}
```

Error codes

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

12.2. DescribeRegions

Queries available regions where specified cloud resources can be deployed.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeRegions	The operation that you want to perform. Set the value to **DescribeRegions**.
AcceptLanguage	String	No	zh-CN	The language of the response. Valid values: • **zh-CN**: Chinese. This is the default value. • **en-US**: English.

Response parameters

Parameter	Type	Example	Description
Regions	Array		The list of available regions.
Region			
LocalName	String	China (Qingdao)	The name of the region.

Parameter	Type	Example	Description
RegionEndpoint	String	vpc.aliyuncs.com	The endpoint of the region.
RegionId	String	cn-qingdao	The ID of the region.
RequestId	String	611CB80C-B6A9-43DB-9E38-0B0AC3D9B58F	The ID of the request

Examples

Sample requests

```
http(s)://vpc.aliyuncs.com/? Action=DescribeRegions
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeRegionsResponse>
 <RequestId>2F026E79-30AD-47B6-9E7D-D1D4BA77F1F1</RequestId>
 <Regions>
    <Region>
       <RegionId>cn-qingdao</RegionId>
       <RegionEndpoint>vpc.aliyuncs.com</RegionEndpoint>
       <LocalName>China (Qingdao)</LocalName>
    </Region>
    <Region>
       <RegionId>eu-central-1</RegionId>
       <RegionEndpoint>vpc.eu-central-1.aliyuncs.com</RegionEndpoint>
       <LocalName>Germany (Frankfurt)</LocalName>
    </Region>
 </Regions>
</DescribeRegionsResponse>
```

`JSON` format

```
{
  "RequestId": "2F026E79-30AD-47B6-9E7D-D1D4BA77F1F1",
  "Regions": {
    "Region": [
      {
        "RegionId": "cn-qingdao",
        "RegionEndpoint": "vpc.aliyuncs.com",
        "LocalName": "China (Qingdao)"
      },
      {
        "RegionId": "eu-central-1",
        "RegionEndpoint": "vpc.eu-central-1.aliyuncs.com",
        "LocalName": "Germany (Frankfurt)"
      }
    ]
  }
}
```

Error codes

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

13.Tags

13.1. TagResources

Creates tags and adds the tags to specified resources at a time.

Description

A tag is a label that you can add to an instance. Each tag consists of a key and a value. Before you add tags, take note of the following limits:

- The keys of tags that are added to the same instance must be unique.
- You cannot create tags without adding them to instances. All tags must be added to instances.
- Tag information is not shared across regions.

  For example, in the China (Shanghai) region, you cannot view tags created in the China (Hangzhou) region.
- Virtual private clouds (VPCs), route tables, vSwitches, and elastic IP addresses (EIPs) under the same account and in the same region share tag information with each other.

  For example, if you have added a tag to a VPC, the tag is available to vSwitches, route tables, and EIPs under the same account and in the same region where the VPC is created. You can select this tag from the editing page without the need to enter the tag again. You can modify the key and value of a tag or remove a tag from an instance anytime. After you delete an instance, all tags that are added to the instance are deleted.
- You can add up to 20 tags to each instance. Before you add a tag to an instance, the system automatically checks the number of existing tags. If the maximum number of tags is reached, an error message is returned.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	TagResources	The operation that you want to perform. Set the value to **TagResources**.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the resources belong.
ResourceId.N	RepeatList	Yes	vpc-bp16qjewdsunr41m1****	The ID of resource N. Valid values of N: **1** to **20**.
ResourceType	String	Yes	VPC	The type of the resource. Valid values: • **VPC**: a virtual private cloud (VPC) • **VSWITCH**: a vSwitch • **ROUTETABLE**: a route table • **EIP**: an elastic IP address (EIP) • **VpnGateway**: a VPN gateway • **NATGATEWAY**: a NAT gateway • **COMMONBANDWIDTHPACKAGE**: an EIP bandwidth plan

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	FinanceDept	The key of tag N. Valid values of N: 1 to 20 It cannot be an empty string. The tag key must be 1 to 64 characters in length, and start with a letter or Chinese character. It can contain digits, periods (.), underscores (_), and hvphens (-) and cannot start with `alivun` or `acs:` . It cannot contain `http://` or `https://` .
Tag.N.Value	String	No	FinanceJoshua	The value of tag N. Valid values of N: 1 to 20. It can be an empty string. The tag value must be up to 128 characters in length, and start with a letter or Chinese character. It can contain digits, periods (.), underscores (_), and hvphens (-) and cannot start with `alivun` or `acs:` . It cannot contain `http://` or `https://` .

Response parameters

Parameter	Type	Example	Description
RequestId	String	C46FF5A8-C5F0-4024-8262-B16B639225A0	The ID of the request.

Examples

Sample requests

```
http(s)://vpc.aliyuncs.com/? Action=TagResources
&RegionId=cn-hangzhou
&ResourceId.1=vpc-bp16qjewdsunr41m1****
&ResourceType=VPC
&Tag.1.Key=FinanceDept
&Tag.1.Value=FinanceJoshua
&<Common request parameters>
```

Sample success responses

`XML` format

```
<TagResourcesResponse>
    <RequestId>C46FF5A8-C5F0-4024-8262-B16B639225A0</RequestId>
</TagResourcesResponse>
```

`JSON` format

```
{
  "RequestId":"C46FF5A8-C5F0-4024-8262-B16B639225A0"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. To acquire the required permissions, submit a ticket.

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

13.2. ListTagResources

Queries tags that are added to one or more resources.

Description

- Set **ResourceId.N** or **Tag.N that consists of Tag.N.Key and Tag.N.Value** in the request to specify the object to be queried.
- **Tag.N** is the tag of a resource. Each tag consists of a key and a value. If you set only **Tag.N.Key**, all tag values that are associated with the specified key are returned. If you set only **Tag.N.Value**, an error message is returned.
- If you set **Tag.N** and **ResourceId.N** to filter tags, **ResourceId.N** must match all specified key-value pairs.
- If you specify multiple key-value pairs, resources that contain these key-value pairs are returned.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListTagResources	The operation that you want to perform. Set the value to **ListTagResources**.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the resource belongs.
ResourceType	String	Yes	VPC	The type of the resource. Valid values: • **VPC**: a virtual private cloud (VPC) • **VSWITCH**: a VSwitch • **ROUTETABLE**: a route table • **EIP**: an elastic IP address (EIP) • **VpnGateway**: a VPN gateway • **NATGATEWAY**: a NAT gateway • **COMMONBANDWIDTHPACKAGE**: an EIP bandwidth plan
ResourceId.N	RepeatList	No	vpc-bp16qjewdsunr41m1****	The ID of resource N. Valid values of N: **1** to **20**.
Tag.N.Key	String	No	FinanceDept	The key of the tag that is added to the resource. Valid values of N: **1** to **20**. The tag key cannot be an empty string. The key must be 1 to 64 characters in length, and start with a letter or Chinese character. It can contain digits, periods (.), underscores (_), and hyphens (-). It cannot start with `alivun` or `acs:`. It cannot contain `http://` or `https://`.
Tag.N.Value	String	No	FinanceJoshua	The value of tag N that is added to the resource. Valid values of N: **1** to **20**. The tag value can be an empty string. The tag value must be up to 128 characters in length, and start with a letter or Chinese character. It can contain digits, periods (.), underscores (_), and hyphens (-). It cannot start with `alivun` or `acs:`. It cannot contain `http://` or `https://`.

Parameter	Type	Required	Example	Description
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The query token. Set this parameter to the NextToken parameter value that is returned in the last API call. If no subsequent request is sent, you do not need to set this parameter.
MaxResults	Integer	No	50	The number of entries to return on each page. Valid values: **1** to **50**. Default value: **50**.

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token that is required for the next query. If the NextToken parameter is empty, no subsequent request will be sent.
RequestId	String	DE65F6B7-7566-4802-9007-96F2494AC512	The ID of the request.
TagResources	Array of TagResource		The resources to which the tags are added.
TagResource			
ResourceId	String	vpc-bp16qjewdsunr41m1****	The ID of the resource.
ResourceType	String	VPC	The type of the resource. Valid values: • **VPC**: a VPC • **VSWITCH**: a VSwitch • **ROUTETABLE**: a route table • **EIP**: an EIP • **VpnGateway**: a VPN gateway • **NATGATEWAY**: a NAT gateway • **COMMONBANDWIDTHPACKAGE**: an EIP bandwidth plan
TagKey	String	FinanceDept	The key of the tag.
TagValue	String	FinanceJoshua	The value of the tag.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=ListTagResources
&RegionId=cn-hangzhou
&ResourceType=VPC
&ResourceId.1=vpc-bp16qjewdsunr41m1****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ListTagResourcesResponse>
 <TagResources>
    <TagResource>
       <ResourceType>VPC</ResourceType>
       <TagValue>aa</TagValue>
       <TagKey>aaa</TagKey>
       <ResourcId>vpc-wz9aml8mptq6fsnfm****</ResourcId>
    </TagResource>
 </TagResources>
 <NextToken></NextToken>
 <RequestId>F11AC96F-B8E6-48F8-95CC-F63E7D50F0D4</RequestId>
</ListTagResourcesResponse>
```

`JSON` format

```
{
 "TagResources": {
  "TagResource": [
   {
    "ResourceType": "VPC",
    "TagValue": "aa",
    "TagKey": "aaa",
    "ResourcId": "vpc-wz9aml8mptq6fsnfm****"
   }
  ]
 },
 "NextToken": "",
 "RequestId": "F11AC96F-B8E6-48F8-95CC-F63E7D50F0D4"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. To acquire the required permissions, submit a ticket.

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

13.3. UnTagResources

Removes tags from specified resources.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UnTagResources	The operation that you want to perform. Set the value to **UnTagResources**.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the resource belongs.
ResourceId.N	RepeatList	Yes	vpc-bp16qjewdsunr41m1*****	The ID of the resource. Valid values of N: **1** to **20**.

Parameter	Type	Required	Example	Description
ResourceType	String	Yes	VPC	The type of resource. Valid values: • **VPC**: a virtual private cloud (VPC) • **VSWITCH**: a vSwitch • **ROUTETABLE**: a route table • **EIP**: an elastic IP address (EIP) • **VpnGateway**: a VPN gateway • **NATGATEWAY**: a NAT gateway • **COMMONBANDWIDTHPACKAGE**: an EIP bandwidth plan
TagKey.N	RepeatList	No	FinanceDept	The key of the tag that you want to remove. Valid values of N: **1** to **20**. The key can be an empty string. The key can be up to 64 characters in length, and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter but cannot start with `alivun` or `acs:`. It cannot contain `http://` or `https://`.
All	Boolean	No	false	Specifies whether to remove all tags from the specified resource. Valid values: • **true**: removes all tags from the specified resource. • **false**: does not remove all tags from the specified resource. This is the default value.

Response parameters

Parameter	Type	Example	Description
RequestId	String	C46FF5A8-C5F0-4024-8262-B16B639225A0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=UnTagResources
&RegionId=cn-hangzhou
&ResourceId.1=vpc-bp16qjewdsunr41m1****
&ResourceType=VPC
&<Common request parameters>
```

Sample success responses

`XML` format

```
<UntagResourcesResponse>
 <RequestId>C46FF5A8-C5F0-4024-8262-B16B639225A0</RequestId>
</UntagResourcesResponse>
```

`JSON` format

```
{
  "RequestId": "C46FF5A8-C5F0-4024-8262-B16B639225A0"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform this operation on the specified resource. To obtain the required permissions, submit a ticket.

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

14.Border Gateway Protocol (BGP)

14.1. DescribeBgpNetworks

Queries advertised Border Gateway Protocol (BGP) networks.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeBgpNetworks	The operation that you want to perform. Set the value to **DescribeBgpNetworks**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the BGP group is deployed. You can call the DescribeRegions operation to query region IDs.
RouterId	String	No	vrt-2zeazning6tb********	The ID of the router to which the route table belongs.
PageNumber	Integer	No	2	The number of the page to return. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description
RequestId	String	6F513A15-669F-419D-B511-08A85292059B	The ID of the request.
TotalCount	Integer	2	The total number of advertised BGP networks.
PageNumber	Integer	2	The number of the returned page.
PageSize	Integer	12	The number of entries returned per page.
BgpNetworks	Array		BGP networks.
VpcId	String	vpc-bp1qpo0kug3a********	The ID of the virtual private cloud (VPC).
DstCidrBlock	String	10.1.**. **/24	Advertised BGP networks.
RouterId	String	vrt-bp1el837xkkak********	The ID of the vRouter.
Status	String	Enabled	The state of the advertised BGP network.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=DescribeBgpNetworks
&RegionId=cn-hangzhou
&RouterId=vrt-2zeazning6tb********
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeBgpNetworksResponse>
    <BgpNetworks>
        <BgpNetwork>
            <DstCidrBlock>192.168. **. **/24</DstCidrBlock>
            <VpcId></VpcId>
        </BgpNetwork>
    </BgpNetworks>
    <RequestId>6F513A15-669F-419D-B511-08A85292059B</RequestId>
    <PageSize>10</PageSize>
    <TotalCount>1</TotalCount>
</DescribeBgpNetworksResponse>
```

`JSON` format

```
{
  "BgpNetworks": {
    "BgpNetwork": [
      {
        "DstCidrBlock": "192.168. **. **/24",
        "VpcId": ""
      }
    ]
  },
  "RequestId": "6F513A15-669F-419D-B511-08A85292059B",
  "PageSize": 10,
  "TotalCount": 1
}
```

Error codes

HttpCode	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because unknown errors have occurred.
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist. Check whether the service is available in the region.

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

14.2. CreateBgpGroup

Creates a Border Gateway Protocol (BGP) group for a virtual border router (VBR).

BGP groups allow VBRs to communicate with data centers. Each BGP group is associated with a VBR. You can add a BGP peer that needs to communicate with a VBR to the corresponding BGP group and advertise the BGP network in the VBR.

BGP groups are used to simplify BGP configurations. You can save time and effort by adding BGP peers that use the same configurations to one BGP group. You must use an autonomous system (AS) number to create a BGP group.

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

- Only BGP4 is supported by the BGP groups.
- BGP groups support IPv4 BGP. IPv6 BGP is not supported.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateBgpGroup	The operation that you want to perform. Set the value to **CreateBgpGroup**.
PeerAsn	Long	Yes	1111	The AS number of the BGP peer.
RegionId	String	Yes	cn-shanghai	The ID of the region where the BGP group is deployed. You can call the DescribeRegions operation to query region IDs.
RouterId	String	Yes	vrt-bp1lhl0taikrtee******	The ID of the VBR.
Name	String	No	test	The name of the BGP group. The name must be 2 to 128 characters in length and can contain digits, periods (.), underscores (_), and hyphens (-). The name must start with a letter but cannot start with `http://` or `https://`.
Description	String	No	BGP	The description of the BGP group. The description must be 2 to 256 characters in length. It must start with a letter but cannot start with `http://` or `https://`.
LocalAsn	Long	No	443	The AS number on the Alibaba Cloud side.
AuthKey	String	No	! PWZ2wsq	The authentication key of the BGP group.
IsFakeAsn	Boolean	No	true	A router that runs BGP typically belongs to only one AS. In some cases, for example, the AS needs to be migrated or is merged with another AS, a new AS number replaces the original one.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
BgpGroupId	String	bgpg-2zendnzngq9lkjkhvlrsr	The ID of the BGP group.
RequestId	String	C1221A1F-2ACD-4592-8F27-474E02883159	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=CreateBgpGroup
&PeerAsn=1111
&RegionId=cn-shanghai
&RouterId=vrt-bp1lhl0taikrteen80oxx
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateBgpGroupResponse>
    <BgpGroupId>bgpg-2zendnzngq9lkjkhvlrsr</BgpGroupId>
    <RequestId>C1221A1F-2ACD-4592-8F27-474E02883159</RequestId>
</CreateBgpGroupResponse>
```

`JSON` format

```
{
  "BgpGroupId": "bgpg-2zendnzngq9lkjkhvlrsr",
  "RequestId": "C1221A1F-2ACD-4592-8F27-474E02883159"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	QuotaExceeded.Bgp	bgp peer count per vbr quota exceed.	The error message returned because the number of BGP groups in the virtual border router (VBR) has reached the upper limit.
400	QuotaExceeded.Nqa	nqa count per vbr quota exceed.	The error message returned because the Network Quality Analyzer (NQA) number has reached the upper limit.
400	QuotaExceeded.BgpNetwork	bgp network count per vbr quota exceed.	The error message returned because the number of BGP networks in the VBR has reached the upper limit.
400	InvalidPeerIpAddress	multi pconn peer ip can not be null.	The IP addresses of multiple physical connections cannot be empty.
400	InvalidVbrNetwork	vbr netowrk not exists	The error message returned because the specified VBR does not exist. Check whether the specified VBR ID is valid.
400	InvalidBgpGroup	bgp group not exists	The error message returned because the BGP group does not exist.
400	InvalidBgpName.Malformed	Specified Bgp Group name is not valid.	The error message returned because the name of the BGP group is invalid.
400	InvalidBgpDescription.Malformed	Specified Bgp Group description is not valid.	The error message returned because the description of the BGP group is invalid.
400	InvalidBgpAuthkey.Malformed	Specified Bgp Group authkey is not valid.	The error message returned because the authentication key of the BGP group is invalid.
404	InvalidRegionId.NotFound	The specified RegionId is not found.	The error message returned because the specified region ID does not exist. Check whether the region ID is valid.
400	InvalidIP.Malformed	Ip malformed.	The error message returned because the format of the IP address is invalid.

HttpCode	Error code	Error message	Description
400	InvalidPeerAsn.Malformed	invalid peer asn cannot equals aliyun asn:45104	The error message returned because the AS number cannot be the same as that of Alibaba Cloud.
400	InvalidParams.NotFound	instance not found	The error message returned because the instance does not exist.
400	InvalidParams.NotFound	vpc instance not found	The error message returned because the specified VPC does not exist. Check whether the specified VPC ID is valid.
400	InvalidParams.AlreadyExists	bgp network already exists	The error message returned because the BGP network already exists.
400	InvalidStatus.CannotOperate	invalid status cannot operate	The error message returned because the state is invalid and the operation cannot be performed.
400	QuotaExceeded.Bgp	bgp group count per vbr quota exceed.	The error message returned because the number of BGP groups in the VBR has reached the upper limit.

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

14.3. DescribeBgpGroups

Queries Border Gateway Protocol (BGP) groups in a region.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeBgpGroups	The operation that you want to perform. Set the value to **DescribeBgpGroups**.
RegionId	String	Yes	cn-shanghai	The ID of the region where the BGP group is deployed. You can call the DescribeRegions operation to query region IDs.
RouterId	String	No	vrt-kojok19x3j0q6kx	The ID of the virtual border router (VBR) that is associated with the BGP group.
BgpGroupId	String	No	bgpg-wz9f62v4fbg2gxxxxxxx	The ID of the BGP group.
IsDefault	Boolean	No	false	Specifies whether the specified BGP group is the default one.
PageNumber	Integer	No	1	The number of the page to return. Default value: 1.
PageSize	Integer	No	1	The number of entries to return on each page. Maximum value: 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description
RequestId	String	1D0971B2-A35A-42C1-A44C-E91360C36C0B	The ID of the request.
TotalCount	Integer	10	The total number of entries.
PageNumber	Integer	1	The number of the returned page.
PageSize	Integer	5	The number of entries returned per page.
BgpGroups	Array		The detailed information about the BGP group.
Name	String	Name	The name of the BGP group.
Description	String	Description	The description of the BGP group.
BgpGroupId	String	bgp-wz977wcrmb69axxxxxxxx	The ID of the BGP group.
PeerAsn	String	1111	The autonomous system (AS) number of the BGP peer.
AuthKey	String	! PWZ2wsq	The key used by the BGP group.
RouterId	String	vrt-bp1lhl0taikrteen*****	The ID of the VBR.
Status	String	active	The state of the BGP peer.
Keepalive	String	10	The keepalive time.
LocalAsn	String	45104	The local AS number.
Hold	String	30	The hold time to receive BGP messages. If no message is received within the hold time, the BGP peer is considered disconnected.
IsFake	String	true	Indicates whether the AS number is fake.
RouteLimit	String	99	Routing limits.
RegionId	String	cn-shanghai	The ID of the region where the BGP group is deployed. For more information about region IDs, see Regions and zones.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=DescribeBgpGroups
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeBgpGroupsResponse>
  <TotalCount>1</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>09E2C0FD-37FF-4737-80DF-517AC36D43DB</RequestId>
  <BgpGroups>
    <BgpGroup>
      <BgpGroupId>bgpg-2zev8h2wo4******</BgpGroupId>
      <LocalAsn>45104</LocalAsn>
      <Hold>30</Hold>
      <Description></Description>
      <AuthKey></AuthKey>
      <IsFake>true</IsFake>
      <PeerAsn>234</PeerAsn>
      <Keepalive>10</Keepalive>
      <RouteLimit>99</RouteLimit>
      <Name>Group1</Name>
      <Status>Pending</Status>
      <RouterId>vbr-2zecmmvg5gvu8i4******</RouterId>
      <RegionId>cn-beijing</RegionId>
    </BgpGroup>
  </BgpGroups>
</DescribeBgpGroupsResponse>
```

`JSON` format

```
{
  "TotalCount": 1,
  "PageSize": 10,
  "RequestId": "09E2C0FD-37FF-4737-80DF-517AC36D43DB",
  "BgpGroups": {
    "BgpGroup": [
      {
        "BgpGroupId": "bgpg-2zev8h2wo******",
        "LocalAsn": 45104,
        "Hold": 30,
        "Description": "",
        "AuthKey": "",
        "IsFake": true,
        "PeerAsn": 234,
        "Keepalive": 10,
        "RouteLimit": 99,
        "Name": "Group1",
        "Status": "Pending",
        "RouterId": "vbr-2zecmmvg5gvu8i4*****",
        "RegionId": "cn-beijing"
      }
    ]
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because unknown errors have occurred.
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist. Check whether the service is available in the region.

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

14.4. ModifyBgpGroupAttribute

Modifies the configuration of a Border Gateway Protocol (BGP) group.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyBgpGroupAttribute	The operation that you want to perform. Set the value to **ModifyBgpGroupAttribute**.
BgpGroupId	String	Yes	bgpg-wz9f62v4fbg2g********	The ID of the BGP group.
RegionId	String	Yes	cn-shanghai	The ID of the region to which the BGP group belongs. You can call the DescribeRegions operation to query the most recent region list.
Name	String	No	test	The name of the BGP group. The name must be 2 to 128 characters in length and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter but cannot start with `http://` or `https://`.
Description	String	No	BGP	The description of the BGP group. The description must be 2 to 256 characters in length. It must start with a letter and cannot start with `http://` or `https://`.
LocalAsn	Long	No	45104	The autonomous system (AS) number of the device on the Alibaba Cloud side.
PeerAsn	Long	No	1111	The AS number of the local device.
AuthKey	String	No	!PWZ2wsq	The authentication key of the BGP group.
IsFakeAsn	Boolean	No	true	Specifies whether a fake AS number is used. • **false** (default): no • **true**: yes **Note** A running BGP router typically belongs to only one AS. If you want to replace the current AS with a new one (for example, the current AS needs to be migrated or merged with another one) and you cannot modify BGP configurations, you can specify a fake AS number to establish connections to the local side. This ensures that your services are not interrupted.

Parameter	Type	Required	Example	Description
ClientToken	String	No	02fb3da4-130e-11e9-8e44-001*******	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	8C3C6D7C-A1CE-4FD8-BC57-DC493A55F76F	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyBgpGroupAttribute
&BgpGroupId=bgpg-wz9f62v4fbg2g********
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyBgpGroupAttributeResponse>
    <RequestId>C1221A1F-2ACD-4592-8F27-474E02883159</RequestId>
</ModifyBgpGroupAttributeResponse>
```

`JSON` format

```
{
  "RequestId": "C1221A1F-2ACD-4592-8F27-474E02883159"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	Specified value of "regionId" is not supported.	The error message returned because the specified region ID does not exist. Check whether the region ID is valid.
400	QuotaExceeded.Bgp	bgp peer count per vbr quota exceed.	The error message returned because the number of BGP groups in the virtual border router (VBR) has reached the upper limit.
400	QuotaExceeded.Nqa	nqa count per vbr quota exceed.	The error message returned because the Network Quality Analyzer (NQA) number has reached the upper limit.
400	QuotaExceeded.BgpNetwork	bgp network count per vbr quota exceed.	The error message returned because the number of BGP networks in the VBR has reached the upper limit.
400	InvalidPeerIpAddress	multi pconn peer ip can not be null.	The IP addresses of multiple Express Connect circuits cannot be empty.
400	InvalidVbrNetwork	vbr netowrk not exists	The error message returned because the specified VBR does not exist. Check whether the specified VBR ID is valid.

HttpCode	Error code	Error message	Description
400	InvalidBgpGroup	bgp group not exists	The error message returned because the BGP group does not exist.
400	InvalidBgpName.Malformed	Specified Bgp Group name is not valid.	The error message returned because the name of the BGP group is invalid.
400	InvalidBgpDiscription.Malformed	Specified Bgp Group description is not valid.	The error message returned because the description of the BGP group is invalid.
400	InvalidBgpAuthkey.Malformed	Specified Bgp Group authkey is not valid.	The error message returned because the authentication key of the BGP group is invalid.
400	InvalidIP.Malformed	Ip malformed.	The error message returned because the format of the IP address is invalid.
400	InvalidPeerAsn.Malformed	invalid peer asn cannot equals aliyun asn:45104	The error message returned because the AS number cannot be the same as that of Alibaba Cloud.
400	InvalidParams.NotFound	instance not found	The error message returned because the specified instance does not exist.
400	InvalidParams.NotFound	vpc instance not found	The error message returned because the specified virtual private cloud (VPC) does not exist. Check whether the specified VPC ID is valid.
400	InvalidParams.AlreadyExists	bgp network already exists	The error message returned because the BGP network already exists.
400	InvalidStatus.CannotOperate	invalid status cannot operate	The error message returned because the state is invalid and the operation cannot be performed.
400	OperationFailed.PconnTrafficNotEnable	The operation is failed because of PconnTrafficNotEnable.	The error message returned because outbound traffic is not enabled.

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

14.5. DeleteBgpGroup

Deletes a Border Gateway Protocol (BGP) group.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteBgpGroup	The operation that you want to perform. Set the value to **DeleteBgpGroup**.
BgpGroupId	String	Yes	bgpg-wz9f62v4fbg2gxxxxxxx	The ID of the BGP group.
RegionId	String	Yes	cn-shanghai	The ID of the region where the BGP group is deployed. You can call the DescribeRegions operation to query the region IDs.

Parameter	Type	Required	Example	Description
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	97E2E97F-968C-48AF-A310-AC4D068854DB	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DeleteBgpGroup
&BgpGroupId=bgpg-wz9f62v4fbg2gxxxxxxxx
&RegionId=cn-shanghai
&<Common Request Parameters>
```

Sample success responses

`XML` format

```
<DeleteBgpGroupResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</DeleteBgpGroupResponse>
```

`JSON` format

```
{
 "RequestId":"0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	Specified value of "regionId" is not supported.	The error message returned because the specified region ID does not exist. Check whether the region ID is valid.
400	QuotaExceeded.Bgp	bgp peer count per vbr quota exceed.	The error message returned because the number of BGP groups in the virtual border router (VBR) has reached the upper limit.
400	QuotaExceeded.Nqa	nqa count per vbr quota exceed.	The error message returned because the Network Quality Analyzer (NQA) number has reached the upper limit.
400	QuotaExceeded.BgpNetwork	bgp network count per vbr quota exceed.	The error message returned because the number of BGP networks in the VBR has reached the upper limit.
400	InvalidPeerIpAddress	multi pconn peer ip can not be null.	The error message returned because the IP addresses of multiple physical connections cannot be empty.
400	InvalidVbrNetwork	vbr netowrk not exists	The error message returned because the specified VBR does not exist. Check whether the specified VBR ID is valid.

HttpCode	Error code	Error message	Description
400	InvalidBgpGroup	bgp group not exists	The error message returned because the BGP group does not exist.
400	InvalidBgpName.Malformed	Specified Bgp Group name is not valid.	The error message returned because the name of the BGP group is invalid.
400	InvalidBgpDiscription.Malformed	Specified Bgp Group description is not valid.	The error message returned because the description of the BGP group is invalid.
400	InvalidBgpAuthkey.Malformed	Specified Bgp Group authkey is not valid.	The error message returned because the authentication key of the BGP group is invalid.
400	InvalidIP.Malformed	Ip malformed.	The error message returned because the format of the IP address is invalid.
400	InvalidPeerAsn.Malformed	invalid peer asn cannot equals aliyun asn:45104	The error message returned because the autonomous system (AS) number cannot be the same as that of Alibaba Cloud.
400	InvalidParams.NotNull	invalid peer asn cannot equals aliyun asn:45104	The error message returned because the AS number cannot be the same as that of Alibaba Cloud.
400	InvalidParams.NotFound	instance not found	The error message returned because the instance does not exist.
400	InvalidParams.NotFound	vpc instance not found	The error message returned because the specified virtual private cloud (VPC) does not exist. Check whether the specified VPC ID is valid.
400	InvalidParams.AlreadyExists	bgp network already exists	The error message returned because the BGP network already exists.
400	InvalidStatus.CannotOperate	invalid status cannot operate	The error message returned because the state is invalid and the operation cannot be performed.

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

14.6. CreateBgpPeer

Adds a Border Gateway Protocol (BGP) peer to a specific BGP group.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateBgpPeer	The operation that you want to perform. Set the value to **CreateBgpPeer**.
BgpGroupId	String	Yes	bgpg-wz9f62v4fbgxxxxxxxx	The ID of the BGP group.
RegionId	String	Yes	cn-shanghai	The ID of the region where the BGP group is deployed. You can call the DescribeRegions operation to query region IDs.

Parameter	Type	Required	Example	Description
ClientToken	String	No	02fb3da4-130e-11e9-8e44-001xxxxxxxx	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.
EnableBfd	Boolean	No	true	Specifies whether to enable the Bidirectional Forwarding Detection (BFD) feature. Valid values: • **true**: enables BFD. • **false**: disables BFD.
PeerIpAddress	String	No	116.62.xx.xx	The IP address of the BGP peer.

Response parameters

Parameter	Type	Example	Description
BgpPeerId	String	Bgp-awjhxxxxxxxx	The ID of the BGP peer.
RequestId	String	D4B7649A-61BB-4C64-A586-1DFF1EDA6A42	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=CreateBgpPeer
&BgpGroupId=bgpg-wz9f62v4fbgxxxxxxxx
&RegionId=cn-shanghai
&<Common Request Parameters>
```

Sample success responses

`XML` format

```
<CreateBgpPeerResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</CreateBgpPeerResponse>
```

`JSON` format

```
{
 "RequestId":"0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	Specified value of "regionId" is not supported.	The error message returned because the specified region ID does not exist. Check whether the service is available in the region.
400	QuotaExceeded.Bgp	bgp peer count per vbr quota exceed.	The error message returned because the number of BGP groups in the virtual border router (VBR) has reached the upper limit.

HttpCode	Error code	Error message	Description
400	QuotaExceeded.Bgp	bgp group count per vbr quota exceed.	The error message returned because the number of BGP groups in the VBR has reached the upper limit.
400	QuotaExceeded.Nqa	nqa count per vbr quota exceed.	The error message returned because the Network Quality Analyzer (NQA) number has reached the upper limit.
400	QuotaExceeded.BgpNetwork	bgp network count per vbr quota exceed.	The error message returned because the number of BGP networks in the VBR has reached the upper limit.
400	InvalidPeerIpAddress	multi pconn peer ip can not be null.	The error message returned because the IP addresses of multiple physical connections cannot be empty.
400	InvalidVbrNetwork	vbr netowrk not exists	The error message returned because the specified VBR does not exist. Check whether the specified VBR ID is valid.
400	InvalidBgpGroup	bgp group not exists	The error message returned because the BGP group does not exist.
400	InvalidBgpName.Malformed	Specified Bgp Group name is not valid.	The error message returned because the name of the BGP group is invalid.
400	InvalidBgpDiscription.Malformed	Specified Bgp Group description is not valid.	The error message returned because the description of the BGP group is invalid.
400	InvalidBgpAuthkey.Malformed	Specified Bgp Group authkey is not valid.	The error message returned because the verification key of the BGP group is invalid.
400	InvalidIP.Malformed	Ip malformed.	The error message returned because the format of the IP address is invalid.
400	InvalidPeerAsn.Malformed	invalid peer asn cannot equals aliyun asn:45104	The error message returned because the autonomous system (AS) number cannot be the same as that of Alibaba Cloud.
400	InvalidParams.NotNull	invalid peer asn cannot equals aliyun asn:45104	The error message returned because the AS number cannot be the same as that of Alibaba Cloud.
400	InvalidParams.NotFound	instance not found	The error message returned because the instance does not exist.
400	InvalidParams.NotFound	vpc instance not found	The error message returned because the specified VPC does not exist. Check whether the specified VPC ID is valid.
400	InvalidParams.AlreadyExists	bgp network already exists	The error message returned because the BGP network already exists.
400	InvalidStatus.CannotOperate	invalid status cannot operate	The error message returned because the state is invalid and the operation cannot be performed.

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

14.7. DescribeBgpPeers

Queries Border Gateway Protocol (BGP) peers in a specific region.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeBgpPeers	The operation that you want to perform. Set the value to **DescribeBgpPeers**.
RegionId	String	Yes	cn-shanghai	The ID of the region where the BGP group is deployed. You can call the DescribeRegions operation to query region IDs.
RouterId	String	No	vbr-2zecmmvg5gvu8i4te*****	The ID of the vRouter.
BgpPeerId	String	No	bgp-2ze3un0ft1jd1xd*****	The ID of the BGP peer.
BgpGroupId	String	No	bgpg-2zev8h2wo414sfh******	The ID of the BGP group.
IsDefault	Boolean	No	false	Specifies whether the BGP group is the default one. • **true**: The BGP group is the default one. • **false**: The BGP group is not the default one.
PageNumber	Integer	No	1	The number of the page to return. Default value: 1.
PageSize	Integer	No	1	The number of entries to return on each page. Maximum value: 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description
RequestId	String	DE77A7F3-3B74-41C0-A5BC-CAFD188C28B6	The ID of the request.
TotalCount	Integer	10	The total number of entries returned.
PageNumber	Integer	1	The number of the returned page.
PageSize	Integer	2	The number of entries returned per page.
BgpPeers	Array		The detailed information about the BGP peer.
Name	String	test	The name of the BGP peer.
Description	String	xxxxxxxxx	The description of the BGP group.
BgpPeerId	String	bgp-wz977wcrmb69agdb******	The ID of the BGP peer.
BgpGroupId	String	bgp-wz977wcrmb69*******	The ID of the BGP group.

Parameter	Type	Example	Description
PeerIpAddress	String	116.62.**. **	The IP address of the BGP peer.
PeerAsn	String	active	The autonomous system (AS) number of the BGP peer.
AuthKey	String	! PWZ2wsq******	The authentication key of the BGP group.
RouterId	String	vbr-2zecmmvg5gvu8i4te****w	The ID of the vRouter.
BgpStatus	String	deleted	The state of the BGP connection. Valid values: • creating: being created • working: being used • modifying: being modified • deleting: being deleted • deleted: deleted
Status	String	active	The state of the BGP peer. Valid values: • Pending: pending • Available: available • Modifying: being modified • Deleting: being deleted • Deleted: deleted
Keepalive	String	10	The keepalive time.
LocalAsn	String	45104	The local AS number.
Hold	String	30	The hold time.
IsFake	String	true	Indicates whether a fake AS number is used.
RouteLimit	String	99	Routing limits.
RegionId	String	cn-shanghai	The ID of the region to which the BGP group belongs.
EnableBfd	Boolean	true	Indicates whether the Bidirectional Forwarding Detection (BFD) protocol is enabled.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=DescribeBgpPeers
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<TotalCount>2</TotalCount>
<PageSize>10</PageSize>
<RequestId>16DFA5E6-9771-41B7-B079-DD7C2DF49BE6</RequestId>
<BgpPeers>
  <BgpPeer>
    <BgpGroupId>bgpg-2zev8h2wo414****</BgpGroupId>
    <LocalAsn>45104</LocalAsn>
    <PeerIpAddress>11.11.**.**</PeerIpAddress>
    <Hold>30</Hold>
    <Description/>
    <AuthKey/>
    <IsFake>true</IsFake>
    <PeerAsn>234</PeerAsn>
    <Keepalive>10</Keepalive>
    <RouteLimit>99</RouteLimit>
    <BgpPeerId>bgp-2ze3un0ft1jd1x***</BgpPeerId>
    <Name/>
    <Status>Available</Status>
    <BgpStatus/>
    <RouterId>vbr-2zecmmvg5gvu8i4te****w</RouterId>
    <RegionId>cn-beijing</RegionId>
  </BgpPeer>
  <BgpPeer>
    <BgpGroupId>bgpg-2zev8h2wo414sf****</BgpGroupId>
    <LocalAsn>45104</LocalAsn>
    <PeerIpAddress>11.11.**.**</PeerIpAddress>
    <Hold>30</Hold>
    <Description/>
    <AuthKey/>
    <IsFake>true</IsFake>
    <PeerAsn>234</PeerAsn>
    <Keepalive>10</Keepalive>
    <RouteLimit>99</RouteLimit>
    <BgpPeerId>bgp-2zeu54rbreqqzy*****</BgpPeerId>
    <Name/>
    <Status>Available</Status>
    <BgpStatus/>
    <RouterId>vbr-2zecmmvg5gvu8i*****</RouterId>
    <RegionId>cn-beijing</RegionId>
  </BgpPeer>
</BgpPeers>
```


`JSON` format

```
{
  "TotalCount": 2,
  "PageSize": 10,
  "RequestId": "16DFA5E6-9771-41B7-B079-DD7C2DF49BE6",
  "BgpPeers": {
    "BgpPeer": [
      {
        "BgpGroupId": "bgpg-2zev8h2wo414****",
        "LocalAsn": 45104,
        "PeerIpAddress": "11.11. **. **",
        "Hold": 30,
        "Description": "",
        "AuthKey": "",
        "IsFake": true,
        "PeerAsn": 234,
        "Keepalive": 10,
        "RouteLimit": 99,
        "BgpPeerId": "bgp-2ze3un0ft1jd1x***",
        "Name": "",
        "Status": "Available",
        "BgpStatus": "",
        "RouterId": "vbr-2zecmmvg5gvu8i4te****w",
        "RegionId": "cn-beijing"
      },
      {
        "BgpGroupId": "bgpg-2zev8h2wo414sf****",
        "LocalAsn": 45104,
        "PeerIpAddress": "11.11. **. **",
        "Hold": 30,
        "Description": "",
        "AuthKey": "",
        "IsFake": true,
        "PeerAsn": 234,
        "Keepalive": 10,
        "RouteLimit": 99,
        "BgpPeerId": "bgp-2zeu54rbreqqzy*****",
        "Name": "",
        "Status": "Available",
        "BgpStatus": "",
        "RouterId": "vbr-2zecmmvg5gvu8i*****",
        "RegionId": "cn-beijing"
      }
    ]
  }
}
```


Error codes

HttpCode	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because unknown errors have occurred.
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID is invalid. Check whether the service is available in the specified region.

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

14.8. DeleteBgpPeer

Deletes a specific Border Gateway Protocol (BGP) peer.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteBgpPeer	The operation that you want to perform. Set the value to **DeleteBgpPeer**.
BgpPeerId	String	Yes	bgp-wz977wcrmb69a*******	The ID of the BGP peer.
RegionId	String	Yes	cn-shanghai	The ID of the region where the BGP group is deployed. You can call the DescribeRegions operation to query region IDs.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-001xxxxxxxx	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	AEBB1EB6-3C15-4A35-B4CE-03485200C143	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=DeleteBgpPeer
&BgpPeerId=bgp-wz977wcrmb69a********
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteBgpPeerResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</DeleteBgpPeerResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	Specified value of "regionId" is not supported.	The error message returned because the specified region ID is invalid. Check whether the service is available in the specified region.

HttpCode	Error code	Error message	Description
400	QuotaExceeded.Bgp	bgp peer count per vbr quota exceed.	The error message returned because the number of BGP groups in the virtual border router (VBR) has reached the upper limit.
400	QuotaExceeded.Nqa	nqa count per vbr quota exceed.	The error message returned because the Network Quality Analyzer (NQA) number has reached the upper limit.
400	QuotaExceeded.BgpNetwork	bgp network count per vbr quota exceed.	The error message returned because the number of BGP networks in the VBR has reached the upper limit.
400	InvalidPeerIpAddress	multi pconn peer ip can not be null.	The error message returned because the IP addresses of multiple physical connections cannot be empty.
400	InvalidVbrNetwork	vbr netowrk not exists	The error message returned because the specified VBR does not exist. Check whether the specified VBR is valid.
400	InvalidBgpGroup	bgp group not exists	The error message returned because the BGP group does not exist.
400	InvalidBgpName.Malformed	Specified Bgp Group name is not valid.	The error message returned because the name of the BGP group is invalid.
400	InvalidBgpDiscription.Malformed	Specified Bgp Group description is not valid.	The error message returned because the description of the BGP group is invalid.
400	InvalidBgpAuthkey.Malformed	Specified Bgp Group authkey is not valid.	The error message returned because the verification key of the BGP group is invalid.
400	InvalidIP.Malformed	Ip malformed.	The error message returned because the format of the IP address is invalid.
400	InvalidPeerAsn.Malformed	invalid peer asn cannot equals aliyun asn:45104	The error message returned because the autonomous system (AS) number cannot be the same as that of Alibaba Cloud.
400	InvalidParams.NotNull	invalid peer asn cannot equals aliyun asn:45104	The error message returned because the AS number cannot be the same as that of Alibaba Cloud.
400	InvalidParams.NotFound	instance not found	The error message returned because the instance does not exist.
400	InvalidParams.NotFound	vpc instance not found	The error message returned because the specified VPC does not exist. Check whether the specified VPC ID is valid.
400	InvalidParams.AlreadyExists	bgp network already exists	The error message returned because the BGP network already exists.
400	InvalidStatus.CannotOperate	invalid status cannot operate	The error message returned because the state is invalid and the operation cannot be performed.

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

14.9. AddBgpNetwork

Advertises a Border Gateway Protocol (BGP) network.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AddBgpNetwork	The operation that you want to perform. Set the value to **AddBgpNetwork**.
DstCidrBlock	String	Yes	10.10.**. **/32	The CIDR block of the virtual private cloud (VPC) or vSwitch that you want to connect to a data center.
RegionId	String	Yes	cn-shanghai	The ID of the region where the virtual border router (VBR) is deployed. You can call the DescribeRegions operation to query region IDs.
RouterId	String	Yes	vrt-2zeo3xzyf38r4u******	The ID of the vRouter associated with the router interface.
VpcId	String	No	vpc-bp1qpo0kug3a2*****	The ID of the VPC.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	9C7FA9D6-72E0-48A9-A9C3-2DA8569CD5EB	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=AddBgpNetwork
&DstCidrBlock=10.10. **. **/32
&RegionId=cn-shanghai
&RouterId=vrt-2zeo3xzyf38r4u******
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AddBgpNetworkResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</AddBgpNetworkResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	QuotaExceeded.Bgp	bgp peer count per vbr quota exceed.	The error message returned because the number of BGP groups in the VBR has reached the upper limit.
400	QuotaExceeded.Nqa	nqa count per vbr quota exceed.	The error message returned because the Network Quality Analyzer (NQA) number has reached the upper limit.
400	QuotaExceeded.BgpNetwork	bgp network count per vbr quota exceed.	The error message returned because the number of BGP networks in the VBR has reached the upper limit.
400	InvalidPeerIpAddress	multi pconn peer ip can not be null.	The error message returned because the IP addresses of multiple physical connections cannot be empty.
400	InvalidVbrNetwork	vbr netowrk not exists	The error message returned because the specified VBR does not exist. Check whether the specified VBR is valid.
400	InvalidBgpGroup	bgp group not exists	The error message returned because the BGP group does not exist.
400	InvalidBgpName.Malformed	Specified Bgp Group name is not valid.	The error message returned because the name of the BGP group is invalid.
400	InvalidBgpDiscription.Malformed	Specified Bgp Group description is not valid.	The error message returned because the description of the BGP group is invalid.
400	InvalidBgpAuthkey.Malformed	Specified Bgp Group authkey is not valid.	The error message returned because the verification key of the BGP group is invalid.
400	InvalidIP.Malformed	Ip malformed.	The error message returned because the format of the IP address is invalid.
400	InvalidPeerAsn.Malformed	invalid peer asn cannot equals aliyun asn:45104	The error message returned because the autonomous system (AS) number cannot be the same as that of Alibaba Cloud.
400	InvalidParams.NotNull	parameter must not null.	The required parameters must not be empty.
400	InvalidParams.NotFound	instance not found	The error message returned because the instance does not exist.
400	InvalidParams.NotFound	vpc instance not found	The error message returned because the specified VPC does not exist. Check whether the specified VPC ID is valid.
400	InvalidParams.AlreadyExists	bgp network already exists	The error message returned because the BGP network already exists.
400	InvalidStatus.CannotOperate	invalid status cannot operate	The error message returned because the state is invalid and the operation cannot be performed.
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist. Check whether the region ID is valid.
400	QuotaExceeded.Bgp	bgp group count per vbr quota exceed.	The error message returned because the number of BGP groups in the VBR has reached the upper limit.

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

14.10. DeleteBgpNetwork

Deletes an advertised Border Gateway Protocol (BGP) network.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteBgpNetwork	The operation that you want to perform. Set the value to **DeleteBgpNetwork**.
DstCidrBlock	String	Yes	10.110.192.12/32	The CIDR block of the virtual private cloud (VPC) or vSwitch that you want to connect to a data center.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the BGP group is deployed. You can call the DescribeRegions operation to query region IDs.
RouterId	String	Yes	vrt-bp1lhl0taikrteen80oxx	The ID of the virtual border router (VBR).
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	22F4C006-D3BB-4F96-9FF9-4C8335276D70	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DeleteBgpNetwork
&DstCidrBlock=10.110.192.12/32
&RegionId=cn-hangzhou
&RouterId=vrt-bp1lhl0taikrteen80oxx
&<Common Request Parameters>
```

Sample success responses

`XML` format

```
<DeleteBgpNetworkResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</DeleteBgpNetworkResponse>
```

`JSON` format

```
{
 "RequestId":"0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	Specified value of "regionId" is not supported.	The error message returned because the specified region ID is invalid. Check whether the service is available in the specified region.
400	QuotaExceeded.Bgp	bgp peer count per vbr quota exceed.	The error message returned because the number of BGP groups in the VBR has reached the upper limit.
400	QuotaExceeded.Nqa	nqa count per vbr quota exceed.	The error message returned because the Network Quality Analyzer (NQA) number has reached the upper limit.
400	QuotaExceeded.BgpNetwork	bgp network count per vbr quota exceed.	The error message returned because the number of BGP networks in the VBR has reached the upper limit.
400	InvalidPeerIpAddress	multi pconn peer ip can not be null.	The error message returned because the IP addresses of multiple physical connections cannot be empty.
400	InvalidVbrNetwork	vbr netowrk not exists	The error message returned because the specified VBR does not exist. Check whether the specified VBR is valid.
400	InvalidBgpGroup	bgp group not exists	The error message returned because the BGP group does not exist.
400	InvalidBgpName.Malformed	Specified Bgp Group name is not valid.	The error message returned because the name of the BGP group is invalid.
400	InvalidBgpDiscription.Malformed	Specified Bgp Group description is not valid.	The error message returned because the description of the BGP group is invalid.
400	InvalidBgpAuthkey.Malformed	Specified Bgp Group authkey is not valid.	The error message returned because the verification key of the BGP group is invalid.
400	InvalidIP.Malformed	Ip malformed.	The error message returned because the format of the IP address is invalid.
400	InvalidPeerAsn.Malformed	invalid peer asn cannot equals aliyun asn:45104	The error message returned because the autonomous system (AS) number cannot be the same as that of Alibaba Cloud.
400	InvalidParams.NotNull	invalid peer asn cannot equals aliyun asn:45104	The error message returned because the AS number cannot be the same as that of Alibaba Cloud.
400	InvalidParams.NotFound	instance not found	The error message returned because the instance does not exist.
400	InvalidParams.NotFound	vpc instance not found	The error message returned because the specified VPC does not exist. Check whether the specified VPC ID is valid.
400	InvalidParams.AlreadyExists	bgp network already exists	The error message returned because the BGP network already exists.
400	InvalidStatus.CannotOperate	invalid status cannot operate	The error message returned because the state is invalid and the operation cannot be performed.

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

14.11. ModifyBgpPeerAttribute

Modifies the configuration of a BGP peer.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyBgpPeerAttribute	The operation that you want to perform. Set the value to **ModifyBgpPeerAttribute**.
BgpPeerId	String	Yes	Bgp-awjhxxxxxxxx	The ID of the BGP peer.
RegionId	String	Yes	cn-shanghai	The ID of the region where the BGP group is deployed. You can call the DescribeRegions operation to query region IDs.
BgpGroupId	String	No	bgpg-wz9f62v4fbgxxxxxxxx	The ID of the BGP group.
PeerIpAddress	String	No	116.62.xx.xx	The IP address of the BGP peer.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-001xxxxxxxx	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.
EnableBfd	Boolean	No	true	Specifies whether to enable the BFD feature. Valid values: • **true**: enables the BFD feature. • **false**: disables the BFD feature.

Response parameters

Parameter	Type	Example	Description
RequestId	String	D4B7649A-61BB-4C64-A586-1DFF1EDA6A42	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=ModifyBgpPeerAttribute
&BgpPeerId=Bgp-awjhxxxxxxxx
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateBgpPeerResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</CreateBgpPeerResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID is invalid. Check whether the service is available in the specified region.

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

15.Virtual Border Router

15.1. CreateVbrHa

Creates a virtual border router (VBR) failover group.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateVbrHa	The operation that you want to perform. Set the value to **CreateVbrHa**.
PeerVbrId	String	Yes	vbr-bp12mw1f8k3jgygk9*** *	The ID of the other VBR in the VBR failover group.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the VBR is deployed.
VbrId	String	Yes	vbr-bp1jcg5cmxjbl9xgc****	The ID of the VBR.
Description	String	No	VBRHa	The description of the VBR failover group. The description must be 2 to 256 characters in length. It must start with a letter and cannot start with `http://` or `https://`.
Name	String	No	VBRHa	The name of the VBR failover group.
ClientToken	String	No	CBCE910E-D396-4944-8****	The client token that is used to ensure the idempotence of the request. The client token must be unique among different requests. It can contain only ASCII characters and cannot exceed 64 characters in length.
DryRun	Boolean	No	false	Specifies whether to precheck the request. Valid values: • **true**: prechecks the request without performing the operation. The system checks the request format, instance status, and whether the required parameters are specified. An error message is returned if the request fails the precheck. If the request passes the precheck, `DRYRUN.SUCCESS` is returned. • **false**: prechecks the request. After the request passes the precheck, the operation is performed.

Response parameters

Parameter	Type	Example	Description
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The ID of the request.

Parameter	Type	Example	Description
VbrHaId	String	vbrha-sa1sxheuxtd98****	The ID of the VBR failover group.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateVbrHa
&PeerVbrId=vbr-bp12mw1f8k3jgygk9****
&RegionId=cn-hangzhou
&VbrId=vbr-bp1jcg5cmxjbl9xgc****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateVbrHaResponse>
    <VbrHaId>vbrha-sa1sxheuxtd98****</VbrHaId>
    <RequestId>4EC47282-1B74-4534-BD0E-403F3EE64CAF</RequestId>
</CreateVbrHaResponse>
```

`JSON` format

```
{
  "CreateVbrHaResponse": {
    "VbrHaId": "vbrha-sa1sxheuxtd98****",
    "RequestId": "4EC47282-1B74-4534-BD0E-403F3EE64CAF"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
404	ResourceNotFound.Vbr	The VBR resource is not found.	The error message returned because the VBR is not found.
400	OperationFailed.VbrCenNotConsistent	The VBR and the peer VBR are attached to different CENs.	The error message returned because the VBRs are attached to different Cloud Enterprise Network (CEN) instances.
400	OperationFailed.VbrAliUidNotConsistent	The VBR and the peer VBR belong to different AliUids.	The error message returned because the VBRs belong to different accounts.
400	OperationFailed.VbrAccessDeviceSame	The VBR and the peer VBR are in the same device.	The error message returned because the VBRs belong to the same device.
400	OperationFailed.VbrBandWidthExceed	The VBR bandwidth exceeds the limit.	The error message returned because the bandwidth of the VBR has reached the upper limit.
400	OperationFailed.VbrInUsedByOtherHa	The VBR is used by another VBR HA.	The error message returned because the VBRs are already used in another VBR failover group.
400	OperationFailed.VbrBgpPeerNotEnableBfd	The VBR BGP has not enabled BFD.	The error message returned because Border Gateway Protocol (BGP) groups of the VBR do not have Bidirectional Forwarding Detection (BFD) enabled.
400	OperationFailed.VbrCenNotRelation	The VBR is not attached to any CEN.	The error message returned because the VBR is not attached to a CEN instance.

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

15.2. DescribeVbrHa

Queries virtual border router (VBR) failover groups.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeVbrHa	The operation that you want to perform. Set the value to **DescribeVbrHa**.
RegionId	String	Yes	cn-shanghai	The ID of the region where the VBR is deployed.
ClientToken	String	No	CBCE910E-D396-4944-8****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.
DryRun	Boolean	No	false	Specifies whether to precheck the request. Valid values: • **true**: prechecks the request without performing the operation. The system checks the request format, instance status, and whether the required parameters are specified. An error message is returned if the request fails the precheck. If the request passes the precheck, `DRYRUN.SUCCESS` is returned. • **false**: prechecks the request. After the request passes the precheck, the operation is performed.
VbrId	String	No	vbr-bp1jcg5cmxjbl9xgc****	The ID of the VBR.
VbrHaId	String	No	vbrha-sa1sxheuxtd98****	The ID of the VBR failover group.

Response parameters

Parameter	Type	Example	Description
CreationTime	String	2021-06-08T12:20:55	The time when the VBR was created.
Description	String	desc	The description of the VBR failover group. The description must be 2 to 256 characters in length. It must start with a letter and cannot start with `http://` or `https://`.
Name	String	VBRHa	The name of the VBR failover group.
PeerVbrId	String	vbr-bp12mw1f8k3jgygk9****	The ID of the other VBR in the VBR failover group.

Parameter	Type	Example	Description
RegionId	String	cn-hangzhou	The ID of the region where the VBR is deployed.
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The ID of the request.
Status	String	Active	The state of the VBR failover group. • **Creating**: The VBR failover group is being created. • **Active**: The VBR failover group is running as expected.
VbrHaId	String	vbrha-sa1sxheuxtd98****	The ID of the VBR failover group.
VbrId	String	vbr-bp1jcg5cmxjbl9xgc****	The ID of the VBR.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeVbrHa
&RegionId=cn-shanghai
&VbrHaId=vbrha-sa1******
&VbrId=vbr-bp1jcg5cm******
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeVbrHaResponse>
    <Status>Active</Status>
    <VbrHaId>vbrha-sa1sxheuxtd98****</VbrHaId>
    <Description>desc</Description>
    <RequestId>4EC47282-1B74-4534-BD0E-403F3EE64CAF</RequestId>
    <CreationTime>2021-06-08T12:20:55</CreationTime>
    <VbrId>vbr-bp1jcg5cmxjbl9xgc****</VbrId>
    <RegionId>cn-hangzhou</RegionId>
    <PeerVbrId>vbr-bp12mw1f8k3jgygk9****</PeerVbrId>
    <Name>VBRHa</Name>
</DescribeVbrHaResponse>
```

`JSON` format

```
{
  "DescribeVbrHaResponse": {
    "Status": "Active",
    "VbrHaId": "vbrha-sa1sxheuxtd98****",
    "Description": "desc",
    "RequestId": "4EC47282-1B74-4534-BD0E-403F3EE64CAF",
    "CreationTime": "2021-06-08T12:20:55",
    "VbrId": "vbr-bp1jcg5cmxjbl9xgc****",
    "RegionId": "cn-hangzhou",
    "PeerVbrId": "vbr-bp12mw1f8k3jgygk9****",
    "Name": "VBRHa"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description

HttpCode	Error code	Error message	Description
404	ResourceNotFound.VbrHa	The VBR HA resource is not found.	The error message returned because the high availability resources of the VBR are not found.

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

15.3. DeleteVbrHa

Deletes a virtual border router (VBR) failover group.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteVbrHa	The operation that you want to perform. Set the value to **DeleteVbrHa**.
InstanceId	String	Yes	vbrha-sa1******	The ID of the VBR failover group.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the VBR is deployed.
ClientToken	String	No	CBCE910E-D396-4944-8****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteVbrHa
&InstanceId=vbrha-sa1******
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteVbrHaResponse>
    <RequestId>4EC47282-1B74-4534-BD0E-403F3EE64CAF</RequestId>
</DeleteVbrHaResponse>
```

`JSON` format

```
{
  "DeleteVbrHaResponse": {
    "RequestId": "4EC47282-1B74-4534-BD0E-403F3EE64CAF"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
404	ResourceNotFound.VbrHa	The VBR HA resource is not found.	The error message returned because the high availability resources of the VBR are not found.

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

15.4. UpdateVirtualBorderBandwidth

Updates the maximum bandwidth value of outbound data transfer for a virtual border router (VBR).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UpdateVirtualBorderBandwidth	The operation that you want to perform. Set the value to **UpdateVirtualBorderBandwidth**.
Bandwidth	Integer	Yes	2	The new maximum bandwidth value for the VBR. Unit: Mbit/s.
RegionId	String	Yes	cn-shanghai	The region ID of the VBR. You can call the DescribeRegions operation to query the most recent region list.
VirtualBorderRouterId	String	Yes	vbr-bp15zckdt37pq72****	The ID of the VBR.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
Code	String	OK	The response code.
HttpStatusCode	String	200	The HTTP status code.

Parameter	Type	Example	Description
Message	String	none	The response message.
RequestId	String	AA4486A8-B6AE-469E-AB09-820EF8ECFA2B	The ID of the request.
Success	Boolean	true	Indicates whether the maximum bandwidth value is updated. • **true**: yes • **false**: no

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=UpdateVirtualBorderBandwidth
&Bandwidth=2
&RegionId=cn-shanghai
&VirtualBorderRouterId=vbr-bp15zckdt37pq72****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<UpdateVirtualBorderBandwidthResponse>
    <Message>none</Message>
    <RequestId>AA4486A8-B6AE-469E-AB09-820EF8ECFA2B</RequestId>
    <HttpStatusCode>200</HttpStatusCode>
    <Code>OK</Code>
    <Success>true</Success>
</UpdateVirtualBorderBandwidthResponse>
```

`JSON` format

```
{
  "UpdateVirtualBorderBandwidthResponse": {
    "Message": "none",
    "RequestId": "AA4486A8-B6AE-469E-AB09-820EF8ECFA2B",
    "HttpStatusCode": 200,
    "Code": "OK",
    "Success": true
  }
}
```

Error codes

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

15.5. CreateVirtualBorderRouter

Creates a virtual border router (VBR).

Usage notes

- After you create a VBR for your Alibaba Cloud account, the VBR is in the **Enabled** state.
- After you create a VBR for another Alibaba Cloud account, the VBR is in the **Unconfirmed** state. The other Alibaba Cloud account must confirm the VBR.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateVirtualBorderRouter	The operation that you want to perform. Set the value to **CreateVirtualBorderRouter**.
PhysicalConnectionId	String	Yes	pc-2zextbehcx****	The ID of the Express Connect circuit.
RegionId	String	Yes	cn-shanghai	The region ID of the Express Connect circuit. You can call the DescribeRegions operation to query the most recent region list.
VlanId	Integer	Yes	0	The VLAN ID of the VBR. Valid values: **0 to 2999**. **Note** Only the owner of the Express Connect circuit can set this parameter. The VLAN IDs of two VBRs of the same Express Connect circuit must be different.
VbrOwnerId	Long	No	1688111111111111	The ID of the Alibaba Cloud account to which the VBR belongs. By default, the ID of the current Alibaba Cloud account or the account to which the Express Connect circuit belongs is used.
CircuitCode	String	No	longtel001	The circuit code provided by the Internet service provider (ISP) of the Express Connect circuit. **Note** Only the owner of the Express Connect circuit can set this parameter.
LocalGatewayIp	String	No	192.168.XX.XX	The IP address of the VBR on the Alibaba Cloud side.
PeerGatewayIp	String	No	192.168.XX.XX	The IP address of the VBR on the user side. Only the owner of the VBR can set this parameter. This parameter is required when you create a VBR for the owner of the Express Connect circuit. You can ignore this parameter when you create a VBR for another Alibaba Cloud account.
PeeringSubnetMask	String	No	255.255.255.252	The subnet mask for the IP addresses of the VBR on the Alibaba Cloud side and on the user side. The two IP addresses must belong to the same subnet.
Description	String	No	desc	The description of the VBR. The description must be 2 to 256 characters in length. It must start with a letter, but cannot start with `http://` or `https://`.

Parameter	Type	Required	Example	Description
Name	String	No	test	The name of the VBR. The name must be 2 to 128 characters in length, and can contain letters, digits, underscores (_), and hyphens (-). The name must start with a letter, but cannot start with `http://` or `https://`.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04*****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.
LocalIpv6GatewayIp	String	No	2001:XXXX:3c4d:0015:0000:0000:0000:1a2b	The IPv6 address of the VBR on the Alibaba Cloud side.
PeerIpv6GatewayIp	String	No	2001:XXXX:3c4d:0015:0000:0000:0000:1a2b	The IPv6 address of the VBR on the client side. Only the owner of the VBR can set this parameter. This parameter is required when you create a VBR for the owner of the Express Connect circuit. You can ignore this parameter when you create a VBR for another Alibaba Cloud account.
PeeringIpv6SubnetMask	String	No	2408:4004:cc:400::/56	The subnet mask for the IPv6 addresses of the VBR on the Alibaba Cloud side and on the user side. The two IPv6 addresses must fall within the same subnet.
EnableIpv6	Boolean	No	true	Specifies whether to enable IPv6. • `true`: yes • `false` (default): no
Bandwidth	Long	No	100	The bandwidth value. Unit: Mbit/s.

Response parameters

Parameter	Type	Example	Description
VbrId	String	vbr-bp1jcg5cmxjbl9xgc****	The ID of the VBR.
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateVirtualBorderRouter
&PhysicalConnectionId=pc-2zextbehcx****
&RegionId=cn-shanghai
&VlanId=10
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateVirtualBorderRouterResponse>
    <RequestId>4EC47282-1B74-4534-BD0E-403F3EE64CAF</RequestId>
    <VbrId>vbr-bp1jcg5cmxjbl9xgc****</VbrId>
</CreateVirtualBorderRouterResponse>
```

`JSON` format

```
{
  "RequestId": "4EC47282-1B74-4534-BD0E-403F3EE64CAF",
  "VbrId": "vbr-bp1jcg5cmxjbl9xgc****"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidPhysicalConnectionId.NotFound	The specified PhysicalConnectionId is not found.	The error message returned because the ID of the Express Connect circuit is invalid.
400	InvalidVlanId.Used	The specified VlanId has been used.	The error message returned because the VLAN ID is being used.
400	MissingParameter	The input parameter 'PhysicalConnectionId' that is mandatory for processing this request is not supplied.	The error message returned because PhysicalConnectionId is not set.
400	InvalidPhysicalConnectionId.NotEnabled	The specified PhysicalConnectionId is not in Enabled state.	The error message returned because the Express Connect circuit is in an invalid state. Check the Express Connect circuit and try again.
400	InvalidVlanId.Malformed	The specified VlanId is not valid.	The error message returned because VlanId is set to an invalid value.
400	InvalidCircuitCode.Malformed	The specified CircuitCode is not valid.	The error message returned because CircuitCode is set to an invalid value.
400	MissingParameter	The input parameter 'LocalGatewayIp' that is mandatory for processing this request is not supplied.	The error message returned because LocalGatewayIp is not set.
400	InvalidLocalGatewayIp.Malformed	The specified LocalGatewayIp is not valid.	The error message returned because the IP address of the local gateway is invalid.
400	MissingParameter	The input parameter 'PeerGatewayIp' that is mandatory for processing this request is not supplied.	The error message returned because PeerGatewayIp is not set.
400	MissingParameter	The input parameter 'PeeringSubnetMask' that is mandatory for processing this request is not supplied.	The error message returned because PeeringSubnetMask is not set.
400	InvalidPeeringSubnetMask.Malformed	The specified PeeringSubnetMask is not valid.	The error message returned because PeeringSubnetMask is set to an invalid value. Check whether PeeringSubnetMask is set to a valid value.
400	InvalidName.Malformed	The specified ?Name? is not valid.	The error message returned because the format of the name is invalid.
400	InvalidDescription.Malformed	The specifid ?Description? is not valid.	The error message returned because the format of the resource description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.

HttpCode	Error code	Error message	Description
400	QuotaExceeded.vbrPerpConn	Virtual boarder router per PhysicalConnection quota exceed.	The error message returned because the number of VBRs of each Express Connect circuit has reached the upper limit. Reduce the number of VBRs and try again.
400	QuotaExceeded.freevbr	Free virtual boarder router quota exceed.	The error message returned because the number of VBRs has reached the upper limit.
400	InvalidIp.NotSameSubnet	Local gateway ip and peer gateway ip are not in the same subnet.	The error message returned because the IP addresses of the local gateway and the peer gateway do not fall within the same subnet.
400	OperationFailed.PconnExistVlan0Vbr	The physical connection has VLAN 0 VBR. You cannot create another VBR.	The error message returned because a VBR whose VLAN ID is 0 already exists in the Express Connect circuit. You are not allowed to create other VBRs.
400	OperationFailed.Vlan0VbrUnSharePconn	VLAN 0 VBR cannot share the physical connection with another VBR.	The error message returned because a VBR whose VLAN ID is 0 already exists in the Express Connect circuit. You are not allowed to create another VBR whose VLAN ID is 0.
400	OperationFailed.PconnTrafficNotEnable	The operation is failed because of PconnTrafficNotEnable.	The error message returned because outbound traffic is not enabled.
403	Forbidden.LocalGatewayIpNotAllowedByCaller	The caller is not allowed to specify the LocalGatewayIp parameter.	The error message returned because you are not allowed to set LocalGatewayIp.
403	Forbidden.PeerGatewayIpNotAllowedByCaller	The caller is not allowed to specify the PeerGatewayIp parameter.	The error message returned because you are not allowed to set PeerGatewayIp.
403	Forbidden.PeeringSubnetMaskNotAllowedByCaller	The caller is not allowed to specify the PeeringSubnetMask parameter.	The error message returned because you are not allowed to set PeeringSubnetMask.
403	Forbidden.NameNotAllowedByCaller	The caller is not allowed to specify the Name parameter.	The error message returned because you are not allowed to set Name.
403	Forbidden.DescriptionNotAllowedByCaller	The caller is not allowed to specify the Description parameter.	The error message returned because you are not allowed to set Description.
404	InvalidRegionId.NotFound	The specified RegionId is not found.	The error message returned because the specified region ID is invalid. Check whether the service is available in the specified region.
404	InvalidVbrOwnerId.NotFound	The specified VbrOwnerId is not valid.	The error message returned because VbrOwnerId is set to an invalid value.
404	CROSS_BID.FORBIDDEN	Create VBR across bid is illegal	The error message returned because you are not allowed to create a VBR for another Alibaba Cloud account.

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

15.6. DeleteVirtualBorderRouter

Deletes a virtual border router (VBR).

Limits

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

- Before you delete a VBR, you must delete all router interfaces of the VBR.
- You can delete only a VBR that is in the **Unconfirmed**, **Enabled**, or **Terminated** state.
- If the owner of an Express Connect circuit wants to delete a VBR that belongs to another Alibaba Cloud account, the VBR must be

in the **Unconfirmed** state.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteVirtualBorderRouter	The operation that you want to perform. Set the value to **DeleteVirtualBorderRouter**.
RegionId	String	Yes	cn-shanghai	The ID of the region where the VBR is deployed. You can call the DescribeRegions operation to query the most recent region list.
VbrId	String	Yes	vbr-bp12mw1f8k3jgygk9****	The ID of the VBR.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteVirtualBorderRouter
&RegionId=cn-shanghai
&VbrId=vbr-bp12mw1f8k3jgygk9****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteVirtualBorderRouterResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</DeleteVirtualBorderRouterResponse>
```

`JSON` format

```
{
  "DeleteVirtualBorderRouterResponse": {
    "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidVbrId.NotFound	The specified VirutalBorderRouter does not exist in our records.	The error message returned because the specified VBR ID does not exist. Check whether the specified VBR ID is valid.
400	InvalidOperation.RouterInterfaceNotDeleted	The specified VirutalBorderRouter still has routerInterface.	The error message returned because the VBR is associated with a router interface.
400	InvalidOperation.OperationNotAllowedInState	The specified VirutalBorderRouter is in invalid state.	The error message returned because the specified VBR is in an invalid state. Check the state of the VBR.
403	Forbidden.OperationDeleteNotAllowedByUser	The caller is not allowed to delete the specified VirtualBorderRouter.	The error message returned because you do not have the permissions to delete the VBR.
403	Forbidden.MultiVlanRi	Multiple vlan router interfaces are found.	The error message returned because multiple VLAN router interfaces exist.
403	Forbidden.NoRiFound	No vlan router interfaces are found.	The error message returned because no VLAN router interface is available.
400	InvalidStatus.NotAllowed	The virtual border has been associated by physicalConnection.	The error message returned because the VBR is associated with an Express Connect circuit.
400	OperationUnsupported.VBRAttachedCen	Operation failed because the VBR is attached to CEN.	The error message returned because the VBR is already attached to a Cloud Enterprise Network (CEN) instance.

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

15.7. DescribeVirtualBorderRouters

Queries virtual border routers (VBRs).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeVirtualBorderRouters	The operation that you want to perform. Set the value to **DescribeVirtualBorderRouters**.
RegionId	String	Yes	cn-shanghai	The ID of the region where the VBR is deployed. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. Default value: **1**.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: **50**. Default value: **10**.

Parameter	Type	Required	Example	Description
Filter.N.Key	String	No	Status	The filter conditions. You can specify at most five filter conditions. The following filter conditions are supported: • **PhysicalConnectionId**: Filter by Express Connect circuit ID. • **VbrId**: Filter by VBR ID. • **Status**: Filter by VBR status. • **Name**: Filter by VBR name. • **AccessPointId**: Filter by access point ID. • **eccId**: Filter by Express Cloud Connect (ECC) instance ID. • **type**: Filter by Express Connect circuit type.
Filter.N.Value.N	RepeatList	No	Active	The filter values of keys. You can specify multiple filter values for one key. The logical operator between filter values is OR. If one filter value is matched, the filter condition is matched.

Response parameters

Parameter	Type	Example	Description
VirtualBorderRouterSet	Array of VirtualBorderRouterType		The information about the queried VBRs.
VirtualBorderRouterType			
AccessPointId	String	ap-cn-kojok1x*********	The ID of the access point.
ActivationTime	String	2021-06-08T12:20:55	The first time when the VBR was activated.
AssociatedCens	Array of AssociatedCen		The information about the Cloud Enterprise Network (CEN) instances to which the VBR is attached.
AssociatedCen			
CenId	String	cen-kojok19xxx******	The ID of the CEN instance.
CenOwnerId	Long	1234567890	The user ID (UID) of the Alibaba Cloud account to which the CEN instance belongs.
CenStatus	String	Attached	The status of the CEN instance. Valid values: • **Attached**: The VBR is attached to the CEN instance. • **Attaching**: The VBR is being attached to the CEN instance. • **Detached**: The VBR is detached from the CEN instance. • **Detaching**: The VBR is being detached from the CEN instance. • If no value is returned, the VBR is not attached to a CEN instance.
AssociatedPhysicalConnections	Array of AssociatedPhysicalConnection		The information about the Express Connect circuits that are associated with the VBR.

Parameter	Type	Example	Description
AssociatedPhysicalConnection			
CircuitCode	String	longtel0**	The circuit code provided by the Internet service provider (ISP) for the Express Connect circuit.
EnableIpv6	Boolean	true	Indicates whether IPv6 is enabled. Valid values: • **true**: enabled • **false**: disabled
LocalGatewayIp	String	192.168.XX.XX	The IPv4 address of the VBR on the Alibaba Cloud side.
LocalIpv6GatewayIp	String	2001:XXXX:3c4d:0015:0000:0000:0000:1a2b	The IPv6 address of the VBR on the Alibaba Cloud side.
PeerGatewayIp	String	192.168.XX.XX	The IPv4 address of the VBR on the user side.
PeerIpv6GatewayIp	String	2001:XXXX:3c4d:0015:0000:0000:0000:1a2b	The IPv6 address of the VBR on the user side. Only the owner of the VBR can set or modify this parameter. This parameter is required when you create a VBR for the owner of the Express Connect circuit. You can ignore this parameter when you create a VBR for another Alibaba Cloud account.
PeeringIpv6SubnetMask	String	2408:4004:cc:400::/56	The subnet mask for the IPv6 addresses of the VBR on the Alibaba Cloud side and on the user side. The two IPv6 addresses must fall within the same subnet.
PeeringSubnetMask	String	255.255.255.252	The subnet mask for the IPv4 addresses of the VBR on the Alibaba Cloud side and on the user side. The two IPv4 addresses must fall within the same subnet.
PhysicalConnectionBusinessStatus	String	Normal	The business status of the Express Connect circuit. • **Normal**: normal • **FinancialLocked**: locked due to overdue payments
PhysicalConnectionId	String	pc-119mfjzm7*********	The ID of the Express Connect circuit.
PhysicalConnectionOwnerUid	String	12345678****	The UID of the Alibaba Cloud account to which the Express Connect circuit belongs.

Parameter	Type	Example	Description
PhysicalConnectionStatus	String	Enabled	The status of the Express Connect circuit. Valid values: • **Initial**: application in progress • **Approved**: approved • **Allocating**: resource allocation in progress • **Allocated**: under construction • **Confirmed**: waiting for user confirmation • **Enabled**: enabled • **Rejected**: rejected • **Canceled**: canceled • **Allocation Failed**: resource allocation failed • **Terminated**: disabled
Status	String	active	The status of the VBR. Valid values: • **unconfirmed**: pending confirmation from other users • **active**: working as expected • **terminating**: being disabled • **terminated**: disabled • **recovering**: being enabled • **deleting**: being deleted
VlanId	String	0	The VLAN ID of the VBR.
VlanInterfaceId	String	ri-kojok19x3j0q6k****	The ID of the VBR interface, which can be used as the next hop of a VBR route.
CircuitCode	String	longtel0**	The circuit code provided by the ISP for the Express Connect circuit.
CloudBoxInstanceId	String	cb-*********	The ID of the cloud box.
CreationTime	String	2020-06-08T12:20:55	The time when the VBR was created.
Description	String	desc	The description of the VBR.
DetectMultiplier	Long	3	The multiple of the detection time. This value indicates the maximum number of dropped packets that is allowed by the receiver when the initiator transmits packets. This value can be used to check whether the connection works as expected. Valid values: **3 to 10**.
EccId	String	ecc-h*********	The ID of the ECC instance.
EnableIpv6	Boolean	false	Indicates whether IPv6 is enabled. Valid values: • **true**: enabled • **false** (default): disabled
LocalGatewayIp	String	192.168.XX.XX	The IPv4 address of the VBR on the Alibaba Cloud side.

Parameter	Type	Example	Description
LocalIpv6GatewayIp	String	2001:XXXX:3c4d:0015:0000:0000:0000:1a2b	The IPv6 address of the VBR on the Alibaba Cloud side.
MinRxInterval	Long	300	The time interval to receive BFD packets. Valid values: **200 to 1000**. Unit: milliseconds.
MinTxInterval	Long	300	The time interval to send BFD packets. Valid values: **200 to 1000**. Unit: milliseconds.
Name	String	test	The name of the VBR.
PConnVbrChargeType	String	PrePaid	The billing method of the VBR that is associated with the Express Connect circuit. • **PrePaid**: subscription. If you select subscription, make sure that your Alibaba Cloud account supports balance payments or credit payments. • **PostPaid**: pay-as-you-go.
PConnVbrExpireTime	String	2021-06-08T12:20:55	The time when the VBR expires.
PeerGatewayIp	String	192.168.XX.XX	The IPv4 address of the VBR on the user side.
PeerIpv6GatewayIp	String	2001:XXXX:3c4d:0015:0000:0000:0000:1a2b	The IPv6 address of the VBR on the user side.
PeeringIpv6SubnetMask	String	2000:1234:0:a000::/55	The subnet mask of the IPv6 addresses configured on the user side and Alibaba Cloud side.
PeeringSubnetMask	String	255.255.255.252	The subnet mask of the IPv4 addresses configured on the user side and Alibaba Cloud side.
PhysicalConnectionBusinessStatus	String	Normal	The business status of the Express Connect circuit. • **Normal**: normal • **FinancialLocked**: locked due to overdue payments
PhysicalConnectionId	String	pc-119mfjzm7x******	The ID of the Express Connect circuit to which the VBR belongs.
PhysicalConnectionOwnerUid	String	12345678****	The UID of the Alibaba Cloud account to which the Express Connect circuit belongs.
PhysicalConnectionStatus	String	Normal	The status of the Express Connect circuit. Valid values: • **Initial**: application in progress • **Approved**: approved • **Allocating**: resource allocation in progress • **Allocated**: under construction • **Confirmed**: waiting for user confirmation • **Enabled**: enabled • **Rejected**: rejected • **Canceled**: canceled • **Allocation Failed**: resource allocation failed • **Terminated**: disabled

Parameter	Type	Example	Description
RecoveryTime	String	2021-05-08T12:20:55	The last time when the status of the VBR changed from **terminated** to **active**.
RouteTableId	String	rtb-bp1nxxxxxxxx*******	The ID of the route table of the VBR.
Status	String	active	The status of the VBR. Valid values: • **unconfirmed**: pending confirmation from other users • **active**: working as expected • **terminating**: being disabled • **terminated**: disabled • **recovering**: being enabled • **deleting**: being deleted
TerminationTime	String	2021-06-08T12:20:55	The last time when the VBR was disabled.
Type	String	pconnVBR	The type of the VBR.
VbrId	String	vbr-bp1jcg5cmxjbl9xgc****	The ID of the VBR.
VlanId	Integer	10	The VLAN ID of the VBR.
VlanInterfaceId	String	ri-2zeo3xzyf38r4xx*******	The ID of the VBR interface.
TotalCount	Integer	1	The total number of entries returned.
PageNumber	Integer	1	The number of the page returned. Default value: **1**.
PageSize	Integer	10	The number of entries returned on each page. Maximum value: **50**. Default value: **10**.
RequestId	String	DE77A7F3-3B74-41C0-A5BC-CAFD188C28B6	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeVirtualBorderRouters
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeVirtualBorderRoutersResponse>
  <TotalCount>1</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>DE77A7F3-3B74-41C0-A5BC-CAFD188C28B6</RequestId>
  <PageNumber>1</PageNumber>
  <VirtualBorderRouterSet>
    <VirtualBorderRouterType>
      <MinRxInterval>300</MinRxInterval>
      <PeerGatewayIp>192.168.XX.XX</PeerGatewayIp>
      <Description>desc</Description>
      <RouteTableId>rtb-bp1nxxxxxxxx*******</RouteTableId>
      <ActivationTime>2021-06-08T12:20:55</ActivationTime>
      <PhysicalConnectionId>pc-119mfjzm7x******</PhysicalConnectionId>
      <PhysicalConnectionStatus>Normal</PhysicalConnectionStatus>
      <VlanInterfaceId>ri-2zeo3xzyf38r4xx*******</VlanInterfaceId>
      <VbrId>vbr-bp1jcg5cmxjbl9xgc****</VbrId>
      <PhysicalConnectionOwnerUid>12345678****</PhysicalConnectionOwnerUid>
      <PeeringSubnetMask>255.255.255.252</PeeringSubnetMask>
      <TerminationTime>2021-06-08T12:20:55</TerminationTime>
      <EnableIpv6>true</EnableIpv6>
      <PeeringIpv6SubnetMask>2000:1234:0:a000::/55</PeeringIpv6SubnetMask>
      <Name>test</Name>
      <RecoveryTime>2017-06-08T12:20:55</RecoveryTime>
      <EccId>ecc-h*********</EccId>
      <LocalIpv6GatewayIp>2001:XXXX:3c4d:0015:0000:0000:0000:1a2b</LocalIpv6GatewayIp>
      <VlanId>10</VlanId>
      <Status>Active</Status>
      <CircuitCode>longtel0**</CircuitCode>
      <MinTxInterval>300</MinTxInterval>
      <PeerIpv6GatewayIp>2001:XXXX:3c4d:0015:0000:0000:0000:1a2b</PeerIpv6GatewayIp>
      <DetectMultiplier>3</DetectMultiplier>
      <PConnVbrChargeType>PrePaid</PConnVbrChargeType>
      <Type>pconnVBR</Type>
      <LocalGatewayIp>192.168.XX.XX</LocalGatewayIp>
      <AccessPointId>ap-cn-kojok1x*********</AccessPointId>
      <CreationTime>2021-06-08T12:20:55</CreationTime>
      <PConnVbrExpireTime>2021-06-08T12:20:55</PConnVbrExpireTime>
      <CloudBoxInstanceId>cb-*********</CloudBoxInstanceId>
      <PhysicalConnectionBusinessStatus>Normal</PhysicalConnectionBusinessStatus>
      <AssociatedPhysicalConnections>
        <AssociatedPhysicalConnection>
          <Status>active</Status>
          <PeerGatewayIp>192.168.XX.XX</PeerGatewayIp>
          <CircuitCode>longtel0**</CircuitCode>
          <PhysicalConnectionId>pc-119mfjzm7*********</PhysicalConnectionId>
          <PhysicalConnectionStatus>Enabled</PhysicalConnectionStatus>
          <VlanInterfaceId>ri-kojok19x3j0q6k****</VlanInterfaceId>
          <PeerIpv6GatewayIp>2001:XXXX:3c4d:0015:0000:0000:0000:1a2b</PeerIpv6GatewayIp>
          <PhysicalConnectionOwnerUid>12345678****</PhysicalConnectionOwnerUid>
          <PeeringSubnetMask>255.255.255.252</PeeringSubnetMask>
          <EnableIpv6>true</EnableIpv6>
          <PeeringIpv6SubnetMask>2408:4004:cc:400::/56</PeeringIpv6SubnetMask>
          <LocalGatewayIp>192.168.XX.XX</LocalGatewayIp>
          <LocalIpv6GatewayIp>2001:XXXX:3c4d:0015:0000:0000:0000:1a2b</LocalIpv6GatewayIp>
          <VlanId>0</VlanId>
          <PhysicalConnectionBusinessStatus>Normal</PhysicalConnectionBusinessStatus>
        </AssociatedPhysicalConnection>
      </AssociatedPhysicalConnections>
      <AssociatedCens>
        <AssociatedCen>
          <CenStatus>Attached</CenStatus>
          <CenOwnerId>1234567890</CenOwnerId>
          <CenId>cen-kojok19xxx******</CenId>
        </AssociatedCen>
      </AssociatedCens>
    </VirtualBorderRouterType>
  </VirtualBorderRouterSet>
</DescribeVirtualBorderRoutersResponse>
```

JSON format


```
{
  "DescribeVirtualBorderRoutersResponse": {
    "TotalCount": 1,
    "PageSize": 10,
    "RequestId": "DE77A7F3-3B74-41C0-A5BC-CAFD188C28B6",
    "PageNumber": 1,
    "VirtualBorderRouterSet": {
      "VirtualBorderRouterType": {
        "MinRxInterval": 300,
        "PeerGatewayIp": "192.168.XX.XX",
        "Description": "desc",
        "RouteTableId": "rtb-bp1nxxxxxxxx*******",
        "ActivationTime": "2021-06-08T12:20:55",
        "PhysicalConnectionId": "pc-119mfjzm7x******",
        "PhysicalConnectionStatus": "Normal",
        "VlanInterfaceId": "ri-2zeo3xzyf38r4xx*******",
        "VbrId": "vbr-bp1jcg5cmxjbl9xgc****",
        "PhysicalConnectionOwnerUid": "12345678****",
        "PeeringSubnetMask": "255.255.255.252",
        "TerminationTime": "2021-06-08T12:20:55",
        "EnableIpv6": true,
        "PeeringIpv6SubnetMask": "2000:1234:0:a000::/55",
        "Name": "test",
        "RecoveryTime": "2017-06-08T12:20:55",
        "EccId": "ecc-h*********",
        "LocalIpv6GatewayIp": "2001:XXXX:3c4d:0015:0000:0000:0000:1a2b",
        "VlanId": 10,
        "Status": "Active",
        "CircuitCode": "longtel0**",
        "MinTxInterval": 300,
        "PeerIpv6GatewayIp": "2001:XXXX:3c4d:0015:0000:0000:0000:1a2b",
        "DetectMultiplier": 3,
        "PConnVbrChargeType": "PrePaid",
        "Type": "pconnVBR",
        "LocalGatewayIp": "192.168.XX.XX",
        "AccessPointId": "ap-cn-kojok1x*********",
        "CreationTime": "2021-06-08T12:20:55",
        "PConnVbrExpireTime": "2021-06-08T12:20:55",
        "CloudBoxInstanceId": "cb-*********",
        "PhysicalConnectionBusinessStatus": "Normal",
        "AssociatedPhysicalConnections": {
          "AssociatedPhysicalConnection": {
            "Status": "active",
            "PeerGatewayIp": "192.168.XX.XX",
            "CircuitCode": "longtel0**",
            "PhysicalConnectionId": "pc-119mfjzm7*********",
            "PhysicalConnectionStatus": "Enabled",
            "VlanInterfaceId": "ri-kojok19x3j0q6k****",
            "PeerIpv6GatewayIp": "2001:XXXX:3c4d:0015:0000:0000:0000:1a2b",
            "PhysicalConnectionOwnerUid": "12345678****",
            "PeeringSubnetMask": "255.255.255.252",
            "EnableIpv6": true,
            "PeeringIpv6SubnetMask": "2408:4004:cc:400::/56",
            "LocalGatewayIp": "192.168.XX.XX",
            "LocalIpv6GatewayIp": "2001:XXXX:3c4d:0015:0000:0000:0000:1a2b",
            "VlanId": 0,
            "PhysicalConnectionBusinessStatus": "Normal"
          }
        },
        "AssociatedCens": {
          "AssociatedCen": {
            "CenStatus": "Attached",
            "CenOwnerId": 1234567890,
            "CenId": "cen-kojok19xxx******"
          }
        }
      }
```

```
    }
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidFilterKey.ValueNotSupported	Specified filter key is not supported: Filter.X.key	The error message returned because Filter.X.key is not supported.

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

15.8. DescribeVirtualBorderRoutersForPhysicalConnection

Queries virtual border routers (VBRs) that are associated with an Express Connect circuit. The VBRs can be created by the owner of the Express Connect circuit and by other Alibaba Cloud accounts.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeVirtualBorderRoutersForPhysicalConnection	The operation that you want to perform. Set the value to **DescribeVirtualBorderRoutersForPhysicalConnection**.
PhysicalConnectionId	String	Yes	pc-119mfj****	The ID of the Express Connect circuit.
RegionId	String	Yes	cn-shanghai	The ID of the region where the Express Connect circuit is deployed. You can call the DescribeRegions operation to query the most recent region list.
Filter.N.Key	String	No	Status	Specifies filter conditions. You can specify at most five filter conditions. The following filter conditions are supported. • **PhysicalConnectionId**: Filter by Express Connect circuit ID. • **VbrId**: Filter by VBR ID. • **Status**: Filter by VBR status. • **Name**: Filter by VBR name. • **AccessPointId**: Filter by access point ID. • **eccId**: Filter by Express Cloud Connect (ECC) instance ID. • **type**: Filter by VBR type.
Filter.N.Value.N	RepeatList	No	Active	Specifies filter values based on keys. You can specify multiple filter values for one key. The logical operator between filter values is OR. If one filter value is matched, the filter condition is matched.
PageNumber	Integer	No	1	The number of the page to return. Default value: **1**.

Parameter	Type	Required	Example	Description
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: **50**. Default value: **10**.

Response parameters

Parameter	Type	Example	Description
VirtualBorderRouterForPhysicalConnectionSet	Array of VirtualBorderRouterForPhysicalConnectionType		The information about VBRs.
VirtualBorderRouterForPhysicalConnectionType			
ActivationTime	String	2017-06-08T12:20:55	The first time when the VBR was activated.
Bandwidth	String	10	The bandwidth of the VBR associated with the Express Connect circuit. Unit: Mbit/s.
BandwidthStatus	String	Active	The status of the bandwidth. Valid values: • **Active**: working as expected • **Inactive**: not working as expected
CircuitCode	String	longtel0**	The circuit code provided by the Internet service provider (ISP) for the Express Connect circuit.
CreationTime	String	2021-06-08T12:20:55	The time when the VBR was created.
EccId	String	ecc-sjghe****	The ID of the ECC instance.
EnableIpv6	Boolean	true	Indicates whether IPv6 is enabled. • **true**: enabled • **false**: disabled
LocalGatewayIp	String	192.168.XX.X	The IPv4 address of the VBR on the Alibaba Cloud side.
LocalIpv6GatewayIp	String	2001:0db8:3c4d:0015:0000:00**:****:1a2b	The IPv6 address of the VBR on the Alibaba Cloud side.
PConnVbrBussinessStatus	String	Normal	The state of the VBR associated with the Express Connect circuit. Valid values: • **Normal**: working as expected • **FinancialLocked**: locked due to overdue payments
PConnVbrChargeType	String	PrePaid	The billing method of the VBR that is associated with the Express Connect circuit. • **PrePaid**: subscription If you choose this billing method, make sure that you Alibaba Cloud account supports balance payments or credit payments. • **PostPaid**: pay-as-you-go

Parameter	Type	Example	Description
PConnVbrExpireTime	String	2021-06-10T12:20:55	The time when the VBR associated with the Express Connect circuit expires.
PeerGatewayIp	String	162.62.XX.XX	The IPv4 address of the VBR on the client side.
PeerIpv6GatewayIp	String	2001:XXXX:3c4d:0015:0000:0000:0000:1a2b	The IPv6 address of the VBR on the client side. Only the owner of the VBR can set or modify this parameter. This parameter is required when you create a VBR for the owner of the Express Connect circuit. You can ignore this parameter when you create a VBR for another Alibaba Cloud account.
PeeringIpv6SubnetMask	String	2408:4004:cc:400::/56	The subnet mask for the IPv6 addresses of the VBR on the Alibaba Cloud side and on the user side. The two IPv6 addresses must fall within the same subnet.
PeeringSubnetMask	String	255.255.255.0	The subnet mask for the IPv4 addresses of the VBR on the Alibaba Cloud side and on the user side. The two IPv4 addresses must fall within the same subnet.
RecoveryTime	String	2021-06-08T12:20:55	The last time when the state of the VBR changed from Terminated to Active.
Status	String	Active	The state of the VBR. • **Unconfirmed**: pending confirmation from other users • **Active**: working as expected • **Terminating**: being disabled • **Terminated**: disabled • **Recovering**: being enabled • **Deleting**: being deleted
TerminationTime	String	2021-06-07T12:20:55	The last time when the VBR was disabled.
Type	String	pconnVBR	The type of the VBR.
VbrId	String	vbr-bp16ksp61j7e0tk*****	The ID of the VBR.
VbrOwnerUid	Long	1234567890	The ID of the Alibaba Cloud account that owns the VBR. If the owner of the VBR is the same as that of the Express Connect circuit, this parameter is empty.
VlanId	Integer	1678	The VLAN ID of the VBR.
TotalCount	Integer	2	The total number of entries returned.
PageNumber	Integer	1	The number of the page to return. Pages start from page 1. Default value: 1.

Parameter	Type	Example	Description
PageSize	Integer	10	The number of entries to return on each page. Maximum value: **50**. Default value: **10**.
RequestId	String	7C5AE8B3-A2D8-428D-A2FF-93A225C0821E	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeVirtualBorderRoutersForPhysicalConnection
&PhysicalConnectionId=pc-119mfj****
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeVirtualBorderRoutersForPhysicalConnectionResponse>
   <TotalCount>2</TotalCount>
   <PageSize>10</PageSize>
   <RequestId>7C5AE8B3-A2D8-428D-A2FF-93A225C0821E</RequestId>
   <PageNumber>1</PageNumber>
   <VirtualBorderRouterForPhysicalConnectionSet>
      <VirtualBorderRouterForPhysicalConnectionType>
         <Status>Active</Status>
         <PeerGatewayIp>162.62.XX.XX</PeerGatewayIp>
         <ActivationTime>2017-06-08T12:20:55</ActivationTime>
         <VbrOwnerUid>1234567890</VbrOwnerUid>
         <CircuitCode>longtel0**</CircuitCode>
         <PeerIpv6GatewayIp>2001:XXXX:3c4d:0015:0000:0000:0000:1a2b</PeerIpv6GatewayIp>
         <VbrId>vbr-bp16ksp61j7e0tk*****</VbrId>
         <PConnVbrChargeType>PrePaid</PConnVbrChargeType>
         <PeeringSubnetMask>255.255.255.0</PeeringSubnetMask>
         <TerminationTime>2021-06-07T12:20:55</TerminationTime>
         <EnableIpv6>true</EnableIpv6>
         <PeeringIpv6SubnetMask>2408:4004:cc:400::/56</PeeringIpv6SubnetMask>
         <RecoveryTime>2021-06-08T12:20:55</RecoveryTime>
         <LocalGatewayIp>192.168.XX.X</LocalGatewayIp>
         <Type>pconnVBR</Type>
         <Bandwidth>10</Bandwidth>
         <CreationTime>2021-06-08T12:20:55</CreationTime>
         <BandwidthStatus>Active</BandwidthStatus>
         <EccId>ecc-sjghe****</EccId>
         <PConnVbrExpireTime>2021-06-10T12:20:55</PConnVbrExpireTime>
         <LocalIpv6GatewayIp>2001:0db8:3c4d:0015:0000:00**:****:1a2b</LocalIpv6GatewayIp>
         <VlanId>1678</VlanId>
         <PConnVbrBussinessStatus>Normal</PConnVbrBussinessStatus>
      </VirtualBorderRouterForPhysicalConnectionType>
   </VirtualBorderRouterForPhysicalConnectionSet>
</DescribeVirtualBorderRoutersForPhysicalConnectionResponse>
```

`JSON` format

```
{
  "DescribeVirtualBorderRoutersForPhysicalConnection": {
    "TotalCount": 2,
    "PageSize": 10,
    "RequestId": "7C5AE8B3-A2D8-428D-A2FF-93A225C0821E",
    "PageNumber": 1,
    "VirtualBorderRouterForPhysicalConnectionSet": {
      "VirtualBorderRouterForPhysicalConnectionType": {
        "Status": "Active",
        "PeerGatewayIp": "162.62.XX.XX",
        "ActivationTime": "2017-06-08T12:20:55",
        "VbrOwnerUid": 1234567890,
        "CircuitCode": "longtel0**",
        "PeerIpv6GatewayIp": "2001:XXXX:3c4d:0015:0000:0000:0000:1a2b",
        "VbrId": "vbr-bp16ksp61j7e0tk*****",
        "PConnVbrChargeType": "PrePaid",
        "PeeringSubnetMask": "255.255.255.0",
        "TerminationTime": "2021-06-07T12:20:55",
        "EnableIpv6": true,
        "PeeringIpv6SubnetMask": "2408:4004:cc:400::/56",
        "RecoveryTime": "2021-06-08T12:20:55",
        "LocalGatewayIp": "192.168.XX.X",
        "Type": "pconnVBR",
        "Bandwidth": 10,
        "CreationTime": "2021-06-08T12:20:55",
        "BandwidthStatus": "Active",
        "EccId": "ecc-sjghe****",
        "PConnVbrExpireTime": "2021-06-10T12:20:55",
        "LocalIpv6GatewayIp": "2001:0db8:3c4d:0015:0000:00**:****:1a2b",
        "VlanId": 1678,
        "PConnVbrBussinessStatus": "Normal"
      }
    }
  }
}
```


Error codes

HttpCode	Error code	Error message	Description
404	InvalidPhysicalConnectionId.NotFound	The specified PhysicalConnectionId does not belong to user.	The error message returned because the specified Express Connect circuit does not belong to your Alibaba Cloud account.
400	InvalidPhysicalConnectionId.NotFound	The specified physicalConnection is not found.	The error message returned because the Express Connect circuit that corresponds to the ID is not found.

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

15.9. ModifyVirtualBorderRouterAttribute

Modifies the configuration of a virtual border router (VBR).

Usage notes

- Only the owner of an Express Connect circuit can modify the **VlanId** parameter.
- One VLAN ID of an Express Connect circuit cannot be used by two VBRs at the same time.
- The VLAN ID of a VBR in the **Terminated** state is reserved for seven days and cannot be used by other VBRs. The VLAN ID can be used by other VBRs after 7 days.
- You cannot set **LocalGatewayIp**, **PeerGatewayIp**, or **PeeringSubnetMask** for VBRs that do not belong to your Alibaba Cloud account.
- Set **PeeringSubnetMask** to a subnet mask with 24 to 30 bits in length (255.255.255.0 ~ 255.255.255.252).
- Set **LocalGatewayIp** and **PeerGatewayIp** to CIDR blocks that belong to the same CIDR block. For example, you can set LocalGatewayIp to 192.168.XX.XX, PeerGatewayIp to 192.168.XX.XX, and PeeringSubnetMask to 255.255.255.248

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyVirtualBorderRouterAttribute	The operation that you want to perform. Set the value to **ModifyVirtualBorderRouterAttribute**.
RegionId	String	Yes	cn-shanghai	The region ID of the VBR. You can call the DescribeRegions operation to query the most recent region list.
VbrId	String	Yes	vbr-bp1lhl0taikrte****	The ID of the VBR.
VlanId	Integer	No	0	The VLAN ID of the VBR. Valid values: **0 to 2999**. **Note** Only the owner of the Express Connect circuit can set this parameter. The VLAN IDs of two VBRs of the same Express Connect circuit must be different.
CircuitCode	String	No	longtel001	The circuit code provided by the Internet service provider (ISP) for the Express Connect circuit. **Note** Only the owner of the Express Connect circuit can set this parameter.
LocalGatewayIp	String	No	192.168.XX.XX	The IP address of the VBR on the Alibaba Cloud side.
PeerGatewayIp	String	No	192.168.XX.X	The IP address of the VBR on the user side. • Only the owner of the VBR can set this parameter. • This parameter is required when you create a VBR for the owner of the Express Connect circuit. You can ignore this parameter when you create a VBR for another Alibaba Cloud account.
PeeringSubnetMask	String	No	255.255.255.252	The subnet mask for the IP addresses of the VBR on the Alibaba Cloud side and on the user side. The two IP addresses must belong to the same subnet.
MinTxInterval	Long	No	300	The time interval to send BFD packets. Valid values: **200 to 1000**. Unit: milliseconds.
MinRxInterval	Long	No	300	The time interval to receive BFD packets. Valid values: **200 to 1000**. Unit: milliseconds.

Parameter	Type	Required	Example	Description
DetectMultiplier	Long	No	3	This value indicates the maximum number of dropped packets that is allowed by the receiver when the initiator transmits packets. This value can be used to check whether the connection works as expected. Valid values: **3 to 10**.
Description	String	No	desc	The description of the VBR. The description must be 2 to 256 characters in length. It must start with a letter but cannot start with `http://` or `https://`.
Name	String	No	VBR	The name of the VBR. The name must be 2 to 128 characters in length, and can contain letters, digits, underscores (_), and hyphens (-). The name must start with a letter. It cannot start with `http://` or `https://`.
AssociatedPhysicalConnections	String	No	pc-kojok19******	The ID of the Express Connect circuit.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-00xxxxxxxx	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.
LocalIpv6GatewayIp	String	No	2001:XXXX:3c4d:0015:0000:0000:0000:1a2b	The IPv6 address of the VBR on the Alibaba Cloud side.
PeerIpv6GatewayIp	String	No	2001:XXXX:3c4d:0015:0000:0000:0000:1a2b	The IPv6 address of the VBR on the client side. • Only the owner of the VBR can set this parameter. • This parameter is required when you create a VBR for the owner of the Express Connect. You can ignore this parameter when you create a VBR for another Alibaba Cloud account.
PeeringIpv6SubnetMask	String	No	2408:4004:cc:400::/56	The subnet mask for the IPv6 addresses of the VBR on the Alibaba Cloud side and on the user side. The two IPv6 addresses must fall within the same subnet.
EnableIpv6	Boolean	No	false	Specifies whether to enable IPv6. Valid values: • **true**: enabled • **false** (default): disabled
Bandwidth	Integer	No	100	The bandwidth value. Unit: Mbit/s.

Response parameters

Parameter	Type	Example	Description
RequestId	String	980960B0-2969-40BF-8542-EBB34FD358AB	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyVirtualBorderRouterAttribute
&RegionId=cn-shanghai
&VbrId=vbr-bp1lhl0taikrte****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyVirtualBorderRouterAttributeResponse>
    <RequestId>980960B0-2969-40BF-8542-EBB34FD358AB</RequestId>
</ModifyVirtualBorderRouterAttributeResponse>
```

`JSON` format

```
{
  "RequestId": "980960B0-2969-40BF-8542-EBB34FD358AB"
}
```

Error codes

HttpCode	Error code	Error message	Required
400	IllegalParam.CidrBlock	The specified CidrBlock is illegal.	The error message returned because CidrBlock is set to an invalid value.
400	InvalidVbrId.NotFound	The specified VirutalBorderRouter is not found.	The error message returned because the specified VBR does not exist. Check whether the parameter is set to a valid value.
400	InvalidVlanId.Used	The specified VlanId has been used.	The error message returned because the VLAN ID is being used.
400	InvalidCircuitCode.Malformed	The specified CircuitCode is not valid.	The error message returned because CircuitCode is set to an invalid value.
400	InvalidVlanId.Malformed	The specified VlanId is not valid.	The error message returned because VlanId is set to an invalid value.
400	InvalidIp.Malformed	The specified ip address is not valid.	The error message returned because the specified private IP address is invalid. Check the private IP address.
400	InvalidPeeringSubnetMask.Malformed	The specified PeeringSubnetMask is not valid.	The error message returned because PeeringSubnetMask is set to an invalid value. Check whether PeeringSubnetMask is set to a valid value.
400	InvalidIp.NotSameSubnet	Local gateway ip and peer gateway ip are not in the same subnet.	The error message returned because the IP addresses of the local gateway and the peer gateway do not fall within the same subnet.
400	OperationFailed.PconnTrafficNotEnable	The operation is failed because of PconnTrafficNotEnable.	The operation failed because outbound traffic is not enabled.
403	Forbidden.CircuitCodeNotAllowedByCaller	The caller is not allowed to modify.	The error message returned because you are not allowed to modify CircuitCode.

HttpCode	Error code	Error message	Required
403	Forbidden.CircuitCodeNotAllowedByCaller	The caller is not allowed to specify the CircuitCode parameter.	The error message returned because you are not allowed to set CircuitCode.
403	Forbidden.LocalGatewayIpNotAllowedByCaller	The caller is not allowed to specify the LocalGatewayIp parameter.	The error message returned because you are not allowed to set LocalGatewayIp.
403	Forbidden.PeerGatewayIpNotAllowedByCaller	The caller is not allowed to specify the PeerGatewayIp parameter.	The error message returned because you are not allowed to set PeerGatewayIp.
403	Forbidden.PeeringSubnetMaskNotAllowedByCaller	The caller is not allowed to specify the PeeringSubnetMask parameter.	The error message returned because you are not allowed to set PeeringSubnetMask.
403	Forbidden.VlanIdNotAllowedByCaller	The caller is not allowed to specify the VlanId.	The error message returned because you are not allowed to specify the VLAN ID.
403	Forbidden.NameNotAllowedByCaller	The caller is not allowed to specify the Name parameter.	The error message returned because you are not allowed to set Name.
403	Forbidden.DescriptionNotAllowedByCaller	The caller is not allowed to specify the Description parameter.	The error message returned because you are not allowed to set Description.
404	InvalidRegionId.NotFound	The specified RegionId is not found.	The error message returned because the specified region ID is invalid. Check whether the service is available in the specified region.

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

15.10. TerminateVirtualBorderRouter

Terminates a Virtual Border Router (VBR).

After this API is called, the VBR changes from the **Enabled** state to the **Terminated** state. After the termination is completed, the VBR status changes to **Terminated**.

> **Note** Only the owner of the physical connection to which the VBR belongs can call this API.

Debug

Use OpenAPI Explorer to perform debug operations and generate SDK code examples.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	TerminateVirtualBorderRouter	The name of this action. Value: **TerminateVirtualBorderRouter**
RegionId	String	Yes	cn-shanghai	The ID of the region to which the VBR belongs. To query the region ID, call DescribeRegions.
VbrId	String	Yes	vbr-bp15zckdt37pq72****	The ID of the VBR to be terminated.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	Optional. The client token. It is used to guarantee the idempotence of the request. The value of this parameter is generated by the client and is unique among different requests. It can be 1 to 64 ASCII characters in length.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The request ID.

Examples

Request example

```
http(s)://[Endpoint]/? Action=TerminateVirtualBorderRouter
&RegionId=cn-shanghai
&VbrId=vbr-bp15zckdt37pq72****
&<CommonParameters>
```

Response examples

`XML` format

```
<TerminateVirtualBorderRouterResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</TerminateVirtualBorderRouterResponse>
```

`JSON` format

```
{
 "RequestId":"0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Errors

HTTP status code	Error code	Error message	Description
404	InvalidVbrId.NotFound	The specified VirutalBorderRouter is not found.	The specified VBR does not exist.
400	InvalidOperation.OperationNotAllowedInState	The specified VirutalBorderRouter is in invalid state.	The status of the VBR does not permit this operation.
403	Forbidden.OperationNotAllowedByUser	The caller is not allowed to terminate the specified VirtualBorderRouter.	You are not allowed to terminate the VBR.

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

15.11. RecoverVirtualBorderRouter

Enables a disabled VBR.

After the operation is called, the virtual border router (VBR) changes from the **Terminated** state to the **Recovering** state. When the VBR recovers, it enters the **Enabled** state.

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

- Only the owner of the Express Connect circuit can call this operation.
- The Express Connect circuit to which the VBR connects must be in the **Enabled** state.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	RecoverVirtualBorderRouter	The operation that you want to perform. Set the value to **RecoverVirtualBorderRouter**.
RegionId	String	Yes	cn-shanghai	The ID of the region where the VBR is deployed. You can call the DescribeRegions operation to query the most recent region list.
VbrId	String	Yes	vbr-bp1lhl0taikrte****	The ID of the VBR.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value. Make sure that the value is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=RecoverVirtualBorderRouter
&RegionId=cn-shanghai
&VbrId=vbr-bp1lhl0taikrte****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RecoverVirtualBorderRouterResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</RecoverVirtualBorderRouterResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidVbrId.NotFound	The specified VirutalBorderRouter is not found.	The error message returned because the specified VBR does not exist. Check whether the parameter is set to a valid value.
400	InvalidOperation.OperationNotAllowedInState	The specified VirutalBorderRouter is in invalid state	The error message returned because the status of the VBR interface is invalid.

HttpCode	Error code	Error message	Description
400	OperationFailed.VlanIdAlreadyInUse	The specifed vlanId has been used.	The error message returned because the VLAN interface is being used.
403	Forbidden.OperationRecoverNotAllowedByUser	The caller is not allowed to recover the specified VirtualBorderRouter.	The error message returned because you do not have the permissions to recover the VBR.
400	OperationFailed.PconnTrafficNotEnable	The operation is failed because of PconnTrafficNotEnable.	The error message returned because outbound traffic is not enabled.

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

15.12. AssociatePhysicalConnectionToVirtualBorderRouter

Associates a virtual border router (VBR) with a specified Express Connect circuit.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AssociatePhysicalConnectionToVirtualBorderRouter	The operation that you want to perform. Set the value to **AssociatePhysicalConnectionToVirtualBorderRouter**.
PhysicalConnectionId	String	Yes	pc-bp1qrb3044eqixog****	The ID of the Express Connect circuit.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the Express Connect circuit is deployed.
VbrId	String	Yes	vbr-bp186tnz6rijyhj******	The ID of the VBR.
VlanId	String	Yes	123	The VLAN ID of the VBR. Valid values: **0 to 2999**. **Note** Only the owner of the Express Connect circuit can set this parameter. The VLAN IDs of two VBRs of the same Express Connect circuit must be different.
CircuitCode	String	No	longtel001	The circuit code provided by the connectivity provider for the Express Connect circuit. **Note** Only the owner of the Express Connect circuit can set this parameter.
LocalGatewayIp	String	No	192.168.XX.XX	The IP address of the VBR on the Alibaba Cloud side.

Parameter	Type	Required	Example	Description
PeerGatewayIp	String	No	192.168.XX.XX	The IP address of the VBR on the customer side. • Only the owner of the VBR can set this parameter. • This parameter is required when you create a VBR for the owner of the Express Connect circuit. You can leave this parameter empty when you create a VBR for another Alibaba Cloud account.
PeeringSubnetMask	String	No	255.255.255.0	The subnet mask for the IP addresses of the VBR on the Alibaba Cloud side and on the customer side. The two IP addresses must fall within the same subnet.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotency of the request. The value of this parameter is generated by a client. The value must be unique among different requests and must be 1 to 64 ASCII characters in length.
LocalIpv6GatewayIp	String	No	2001:XXXX:3c4d:0015:0000:0000:0000:1a2b	The IPv6 address of the VBR on the Alibaba Cloud side.
PeerIpv6GatewayIp	String	No	2001:XXXX:3c4d:0015:0000:0000:0000:1a2b	The IPv6 address of the VBR on the customer side. • Only the owner of the VBR can set or modify this parameter. • This parameter is required when you create a VBR for the owner of the Express Connect circuit. You can leave this parameter empty when you create a VBR for another Alibaba Cloud account.
PeeringIpv6SubnetMask	String	No	2408:4004:cc:400::/56	The subnet mask for the IPv6 addresses of the VBR on the Alibaba Cloud side and on the user side. The two IPv6 addresses must fall within the same subnet.
EnableIpv6	String	No	false	Specifies whether to enable IPv6. Valid values: • **true**: enables IPv6. • **false** (default): disables IPv6.

Response parameters

Parameter	Type	Example	Description
RequestId	String	980960B0-2969-40BF-8542-EBB34FD358AB	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=AssociatePhysicalConnectionToVirtualBorderRouter
&PhysicalConnectionId=pc-bp1qrb3044eqixog****
&RegionId=cn-hangzhou
&VbrId=vbr-bp186tnz6rijyhj******
&VlanId=123
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AssociatePhysicalConnectionToVirtualBorderRouterResponse>
    <RequestId>980960B0-2969-40BF-8542-EBB34FD358AB</RequestId>
</AssociatePhysicalConnectionToVirtualBorderRouterResponse>
```

`JSON` format

```
{
  "RequestId": "980960B0-2969-40BF-8542-EBB34FD358AB"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidOperation.RouterInterfaceNotDeleted	The specified VirutalBorderRouter still has routerInterface.	The error message returned because the VBR is associated with a router interface.
400	InvalidOperation.OperationNotAllowedInState	The specified VirutalBorderRouter is in invalid state.	The error message returned because the specified VBR is in an invalid state. Check the status of the VBR.
400	InvalidStatus.NotAllowed	Invalid virtual border router status.	The error message returned because the status of the VBR does not support this operation.
400	InvalidPhysicalConnectionId.NotFound	The specified PhysicalConnectionId is not found.	The error message returned because the ID of the Express Connect circuit is invalid.
400	InvalidVlanId.Used	The specified VlanId has been used.	The error message returned because the VLAN ID is being used.
400	MissingParameter	The input parameter 'PhysicalConnectionId' that is mandatory for processing this request is not supplied.	The error message returned because PhysicalConnectionId is not set.
400	InvalidPhysicalConnectionId.NotEnabled	The specified PhysicalConnectionId is not in Enabled state.	The error message returned because the status of the Express Connect circuit is invalid. Check the Express Connect circuit and try again.
400	MissingParameter	The input parameter 'VlanId' that is mandatory for processing this request is not supplied.	The error message returned because VlanId is not set.
400	InvalidVlanId.Malformed	The specified VlanId is not valid.	The error message returned because the value of VlanId is invalid.
400	InvalidCircuitCode.Malformed	The specified CircuitCode is not valid.	The error message returned because the value of CircuitCode is invalid.
400	MissingParameter	The input parameter 'LocalGatewayIp' that is mandatory for processing this request is not supplied.	The error message returned because LocalGatewayIp is not set.
400	InvalidLocalGatewayIp.Malformed	The specified LocalGatewayIp is not valid.	The error message returned because the IP address of the local gateway is invalid.
400	MissingParameter	The input parameter 'PeerGatewayIp' that is mandatory for processing this request is not supplied.	The error message returned because PeerGatewayIp is not set.
400	InvalidPeerGatewayIp.Malformed	The specified PeerGatewayIp is not valid.	The error message returned because the value of PeerGatewayIp is invalid.

HttpCode	Error code	Error message	Description
400	MissingParameter	The input parameter 'PeeringSubnetMask' that is mandatory for processing this request is not supplied.	The error message returned because PeeringSubnetMask is not set.
400	InvalidPeeringSubnetMask.Malformed	The specified PeeringSubnetMask is not valid.	The error message returned because PeeringSubnetMask is set to an invalid value. Check whether PeeringSubnetMask is set to a valid value.
400	InvalidName.Malformed	The specified ?Name? is not valid.	The error message returned because the format of the name is invalid.
400	InvalidDescription.Malformed	The specifid ?Description? is not valid.	The error message returned because the format of the resource description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	QuotaExceeded.vbrPerpConn	Virtual boarder router per PhysicalConnection quota exceed.	The error message returned because the number of VBRs of each Express Connect circuit has reached the upper limit. Reduce the number of VBRs and try again.
400	EXCEED_ASSOCIATE_MAX_NUM	assocaite virtual boarder num too many.	The error message returned because the number of associated VBRs has reached the upper limit.
400	InvalidIP.Malformed	Ip malformed.	The error message returned because the format of the IP address is invalid.
400	InvalidIp.NotSameSubnet	Local gateway ip and peer gateway ip are not in the same subnet.	The error message returned because the IP addresses of the local gateway and the peer gateway do not fall within the same subnet.
400	InvalidStatus.StatusNotEnabled	The physical connection status is invalid.	The error message returned because the status of the Express Connect circuit does not support this operation. Check the status of the Express Connect circuit.
400	PHYSICAL_NOT_ALLOW_ASSOCIATE_VBR	The specified operation not allow.	The error message returned because the Express Connect circuit is associated with a VBR and the operation cannot be performed.
400	OperationFailed.PconnTrafficNotEnable	The operation is failed because of PconnTrafficNotEnable.	The operation failed because outbound traffic is disabled.
403	Forbidden.OperationNotAllowedByUser	The caller is not allowed to delete the specified VirtualBorderRouter.	The error message returned because you are not allowed to delete the VBR.
403	Forbidden.MultiVlanRi	Multiple vlan router interfaces are found.	The error message returned because multiple VLAN router interfaces exist.
403	Forbidden.NoRiFound	No vlan router interfaces are found.	The error message returned because no VLAN router interface is available.
403	Forbidden.LocalGatewayIpNotAllowedByCaller	The caller is not allowed to specify the LocalGatewayIp parameter.	The error message returned because you are not allowed to set LocalGatewayIp.
403	Forbidden.PeerGatewayIpNotAllowedByCaller	The caller is not allowed to specify the PeerGatewayIp parameter.	The error message returned because you are not allowed to set PeerGatewayIp.
403	Forbidden.PeeringSubnetMaskNotAllowedByCaller	The caller is not allowed to specify the PeeringSubnetMask parameter.	The error message returned because you are not allowed to set PeeringSubnetMask.
403	Forbidden.NameNotAllowedByCaller	The caller is not allowed to specify the Name parameter.	The error message returned because you are not allowed to set Name.

HttpCode	Error code	Error message	Description
403	Forbidden.DescriptionNotAllowedByCaller	The caller is not allowed to specify the Description parameter.	The error message returned because you are not allowed to set Description.
404	InvalidInstanceId.NotFound	The specified Instance does not exist in the specified region.	The error message returned because the instance does not exist in the specified region.
404	InvalidVbrId.NotFound	The specified VirutalBorderRouter does not exist in our records.	The error message returned because the specified VBR ID does not exist. Check whether the specified VBR ID is valid.
404	InvalidRegionId.NotFound	The specified RegionId is not found.	The error message returned because the specified region ID is invalid. Check whether the service is available in the specified region.
404	InvalidVbrOwnerId.NotFound	The specified VbrOwnerId is not valid.	The error message returned because the value of VbrOwnerId is invalid.

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

15.13. UnassociatePhysicalConnectionFromVirtualBorderRouter

Disassociates a Virtual Border Router (VBR) from a physical connection.

Debug

Use OpenAPI Explorer to perform debug operations and generate SDK code examples.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	UnassociatePhysicalConnectionFromVirtualBorderRouter	The name of this action. Value: **UnassociatePhysicalConnectionFromVirtualBorderRouter**
PhysicalConnectionId	String	Yes	pc-bp1qrb3044eqixog****	The ID of the physical connection.
RegionId	String	Yes	cn-hangzhou	The region ID of the physical connection.
VbrId	String	Yes	vbr-bp16ksp61j7e0tkn*****	The VLAN ID of the VBR. Value range: 1 to 2999. **Note** This parameter can only be specified by the owner of the physical connection. The VLAN IDs of two VBRs associated with the same physical connection must be different.
ClientToken	String	No	longtel001	Optional. The leased line code provided by the service provider for the physical connection. **Note** This parameter can only be specified by the owner of the physical connection.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	980960B0-2969-40BF-8542-EBB34FD358AB	The request ID.

Examples

Request example

```
http(s)://[Endpoint]/? Action=UnassociatePhysicalConnectionFromVirtualBorderRouter
&PhysicalConnectionId=pc-bp1qrb3044eqixog****
&RegionId=cn-hangzhou
&VbrId=vbr-bp16ksp61j7e0tkn*****
&<CommonParameters>
```

Response examples

`XML` format

```
<UnassociatePhysicalConnectionFromVirtualBorderRouterResponse>
  <RequestId>980960B0-2969-40BF-8542-EBB34FD358AB</RequestId>
  </UnassociatePhysicalConnectionFromVirtualBorderRouterResponse>
```

`JSON` format

```
{
 "RequestId":"980960B0-2969-40BF-8542-EBB34FD358AB"
}
```

Errors

HTTP status code	Error code	Error message	Description
404	InvalidVbrId.NotFound	The specified VirutalBorderRouter does not exist in our records.	The specified VBR does not exist.
404	InvalidVbrId.NotFound	The specified VirutalBorderRouter or PhysicalConnection does not exist in our records.	The specified VBR or physical connection does not exist.
400	PARAMETER_MUST_NOT_NULL	The specified physical connection id or vbrId must not be null.	The VbrId parameter and the PhysicalConnectionId parameter must be specified.
400	PHYSICAL_NOT_ASSOCIATE_TO_VBR	The specified PhysicalConnection have not associate to the vbr.	No VBR is created for the specified physical connection.
400	ROUTER_INTERFACE_REFERED_BY_ROUTEENTRY	The specified VlanInterface has been used by routeEntry.	The specified VLAN interface is already used in a route entry.
400	InvalidStatus.NotAllowed	Invalid virtual border router status.	The status of the VBR does not permit this operation.
400	PHYSICAL_NOT_ALLOW_ASSOCIATE_VBR	The specified operation not allow.	The operation failed because the physical connection is associated with VBRs.

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

16.Physical connection

16.1. OpenPhysicalConnectionService

Enables outbound traffic for an Express Connect circuit.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	OpenPhysicalConnectionService	The operation that you want to perform. Set the value to **OpenPhysicalConnectionService**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the Express Connect circuit is deployed. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	54B48E3D-DF70-471B-AA93-08E683A1B45	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=OpenPhysicalConnectionService
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<OpenPhysicalConnectionServiceResponse>
    <RequestId>54B48E3D-DF70-471B-AA93-08E683A1B45</RequestId>
</OpenPhysicalConnectionServiceResponse>
```

`JSON` format

```
{
  "OpenPhysicalConnectionServiceResponse": {
    "RequestId": "54B48E3D-DF70-471B-AA93-08E683A1B45"
  }
}
```

Error codes

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

16.2. DescribeAccessPoints

Queries the access points of an Express Connect circuit in a specific region.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeAccessPoints	The operation that you want to perform. Set the value to **DescribeAccessPoints**.
RegionId	String	Yes	cn-hangzhou	The region ID of the access point. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. Default value: **1**.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: **50**. Default value: **10**.

Response parameters

Parameter	Type	Example	Description
AccessPointSet	Array of AccessPointType		The information about the access point.
AccessPointType			
AccessPointFeatureModels	Array of AccessPointFeatureModel		The feature model of the access point.
AccessPointFeatureModel			
FeatureKey	String	AP_Support_VbrBandwidthLimit	The feature of the access point.
FeatureValue	String	true	The feature value of the access point.
AccessPointId	String	ap-cn-hangzhou-****	The ID of the access point.
AttachedRegionNo	String	cn-hangzhou	The region ID of the access point.
Description	String	Access point description	The description of the access point.
HostOperator	String	China Telecom	The colocation provider of the access point.
Location	String	China (Hangzhou)	The location of the access point.
Name	String	Hangzhou-Yuhang-C	The name of the access point.

Parameter	Type	Example	Description
Status	String	recommended	The status of the access point. Valid values: • **Recommended**: The access point is ready for use. • **hot**: A large number of Express Connect circuits are connected to the access point. • **full**: The number of Express Connect circuits connected to the access point has reached the upper limit. • **disabled**: The access point is unavailable.
Type	String	VPC	The network type of the Express Connect circuit. Default value: **VPC**.
TotalCount	Integer	5	The total number of entries.
PageNumber	Integer	1	The number of the returned page. Default value: **1**.
PageSize	Integer	10	The number of entries returned on each page. Maximum value: **50**. Default value: **10**.
RequestId	String	3E85D803-C7CF-4BCD-9CFE-6DBA1DFFA027	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeAccessPoints
&RegionId=cn-hangzhou
&<Common request parameters>
```

Successful response examples

`XML` format

```
<DescribeAccessPointsResponse>
    <AccessPointSet>
        <AccessPointType>
            <Status>recommended</Status>
            <Type>VPC</Type>
            <Description>Access point description</Description>
            <AttachedRegionNo>cn-hangzhou</AttachedRegionNo>
            <HostOperator>China Telecom</HostOperator>
            <AccessPointId>ap-cn-hangzhou-****</AccessPointId>
            <Name>Hangzhou-Yuhang-C</Name>
            <Location>Hangzhou</Location>
            <AccessPointFeatureModels>
                <AccessPointFeatureModel>
                    <FeatureValue>true</FeatureValue>
                    <FeatureKey>AP_Support_VbrBandwidthLimit</FeatureKey>
                </AccessPointFeatureModel>
            </AccessPointFeatureModels>
        </AccessPointType>
    </AccessPointSet>
    <TotalCount>5</TotalCount>
    <PageSize>10</PageSize>
    <RequestId>3E85D803-C7CF-4BCD-9CFE-6DBA1DFFA027</RequestId>
    <PageNumber>1</PageNumber>
</DescribeAccessPointsResponse>
```

`JSON` format

```
{
  "DescribeAccessPointsResponse": {
    "AccessPointSet": {
      "AccessPointType": {
        "Status": "recommended",
        "Type": "VPC",
        "Description": "Access point description",
        "AttachedRegionNo": "cn-hangzhou",
        "HostOperator": "China Telecom",
        "AccessPointId": "ap-cn-hangzhou-****",
        "Name": "Hangzhou-Yuhang-C",
        "Location": "Hangzhou",
        "AccessPointFeatureModels": {
          "AccessPointFeatureModel": {
            "FeatureValue": true,
            "FeatureKey": "AP_Support_VbrBandwidthLimit"
          }
        }
      }
    },
    "TotalCount": 5,
    "PageSize": 10,
    "RequestId": "3E85D803-C7CF-4BCD-9CFE-6DBA1DFFA027",
    "PageNumber": 1
  }
}
```


Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotSupport	The RegionId provided does not support in our records.	The error message returned because the specified region ID is invalid.

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

16.3. CreatePhysicalConnection

Applies for an Express Connect circuit.

Usage notes

After your application is approved, the Express Connect circuit changes to the **Initial** state. You can contact the Internet service provider (ISP) to start construction.

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

- If your Alibaba Cloud account has more than five Express Connect circuits that are not in the **Enabled** state, you cannot apply for another Express Connect circuit.
- If your account has an Express Connect circuit with overdue payments, you cannot apply for another Express Connect circuit.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreatePhysicalConnection	The operation that you want to perform. Set the value to **CreatePhysicalConnection**.
AccessPointId	String	Yes	ap-cn-beijing-ft-A	The ID of the access point to which the Express Connect circuit belongs.

Parameter	Type	Required	Example	Description
ClientToken	String	Yes	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.
LineOperator	String	Yes	CT	The ISP of the Express Connect circuit. Valid values: • **CT**: China Telecom • **CU**: China Unicom • **CM**: China Mobile • **CO**: other ISPs in mainland China • **Equinix** :Equinix • **Other**: other ISPs outside mainland China
PeerLocation	String	Yes	XX street	The geographical location of the data center.
RegionId	String	Yes	cn-shanghai	The region ID of the Express Connect circuit. You can call the DescribeRegions operation to query the most recent region list.
Type	String	No	VPC	The type of the Express Connect circuit. The default value is **VPC**.
bandwidth	Integer	No	10	The bandwidth value of the bandwidth plan. Unit: Mbit/s. Valid values: **5 to 5000**.
PortType	String	No	1000Base-T	The port type of the Express Connect circuit. Valid values: • **100Base-T**: a copper port that supports 100 Mbit/s of bandwidth • **1000Base-T**: a copper port that supports 1,000 Mbit/s of bandwidth • **1000Base-LX**: a single-mode fiber port that supports 1,000 Mbit/s of bandwidth (10 kilometers) • **10GBase-T**: a copper port that supports 10,000 Mbit/s of bandwidth • **10GBase-LR**: a single-mode fiber port that supports 10,000 Mbit/s of bandwidth (10 kilometers)
RedundantPhysicalConnectionId	String	No	pc-119mfjz******	The ID of the standby Express Connect circuit. The standby Express Connect circuit must be in the **Allocated**, **Confirmed**, or **Enabled** state.
Description	String	No	description	The description of the Express Connect circuit. The description must be 2 to 256 characters in length. It must start with a letter, but cannot start with `http://` or `https://`.

Parameter	Type	Required	Example	Description
Name	String	No	test	The name of the Express Connect circuit. The name must be 2 to 128 characters in length and can contain digits, underscores (_), and hyphens (-). It must start with a letter, but cannot start with `http://` or `https://`.
CircuitCode	String	No	longtel001	The circuit code provided by the ISP of the Express Connect circuit.

Response parameters

Parameter	Type	Example	Description
PhysicalConnectionId	String	vpc-bp12mw******	The ID of the Express Connect circuit.
RequestId	String	8A6A5EC5-6F6C-4906-9689-56ACE58A13E0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreatePhysicalConnection
&AccessPointId=ap-cn-beijing-ft-A
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&LineOperator=CT
&PeerLocation=XX street
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreatePhysicalConnectionResponse>
    <RequestId>8A6A5EC5-6F6C-4906-9689-56ACE58A13E0</RequestId>
    <PhysicalConnectionId>vpc-bp12mw******</PhysicalConnectionId>
</CreatePhysicalConnectionResponse>
```

`JSON` format

```
{
  "RequestId": "8A6A5EC5-6F6C-4906-9689-56ACE58A13E0",
  "PhysicalConnectionId": "vpc-bp12mw******"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidAccessPointId.NotEnabled	Invalid access point status.	The error message returned because the access point is unavailable.
400	InvalidType.Malformd	The Type provided was invalid.	The error message returned because Type is set to an invalid value.
400	InvalidPeerLocation.Malformd	The PeerLocation provided was invalid.	The error message returned because PeerLocation is set to an invalid value.
400	InvalidLineOperator.Malformd	The LineOperator provided was invalid.	The error message returned because LineOperator is set to an invalid value.

HttpCode	Error code	Error message	Description
400	InvalidPortType.Malformd	The PortType provided was invalid.	The error message returned because the specified port type is invalid.
400	InvalidDescription.Malformed	The specifid ?Description? is not valid.	The error message returned because the format of the resource description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidRedundantPhysicalConnectionId.NotFound	The RedundantPhysicalConnectionId does not found.	The error message returned because the specified standby Express Connect circuit does not exist.
400	InvalidName.Malformed	The specified ?Name? is not valid.	The error message returned because the format of the name is invalid.
400	QuotaExceeded.pConnPerAP	Physical connection count per ap quota exceed.	The error message returned because the number of Express Connect circuits that are associated with the specified access point has reached the upper limit.
400	InvalidBandwidth	invalid physical connection banwidth.	The error message returned because the specified bandwidth value of the Express Connect circuit is invalid.
400	InvalidRedundantPhysicalConnection	redundant physical connection doesn't belong to current user.	The error message returned because the specified standby Express Connect circuit does not belong to your Alibaba Cloud account.
400	InvalidRedundantPhysicalConnectionStatus	invalid redundant physical connection status.	The error message returned because the standby Express Connect circuit is in an invalid state.
400	InvalidCircuitCode.Malformed	circuitCode is illegal.	The error message returned because CircuitCode is set to an invalid value.
400	QuotaExceeded.freePconnPerAP	free physical connections count excceeded.	The error message returned because the quota on Express Connect circuits is reached.

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

16.4. CancelPhysicalConnection

Cancels a physical connection. After a physical connection is cancelled, it enters the Canceled state.

You can only cancel physical connections that are not enabled, including physical connections in the Initial, Approved, Allocated, and Confirmed state.

Debug

Use OpenAPI Explorer to perform debug operations and generate SDK code examples.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	CancelPhysicalConnection	The name of this action. Value: **CancelPhysicalConnection**
PhysicalConnectionId	String	Yes	pc-119mfjzm7	The ID of the physical connection to be canceled.

Parameter	Type	Required?	Example value	Description
RegionId	String	Yes	cn-shanghai	The ID of the region to which the physical connection belongs. To query the region ID, call DescribeRegions.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	Optional. The client token. It is used to guarantee the idempotence of the request. The value of this parameter is generated by the client and is unique among different requests. It can contain up to 64 ASCII characters.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The request ID.

Examples

Request example

```
http(s)://[Endpoint]/? Action=CancelPhysicalConnection
&PhysicalConnectionId=pc-119mfjzm7
&RegionId=cn-shanghai
&<CommonParameters>
```

Response examples

`XML` format

```
<CancelPhysicalConnectionResponse>
  <RequestId>BE36E95A-F83E-4127-A29E-F2F35D4C999A</RequestId>
  </CancelPhysicalConnectionResponse>
```

`JSON` format

```
{
 "RequestId":"BE36E95A-F83E-4127-A29E-F2F35D4C999A"
}
```

Errors

HTTP status code	Error code	Error message	Description
404	InvalidPhysicalConnectionId.NotFound	The PhysicalConnectionId provided does not exist in our records.	The specified physical connection does not exist.
400	Forbidden.NotAllowedInState	The request does not allow in this state.	The request cannot be processed because the status of the resource does not permit this action.

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

16.5. DescribePhysicalConnections

Queries Express Connect circuits in a region.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribePhysicalConnections	The operation that you want to perform. Set the value to **DescribePhysicalConnections** .
RegionId	String	Yes	cn-hangzhou	The ID of the region where the Express Connect circuit is deployed. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	10	The number of the page to return. Default value: **1**.
PageSize	Integer	No	1	The number of entries to return on each page. Maximum value: **50**. Default value: **10**.
Filter.N.Key	String	No	1	The filter condition. Valid values of N are **1 to 5**. The following filter conditions are supported: • **PhysicalConnectionId**: the ID of the Express Connect circuit • **AccessPointId**: the ID of the access point • **Type**: the type of the Express Connect circuit • **LineOperator**: the Internet service provider (ISP) of the Express Connect circuit. • **Spec**: the specification of the Express Connect circuit • **Status**: the status of the Express Connect circuit • **Name**: the name of the Express Connect circuit The logical operator between values in a filter condition is OR, which means that the filter condition is met if one of the values is met. The logical operator between filter conditions is AND. In this case, the result is returned only when all conditions are met.
Filter.N.Value.N	RepeatList	No	1	The value of the filter condition. Valid values of N are **1 to 5**.
IncludeReservationData	Boolean	No	false	Specifies whether to return the orders that have not taken effect. • **true**: yes • **false**: no
ClientToken	String	No	23243242rggy****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
PhysicalConnectionSet	Array of PhysicalConnectionType		The description of the Express Connect circuit.
PhysicalConnectionType			
AccessPointId	String	eip-2zeerraiwb7uj6i0*******	The ID of the access point.
AdLocation	String	Room Ax-x Bxx, building xx, xxx Avenue, Nanshan District, Shenzhen, Guangdong	The geographical location of the access device.
Bandwidth	Long	10	The bandwidth of the Express Connect circuit. Unit: Mbit/s.
BusinessStatus	String	Normal	The payment status of the Express Connect circuit. Valid values: • **Normal**: enabled • **FinancialLocked**: locked due to overdue payments • **SecurityLocked**: locked for security reasons
ChargeType	String	Prepaid	The billing method. The value is set to **Prepaid**, which indicates the subscription billing method.
CircuitCode	String	longtel001	The circuit code provided by the ISP for the Express Connect circuit.
CreationTime	String	2017-06-08T12:20:55	The time when the Express Connect circuit was created.
Description	String	The Express Connect circuit	The description of the Express Connect circuit.
EnabledTime	String	2017-06-08T12:20:55	The time when the Express Connect circuit was created.
EndTime	String	2019-02-25T11:01:04Z	The time when the Express Connect circuit expires.
HasReservationData	String	true	Indicates whether you have subscription messages. • **true**: yes • **false**: no
LineOperator	String	CT	The ISP of the Express Connect circuit. Valid values: • **CT**: China Telecom • **CU**: China Unicom • **CM**: China Mobile • **CO**: other ISPs in China • **Equinix**: Equinix • **Other**: other ISPs outside China

Parameter	Type	Example	Description
LoaStatus	String	Available	The status of the letter of authorization (LOA). • **Applying** :The LOA is pending for approval. • **Accept**: The LOA is approved. • **Available** : The LOA is available. • **Rejected**: The LOA is rejected. • **Completing**: The Express Connect circuit is under construction. • **Complete**: The Express Connect circuit is installed. • **Deleted**: The LOA is deleted.
Name	String	name	The name of the Express Connect circuit.
PeerLocation	String	Building XX, XX Avenue, XX District, Hangzhou, Zhejiang	The geographical location of the data center.
PhysicalConnectionId	String	pc-119mfjzm*****	The ID of the Express Connect circuit.
PortNumber	String	80	The port number of the access device.
PortType	String	1000Base-T	The port type of the Express Connect circuit. Valid values: • **100Base-T**: a copper port that supports 100 Mbit/s • **1000Base-T**: a copper port that supports 1,000 Mbit/s • **1000Base-LX**: a single-mode optical port that supports 1,000 Mbit/s (10 kilometers of communication distance) • **10GBase-T**: a copper port that supports 10 Gbit/s • **10GBase-LR**: a single-mode optical port that supports 10 Gbit/s (10 kilometers of communication distance)
RedundantPhysicalConnectionId	String	pc-119mfjzm*******	The ID of the redundant Express Connect circuit.
ReservationActiveTime	String	2019-02-25T11:01:04Z	The time when the renewal takes effect.
ReservationInternetChargeType	String	PayByBandwidth	The renewal type.
ReservationOrderType	String	RENEW	The type of the renewal order.
Spec	String	Large	The specification of the Express Connect circuit.
Status	String	Enabled	The status of the Express Connect circuit. Valid values: • **Initial**: pending approval • **Approved**: approved • **Allocating**: allocating resources • **Allocated**: under construction • **Confirmed**: waiting for user confirmation • **Enabled**: enabled • **Rejected**: rejected • **Canceled**: canceled • **Allocation Failed**: resource allocation failed • **Terminated**: disabled

Parameter	Type	Example	Description
Type	String	VPC	The type of the Express Connect circuit. Default value: **VPC**.
TotalCount	Integer	10	The total number of entries returned.
PageNumber	Integer	10	The number of the page returned. Default value: **1**.
PageSize	Integer	10	The number of entries returned on each page. Maximum value: **50**. Default value: **10**.
RequestId	String	EEC8EAB1-F299-4F5C-8E54-0A3129164C27	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribePhysicalConnections
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribePhysicalConnectionsResponse>
  <PhysicalConnectionSet>
    <PhysicalConnectionType>
      <Status>Enabled</Status>
      <Description>Express Connect circuit</Description>
      <EndTime>2019-02-25T11:01:04Z</EndTime>
      <LineOperator>CT</LineOperator>
      <CircuitCode>longtel001</CircuitCode>
      <PhysicalConnectionId>pc-119mfjzm*****</PhysicalConnectionId>
      <HasReservationData>true</HasReservationData>
      <RedundantPhysicalConnectionId>pc-119mfjzm*******</RedundantPhysicalConnectionId>
      <PeerLocation>Building XX, XX Avenue, XX District, Hangzhou, Zhejiang</PeerLocation>
      <BusinessStatus>Normal</BusinessStatus>
      <ReservationInternetChargeType>PayByBandwidth</ReservationInternetChargeType>
      <Name>name</Name>
      <ReservationOrderType>RENEW</ReservationOrderType>
      <LoaStatus>Available</LoaStatus>
      <Type>VPC</Type>
      <AdLocation>Room Ax-x Bxx, building xx, xxx Avenue, Nanshan District, Shenzhen, Guangdong</AdLocation>
      <ChargeType>Prepaid</ChargeType>
      <Bandwidth>10</Bandwidth>
      <CreationTime>2017-06-08T12:20:55</CreationTime>
      <AccessPointId>eip-2zeerraiwb7uj6i0*******</AccessPointId>
      <EnabledTime>2017-06-08T12:20:55</EnabledTime>
      <ReservationActiveTime>2019-02-25T11:01:04Z</ReservationActiveTime>
      <PortNumber>80</PortNumber>
      <Spec>Large</Spec>
      <PortType>1000Base-T</PortType>
    </PhysicalConnectionType>
  </PhysicalConnectionSet>
  <TotalCount>10</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>EEC8EAB1-F299-4F5C-8E54-0A3129164C27</RequestId>
  <PageNumber>10</PageNumber>
</DescribePhysicalConnectionsResponse>
```

`JSON` format

```
{
  "PhysicalConnectionSet": {
    "PhysicalConnectionType": {
      "Status": "Enabled",
      "Description": "Express Connect circuit",
      "EndTime": "2019-02-25T11:01:04Z",
      "LineOperator": "CT",
      "CircuitCode": "longtel001",
      "PhysicalConnectionId": "pc-119mfjzm*****",
      "HasReservationData": true,
      "RedundantPhysicalConnectionId": "pc-119mfjzm*******",
      "PeerLocation": "Building XX, XX Avenue, XX District, Hangzhou, Zhejiang",
      "BusinessStatus": "Normal",
      "ReservationInternetChargeType": "PayByBandwidth",
      "Name": "name",
      "ReservationOrderType": "RENEW",
      "LoaStatus": "Available",
      "Type": "VPC",
      "AdLocation": "Room Ax-x Bxx, building xx, xxx Avenue, Nanshan District, Shenzhen, Guangdong",
      "ChargeType": "Prepaid",
      "Bandwidth": 10,
      "CreationTime": "2017-06-08T12:20:55",
      "AccessPointId": "eip-2zeerraiwb7uj6i0*******",
      "EnabledTime": "2017-06-08T12:20:55",
      "ReservationActiveTime": "2019-02-25T11:01:04Z",
      "PortNumber": 80,
      "Spec": "Large",
      "PortType": "1000Base-T"
    }
  },
  "TotalCount": 10,
  "PageSize": 10,
  "RequestId": "EEC8EAB1-F299-4F5C-8E54-0A3129164C27",
  "PageNumber": 10
}
```


Error codes

HttpCode	Error code	Error message	Description
404	InvalidFilterKey.ValueNotSupported	Specified filter key is not supported: Filter.X.key	The error message returned because Filter.X.key is not supported.

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

16.6. ModifyPhysicalConnectionAttribute

Modifies the configuration of a physical connection.

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

- You can only modify the specifications and standby physical connection ID of a physical connection that is in the **Initial**, **Enabled**, or **Rejected** state.
- You cannot modify the configuration of a physical connection that is in the **Canceled**, **Allocating**, **AllocationFailed**, or **Terminated** state.
- After you modify the configuration of a physical connection that is in the **Rejected** state, its state becomes **Initial**.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyPhysicalConnectionAttribute	The operation that you want to perform. Set the value to **ModifyPhysicalConnectionAttribute**.
PhysicalConnectionId	String	Yes	pc-119mfjzm******	The ID of the physical connection.
RegionId	String	Yes	cn-shanghai	The ID of the region where the physical connection is created. You can call the DescribeRegions operation to query region IDs.
LineOperator	String	No	CT	The Internet service provider (ISP). Valid values: • CT: China Telecom • CU: China Unicom • CM: China Mobile • CO: Other ISPs in China • Equinix: Equinix • Other: other ISPs outside China
bandwidth	Integer	No	5	The bandwidth of the physical connection. Unit: Mbit/s. Valid values: 2 to 10240.
PeerLocation	String	No	Building XX, XX Avenue, XX District, Hangzhou, Zhejiang	The geographical location of the data center.
PortType	String	No	1000Base-LX	The type of the physical connection port. Valid values: • 100Base-T: a copper port that supports 100 Mbit/s • 1000Base-T: a copper port that supports 1,000 Mbit/s • 1000Base-LX: a single-mode fiber port that supports 1,000 Mbit/s (10 kilometers) • 10GBase-T: a copper port that supports 10,000 Mbit/s • 10GBase-LR: a single-mode fiber port that supports 10,000 Mbit/s (10 kilometers)
RedundantPhysicalConnectionId	String	No	pc-119mfjzm7	The ID of the standby physical connection. The standby physical connection must be in the **Allocated**, **Confirmed**, or **Enabled** state.
Description	String	No	Description	The description of the physical connection. The description must be 2 to 256 characters in length. It must start with a letter but cannot start with `http://` or `https://`.
Name	String	No	Name	The name of the physical connection. The name must be 2 to 128 characters in length, and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter, and cannot start with `http://` or `https://`.

Parameter	Type	Required	Example	Description
ClientToken	String	No	efefe566754h	The client token that is used to ensure the idempotency of the request. You can use the client to generate the 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.
CircuitCode	String	No	longtel001	The circuit code provided by the ISP for the physical connection.

Response parameters

Parameter	Type	Example	Description
RequestId	String	013EE132-A109-4247-91B0-099A8FF49AD7	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=ModifyPhysicalConnectionAttribute
&PhysicalConnectionId=pc-119mfjzm******
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyPhysicalConnectionAttributeResponse>
    <RequestId>8A6A5EC5-6F6C-4906-9689-56ACE58A13E0</RequestId>
</ModifyPhysicalConnectionAttributeResponse>
```

`JSON` format

```
{
 "RequestId": "8A6A5EC5-6F6C-4906-9689-56ACE58A13E0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidPhysicalConnectionId.NotFound	The PhysicalConnectionId provided does not exist in our records.	The error message returned because the physical connection does not exist.
400	InvalidLineOperator.Malformd	The LineOperator provided was invalid.	The error message returned because LineOperator is set to an invalid value.
400	InvalidPeerLocation.Malformd	The PeerLocation provided was invalid.	The error message returned because PeerLocation is set to an invalid value.
400	InvalidPortType.Malformd	The PortType provided was invalid.	The error message returned because the specified type of the port is invalid.
400	InvalidDescription.Malformed	The specifid ? Description? is not valid.	The error message returned because the format of the specified resource description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.

HttpCode	Error code	Error message	Description
400	InvalidName.Malformed	The specified ? Name? is not valid.	The error message returned because the format of the specified name is invalid.
400	InvalidStatus	invalid physical connection status.	The error message returned because the specified state of the physical connection is invalid.
400	InvalidBandwidth	invalid physical connection banwidth.	The error message returned because the specified bandwidth value of the physical connection is invalid.
400	InvalidRedundantPhysicalConnection	redundant physical connection doesn't belong to current user.	The error message returned because the specified physical connection does not belong to your Alibaba Cloud account.
400	InvalidRedundantPhysicalConnectionStatus	invalid redundant physical connection status.	The error message returned because the specified state of the standby physical connection is invalid.
400	InvalidCircuitCode.Malformed	circuitCode is illegal.	The error message returned because CircuitCode is set to an invalid value.

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

16.7. TerminatePhysicalConnection

Disables an Express Connect circuit after it is enabled.

Usage notes

After you call this operation, the specified Express Connect circuit changes to the **Terminating** state. After the Express Connect circuit is disabled, it changes to the **Terminated** state.

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

- You can only terminate an Express Connect circuit that is in the **Enabled** state.
- Before you disable an Express Connect circuit, you must delete the virtual border routers (VBRs) associated with it.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	TerminatePhysicalConnection	The operation that you want to perform. Set the value to **TerminatePhysicalConnection**.
PhysicalConnectionId	String	Yes	pc-119mfjzm****	The ID of the Express Connect circuit.
RegionId	String	Yes	cn-hangzhou	The region ID of the Express Connect circuit. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=TerminatePhysicalConnection
&PhysicalConnectionId=pc-119mfjzm****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<TerminatePhysicalConnectionResponse>
    <RequestId>4EC47282-1B74-4534-BD0E-403F3EE64CAF</RequestId>
</TerminatePhysicalConnectionResponse>
```

`JSON` format

```
{
  "RequestId": "4EC47282-1B74-4534-BD0E-403F3EE64CAF"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidPhysicalConnectionId.NotFound	The PhysicalConnectionId provided does not exist in our records.	The error message returned because the specified Express Connect circuit does not exist.
400	Forbidden.NotAllowedInState	The request does not allow in this state.	The error message returned because the Express Connect circuit in an invalid state and the operation cannot be performed.

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

16.8. EnablePhysicalConnection

Enables an Express Connect circuit that is in the **Confirmed** state. After you enable an Express Connect circuit, it changes to the **Enabled** state.

Usage notes

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

- You can enable only an Express Connect circuit that is in the **Confirmed** state.

- After you enable an Express Connect circuit, it changes to the **Enabled** state.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	EnablePhysicalConnection	The operation that you want to perform. Set the value to **EnablePhysicalConnection**.
PhysicalConnectionId	String	Yes	pc-119mfjz****	The ID of the Express Connect circuit.
RegionId	String	Yes	cn-shanghai	The region ID of the Express Connect circuit. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=EnablePhysicalConnection
&PhysicalConnectionId=pc-119mfjz****
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<EnablePhysicalConnectionResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</EnablePhysicalConnectionResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidPhysicalConnectionId.NotFound	The PhysicalConnectionId provided does not exist in our records.	The error message returned because the specified Express Connect circuit does not exist.
400	Forbidden.NotAllowedInState	The request does not allow in this state.	The error message returned because the Express Connect circuit in an invalid state and the operation cannot be performed.

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

16.9. ConfirmPhysicalConnection

Confirms the state of a physical connection. After you call this operation, the state of the physical connection changes to Confirmed.

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
PhysicalConnectionId	String	Yes	pc-119mf****	The ID of the physical connection.
RegionId	String	Yes	cn-shanghai	The ID of the region where the physical connection is deployed. You can call the DescribeRegions operation to query region IDs.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e0****	The client token that is used to ensure the idempotence of the request. You can use the client to generate a token, 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.

Response parameters

Parameter	Type	Example	Description
RequestId	String	API-20365164-5b0d-460a-83c2-2189972b****	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=ConfirmPhysicalConnection
&PhysicalConnectionId=pc-119mf****
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ConfirmPhysicalConnectionResponse>
 <RequestId>API-20365164-5b0d-460a-83c2-2189972b****</RequestId>
</ConfirmPhysicalConnectionResponse>
```

`JSON` format

```
{
  "RequestId": "API-20365164-5b0d-460a-83c2-2189972b****"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidRegionId.NotFound	The specified RegionId is not found.	The error message returned because the specified region ID is invalid. Check whether the service is available in the specified region.

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

16.10. DeletePhysicalConnection

Deletes a connection over an Express Connect circuit.

Limit

You can only delete a connection over an Express Connect circuit that is in the **Rejected**, **Canceled**, **AllocationFailed**, or **Terminated** state.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeletePhysicalConnection	The operation that you want to perform. Set the value to **DeletePhysicalConnection**.
PhysicalConnectionId	String	Yes	pc-119mfjzm7*********	The ID of the Express Connect circuit.
RegionId	String	Yes	cn-shanghai	The region ID of the Express Connect circuit. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeletePhysicalConnection
&PhysicalConnectionId=pc-119mfjzm7*********
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeletePhysicalConnectionResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</DeletePhysicalConnectionResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidPhysicalConnectionId.NotFound	The PhysicalConnectionId provided does not exist in our records.	The error message returned because the specified Express Connect circuit does not exist.
400	Forbidden.NotAllowedInState	The request does not allow in this state.	The error message returned because the connection is in an invalid state and the operation cannot be performed.
400	InvalidPhysicalConnectionId.NotMatched	instance id not matched.	The error message returned because the instance ID does not match.
400	Forbidden.VBRExists	physical connection owner's vbr still exists.	The error message returned because the virtual border router (VBR) of the Express Connect circuit still exists.
400	Forbidden.VBRExists	vbr owner's vbr still exists.	The error message returned because the VBR still exists.
400	Forbidden.AssociateToVBR	The physical connection still associate to VBR.	The error message returned because the Express Connect circuit is already associated with a VBR.

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

16.11. ApplyPhysicalConnectionLOA

Applies for letter of authorization (LOA) for an Express Connect circuit.

Debugging

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

Request parameters

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

Parameter	Type	Required	Example	Description
CompanyName	String	Yes	company	The name of the customer company that requires the Express Connect circuit.
ConstructionTime	String	Yes	2019-02-28T16:00:00.000Z	The time when construction started.
InstanceId	String	Yes	pc-bp1qrb3044eqi******	The ID of the Express Connect circuit.
LineType	String	Yes	FIBRE	The type of the Express Connect circuit. • **MSTP** • **MPLSVPN** • **FIBRE** • **Other**
RegionId	String	Yes	cn-hangzhou	The ID of the region where the Express Connect circuit is deployed.
Si	String	Yes	Alibaba	The construction company.
ClientToken	String	No	A47BD386-7FDE-4xxx4-8D22-C62xxxxxxxx	Client authentication.
Bandwidth	Integer	No	3	The bandwidth of the Express Connect circuit. Unit: Mbit/s.
PeerLocation	String	No	China (Hangzhou)	The geographic location where the Express Connect circuit is deployed.
PMInfo.N.PMName	String	No	Tom	The name of the construction personnel. N is a natural number. Replace N with a value when you call this operation.
PMInfo.N.PMContactInfo	String	No	1320000****	The contact information about the construction personnel. N is a natural number. Replace N with a value when you call this operation.
PMInfo.N.PMCertificateType	String	No	IDCard	The identity type of the construction personnel. N is a natural number. Replace N with a value when you call this operation.
PMInfo.N.PMCertificateNo	String	No	3**********3	The identity number of the construction personnel. N is a natural number. Replace N with a value when you call this operation.
PMInfo.N.PMGender	String	No	Male	The gender of the construction personnel. N is a natural number. Replace N with a value when you call this operation.

Response parameters

Parameter	Type	Example	Description
RequestId	String	A47BD386-7FDE-42C4-8D22-C6223D18AA1C	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ApplyPhysicalConnectionLOA
&CompanyName=company
&ConstructionTime=2019-02-28T16:00:00.000Z
&InstanceId=pc-bp1qrb3044eqixxxxxxxx
&LineType=SDH
&RegionId=cn-hangzhou
&Si=Alibaba
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ApplyPhysicalConnectionLOAResponse>
    <RequestId>A47BD386-7FDE-42C4-8D22-C6223D18AA1C</RequestId>
</ApplyPhysicalConnectionLOAResponse>
```

`JSON` format

```
{
  "ApplyPhysicalConnectionLOAResponse": {
    "RequestId": "A47BD386-7FDE-42C4-8D22-C6223D18AA1C"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
400	OperationFailed.PconnTrafficNotEnable	The operation is failed because of PconnTrafficNotEnable.	The operation failed because outbound traffic is not enabled.

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

16.12. CompletePhysicalConnectionLOA

Generates a report for an installed physical connection.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CompletePhysicalConnectionLOA	The operation that you want to perform. Set the value to **CompletePhysicalConnectionLOA**.
InstanceId	String	Yes	pc-bp10tvlhnwkwxxxxxxxxxx	The ID of the physical connection.

Parameter	Type	Required	Example	Description
LineCode	String	Yes	aaa111	The circuit code provided by the Internet service provider (ISP).
LineLabel	String	Yes	bbb222	The label of the cable in the data center.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the physical connection is deployed.
ClientToken	String	No	F8983C74-E068-4509-B442-89xxxxxC8F43B	The client token that is used for authentication.

Response parameters

Parameter	Type	Example	Description
RequestId	String	F8983C74-E068-4509-B442-89BD82C8F43B	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? InstanceId=pc-bp10tvlhnwkwxxxxxxxxxx
&LineCode=aaa111
&LineLabel=bbb222
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CompletePhysicalConnectionLOAResponse>
    <code>200</code>
  <message>successful</message>
  <requestId>5FA3B04E-AEA0-4F89-BF0D-3FD71ED69BF7</requestId>
  <success>true</success>
   </CompletePhysicalConnectionLOAResponse>
```

`JSON` format

```
{
  "code":"200",
  "message":"successful",
  "requestId":"5FA3B04E-AEA0-4F89-BF0D-3FD71ED69BF7",
  "success":true
}
```

Error codes

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

16.13. CreatePhysicalConnectionOccupancyOrder

Creates an order for resource occupation of an Express Connect circuit.

> **Note** You can call this operation only when the Express Connect circuit is in the (**Complete**) state.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreatePhysicalConnectionOccupancyOrder	The operation that you want to perform. Set the value to **CreatePhysicalConnectionOccupancyOrder**.
PhysicalConnectionId	String	Yes	pc-bp1hp0wr072f6******	The ID of the Express Connect circuit.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the Express Connect circuit is deployed. You can call the DescribeRegions operation to query the most recent region list.
Period	Integer	No	1	The subscription duration. **Note** When **InstanceChargeType** is set to **PrePaid**, you must specify this parameter. You do not need to specify this parameter when **InstanceChargeType** is set to **PostPaid**. • If **PricingCycle** is set to **Month**, set **Period** to a value from **1 to 9**. • If **PricingCycle** is set to **Year**, set **Period** to a value from **1 to 5**.
InstanceChargeType	String	No	PostPaid	The billing method of the Express Connect circuit. Valid values: • **PrePaid**: subscription. If you choose this billing method, make sure that you Alibaba Cloud account supports balance payments or credit payments. • **PostPaid**: pay-as-you-go. This is the default value.
AutoPay	Boolean	No	false	Specifies whether to enable automatic payment. Valid values: • **true**: enables automatic payment. Make sure that you have a sufficient balance in your account. Otherwise, your order becomes invalid and is automatically canceled. • **false**: disables automatic payment. This is the default value.
PricingCycle	String	No	Month	The billing cycle of the subscription. Valid values: • **Month**: Bills are paid on a monthly basis. This is the default value. • **Year**: Bills are paid on an annual basis.

Parameter	Type	Required	Example	Description
ClientToken	String	No	CBCE910E-D396-4944-8****	The client Token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	9B9300FE-11E2-4E3B-949C-BED3B44DD26D	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreatePhysicalConnectionOccupancyOrder
&PhysicalConnectionId=pc-bp1hp0wr072f6******
&RegionId=cn-hangzhou
&<Common request parameters>
```

Successful response examples

`XML` format

```
<CreatePhysicalConnectionOccupancyOrderResponse>
    <RequestId>9B9300FE-11E2-4E3B-949C-BED3B44DD26D</RequestId>
</CreatePhysicalConnectionOccupancyOrderResponse>
```

`JSON` format

```
{
  "CreatePhysicalConnectionOccupancyOrderResponse": {
    "RequestId": "9B9300FE-11E2-4E3B-949C-BED3B44DD26D"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidPhysicalConnectionId.NotFound	The PhysicalConnectionId provided does not exist in our records.	The error message returned because the Express Connect circuit does not exist.
400	Forbidden.NotAllowedInState	The request does not allow in this state.	The error message returned because the current status does not support this operation.

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

16.14. CreatePhysicalConnectionSetupOrder

Creates an order for initial installation of a physical connection.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreatePhysicalConnectionSetupOrder	The operation that you want to perform. Set the value to **CreatePhysicalConnectionSetupOrder**.
AccessPointId	String	Yes	ap-cn-beijing-ft-A	The ID of the access point.
LineOperator	String	Yes	CT	The Internet service provider (ISP). Valid values: • CT: China Telecom • CU: China Unicom • CM: China Mobile • CO: other ISPs in China • Equinix: Equinix • Other: other ISPs outside China
RegionId	String	Yes	cn-shanghai	The ID of the region where the physical connection is deployed. You can call the DescribeRegions operation to query region IDs.
PortType	String	No	100Base-T	The port type of the physical connection. Valid values: • **100Base-T**: a copper port that supports 100 Mbit/s • **1000Base-T**: a copper port that supports 1,000 Mbit/s • **1000Base-LX**: a single-mode optical port that supports 1,000 Mbit/s (10 kilometers) • **10GBase-T**: a copper port that supports 10,000 Mbit/s • **10GBase-LR**: a single-mode optical port that supports 10,000 Mbit/s (10 kilometers)
RedundantPhysicalConnectionId	String	No	pc-bp10zsv5ntp********	The ID of the standby physical connection. The standby physical connection must be in the **Allocated**, **Confirmed**, or **Enabled** state.
AutoPay	Boolean	No	true	Specifies whether to enable automatic payment. Valid values: **true and false**
ClientToken	String	No	318BB676-0A2B-43A0-9AD8-F1D34E93750F	The client token that is used for authentication.

Response parameters

Parameter	Type	Example	Description
RequestId	String	F7A6301A-64BA-41EC-8284-8F4838C15D1F	The ID of the instance.
OrderId	String	202844382740728	The ID of the order.
PhysicalConnectionId	String	pc-2zegmc02v7ss4******	The ID of the physical connection.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=CreatePhysicalConnectionSetupOrder
&AccessPointId=ap-cn-beijing-ft-A
&LineOperator=CT
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreatePhysicalConnectionSetupOrderResponse>
  <OrderId>205226815210296</OrderId>
  <RequestId>76CCB7F1-C141-4BD1-8106-63987D12BEF4</RequestId>
  <PhysicalConnectionId>pc-2zegmc02v7ss4pin******</PhysicalConnectionId>
</CreatePhysicalConnectionSetupOrderResponse>
```

`JSON` format

```
{
 "OrderId": 205226815210296,
 "RequestId": "76CCB7F1-C141-4BD1-8106-63987D12BEF4",
 "PhysicalConnectionId": "pc-2zegmc02v7ss4******"
}
```

Error codes

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

16.15. DescribePhysicalConnectionLOA

Queries letter of authorization (LOA) information about an Express Connect circuit.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribePhysicalConnectionLOA	The operation that you want to perform. Set the value to **DescribePhysicalConnectionLOA**.
InstanceId	String	Yes	pc-bp1ca4wca27ex******	The ID of the Express Connect circuit.
RegionId	String	Yes	cn-hangzhou	The region ID of the Express Connect circuit.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
PhysicalConnectionLOAType	Struct		The LOA information about the Express Connect circuit.
CompanyLocalizedName	String	company	The name of the construction company.
CompanyName	String	test1234	The name of the organization that requires the Express Connect circuit.
ConstructionTime	String	2019-02-26T08:00:00Z	The time when construction starts.
InstanceId	String	pc-bp1ca4wca27****	The ID of the Express Connect circuit.
LineCode	String	aaa111	The circuit code provided by the Internet service provider (ISP).
LineLabel	String	bbb222	The label of the cable in the data center.
LineType	String	FIBRE	The type of the Express Connect circuit. • **MSTP** • **MPLSVPN** • **FIBRE** • **Other**
LoaUrl	String	http://******	The download URL of the LOA file.
PMInfo	Array of PMInfo		The information about the construction workers.
PMInfo			
PMCertificateNo	String	12345671****	The identity document number of the construction worker.
PMCertificateType	String	Other	The identity document type of the construction worker. • **IDCard**: identity card • **Passport**: passport • **Other**: other identity documents
PMContactInfo	String	18910010****	The phone number of the construction worker.
PMGender	String	Male	The gender of the construction worker. • **Male**: male • **Female**: female
PMName	String	name	The name of the construction worker.
SI	String	ctcu	The construction company.

Parameter	Type	Example	Description
Status	String	Available	The status of the LOA. • **Applying** :The LOA is pending for approval. • **Accept**: The LOA is approved. • **Available** : The LOA is available. • **Rejected**: The LOA is rejected. • **Completing**: The Express Connect circuit is under construction. • **Complete**: The Express Connect circuit is installed. • **Deleted**: The LOA is deleted.
RequestId	String	318BB676-0A2B-43A0-9AD8-F1D34E93750F	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribePhysicalConnectionLOA
&InstanceId=pc-bp1ca4wca27ex******
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribePhysicalConnectionLOAResponse>
    <RequestId>318BB676-0A2B-43A0-9AD8-F1D34E93750F</RequestId>
    <PhysicalConnectionLOAType>
        <Status>Available</Status>
        <CompanyName>test1234</CompanyName>
        <ConstructionTime>2019-02-26T08:00:00Z</ConstructionTime>
        <InstanceId>pc-bp1ca4wca27****</InstanceId>
        <SI>ctcu</SI>
        <CompanyLocalizedName>company</CompanyLocalizedName>
        <LoaUrl>http://******</LoaUrl>
        <LineCode>aaa111</LineCode>
        <LineType>FIBRE</LineType>
        <LineLabel>bbb222</LineLabel>
        <PMInfo>
            <PMInfo>
                <PMCertificateNo>12345671****</PMCertificateNo>
                <PMCertificateType>Other</PMCertificateType>
                <PMContactInfo>18910010****</PMContactInfo>
                <PMGender>Male</PMGender>
                <PMName>name</PMName>
            </PMInfo>
        </PMInfo>
    </PhysicalConnectionLOAType>
</DescribePhysicalConnectionLOAResponse>
```

`JSON` format

```
{
  "DescribePhysicalConnectionLOAResponse": {
    "RequestId": "318BB676-0A2B-43A0-9AD8-F1D34E93750F",
    "PhysicalConnectionLOAType": {
      "Status": "Available",
      "CompanyName": "test1234",
      "ConstructionTime": "2019-02-26T08:00:00Z",
      "InstanceId": "pc-bp1ca4wca27****",
      "SI": "ctcu",
      "CompanyLocalizedName": "company",
      "LoaUrl": "http://******",
      "LineCode": "aaa111",
      "LineType": "FIBRE",
      "LineLabel": "bbb222",
      "PMInfo": {
        "PMInfo": {
          "PMCertificateNo": "12345671****",
          "PMCertificateType": "Other",
          "PMContactInfo": "18910010****",
          "PMGender": "Male",
          "PMName": "name"
        }
      }
    }
  }
}
```


Error codes

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

16.16. CreateVirtualPhysicalConnection

Creates a hosted connection.

Usage notes

Before you call this API operation, familiarize yourself with the workflow for creating a hosted connection and the environment requirements. For more information, see Overview of hosted connections and Operations performed by Express Connect partners.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateVirtualPhysicalConnection	The operation that you want to perform. Set the value to **CreateVirtualPhysicalConnection**.
OrderMode	String	Yes	PayByVirtualPhysicalConnectionOwner	The paying party of the hosted connection. Valid values: • **PayByPhysicalConnectionOwner**: the Express Connect partner • **PayByVirtualPhysicalConnectionOwner**: the tenant

Parameter	Type	Required	Example	Description
VlanId	Long	Yes	4	The VLAN ID of the hosted connection. Valid values: **0** to **2999**. • If the VLAN ID is set to **0**, it indicates that the switch port of the virtual border router (VBR) is a Layer 3 router interface instead of a VLAN interface. When a Layer 3 router interface is used, each Express Connect circuit corresponds to a VBR. • If the VLAN ID is set to a value from **1** to **2999**, the switch port of the VBR is a Layer 3 VLAN subinterface. When a Layer 3 VLAN subinterface is used, each VLAN ID corresponds to a VBR. In this case, the Express Connect circuit with which the VBR is associated can be used to connect to virtual private clouds (VPCs) that belong to different Alibaba Cloud accounts. VBRs in different VLANs are isolated from each other at Layer 2.
Spec	String	Yes	50M	The bandwidth limit of the hosted connection. Valid values: **50M**, **100M**, **200M**, **300M**, **400M**, **500M**, **1G**, **2G**, **5G**, **8G**, and **10G**. **Note** However, if you want to set the value to **2G**, **5G**, **8G**, or **10G**, you must first submit a ticket. **M** indicates Mbit/s and **G** indicates Gbit/s.
VpconnAliUid	Long	Yes	253460731706911258	The Alibaba Cloud account ID of the tenant.
PhysicalConnectionId	String	Yes	pc-bp1ciz7ekd2grn1as****	The ID of the Express Connect circuit over which the hosted connection is created.
Name	String	No	nametest	The name of the hosted connection.
Token	String	No	CBCE910E-D396-4944-8****	The client token that is used to ensure the idempotence of the request. You can use the client to generate a token, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.
DryRun	Boolean	No	false	Specifies whether to precheck the request only. Valid values: • **true**: only prechecks the request but does not create the specified hosted connection. The system prechecks the request syntax, instance status, and whether the required parameters are specified. An error message is returned if the request fails to pass the precheck. If the request passes the precheck, `DRYRUN.SUCCESS` is returned. • **false** (default): sends the request. If the request passes the precheck, the hosted connection is created.

Parameter	Type	Required	Example	Description
Description	String	No	desctest	The description of the hosted connection.
RegionId	String	Yes	cn-hangzhou	The region ID of the hosted connection. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	CD14EA74-E9C3-59A9-942A-DFEC7E12818D	The ID of the request.
VirtualPhysicalConnection	String	pc-bp1mrgfbtmc9brre7****	The ID of the hosted connection.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateVirtualPhysicalConnection
&OrderMode=PayByVirtualPhysicalConnectionOwner
&VlanId=4
&Spec=50M
&VpconnAliUid=253460731706911258
&PhysicalConnectionId=pc-bp1ciz7ekd2grn1as****
&Name=nametest
&DryRun=false
&Description=desctest
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateVirtualPhysicalConnectionResponse>
  <RequestId>CD14EA74-E9C3-59A9-942A-DFEC7E12818D</RequestId>
  <VirtualPhysicalConnection>pc-bp1mrgfbtmc9brre7****</VirtualPhysicalConnection>
</CreateVirtualPhysicalConnectionResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
 "RequestId" : "CD14EA74-E9C3-59A9-942A-DFEC7E12818D",
 "VirtualPhysicalConnection" : "pc-bp1mrgfbtmc9brre7****"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	IllegalParam.Bandwidth	The param of Bandwidth [%s] is illegal.	The error message returned because the specified bandwidth limit is invalid.
400	ResourceNotFound.PhysicalConnectionId	The specified PhysicalConnectionId [%s] is not found.	The error message returned because the specified Express Connect circuit ID (PhysicalConnectionId) does not exist.

HttpCode	Error code	Error message	Description
400	InvalidPhysicalConnectionId.NotFound	The specified PhysicalConnectionId is not found.	The error message returned because the specified Express Connect circuit ID does not exist.
400	MissingParameter	The input parameter 'PhysicalConnectionId' that is mandatory for processing this request is not supplied.	The error message returned because the PhysicalConnectionId parameter is not specified.
400	InvalidPhysicalConnectionId.NotEnabled	The specified PhysicalConnectionId is not in Enabled state.	The error message returned because the Express Connect circuit is in an invalid state. Check the Express Connect circuit and try again.
400	InvalidVlanId.Malformed	The specified VlanId is not valid.	The error message returned because the value of VlanId is invalid.

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

16.17. GetPhysicalConnectionServiceStatus

Queries the status of outbound data transfer billing for the current account.

Usage notes

You can call this API operation to query the status of outbound data transfer billing for the current account. For more information about outbound data transfer billing, see Outbound data transfer billing and Billing.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetPhysicalConnectionServiceStatus	The operation that you want to perform. Set the value to **GetPhysicalConnectionServiceStatus**.
RegionId	String	Yes	cn-hangzhou	The ID of the region for which you want to query the status of outbound data transfer billing. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	54B48E3D-DF70-471B-AA93-08E683A1B45	The ID of the request.
Enabled	Boolean	true	Indicates whether outbound data transfer billing is enabled. Valid values: • **true**: yes • **false**: no

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetPhysicalConnectionServiceStatus
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<GetPhysicalConnectionServiceStatusResponse>
  <RequestId>54B48E3D-DF70-471B-AA93-08E683A1B45</RequestId>
  <Enabled>true</Enabled>
</GetPhysicalConnectionServiceStatusResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
 "RequestId" : "54B48E3D-DF70-471B-AA93-08E683A1B45",
 "Enabled" : true
}
```

Error codes

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

16.18. RecoverPhysicalConnection

Resumes an Express Connect circuit.

Usage notes

You can call this API operation to resume a suspended Express Connect circuit. You can resume only shared Express Connect circuits by calling this API operation.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RecoverPhysicalConnection	The operation that you want to perform. Set the value to **RecoverPhysicalConnection**.
InstanceId	String	Yes	pc-bp1mrgfbtmc9brre7****	The ID of the Express Connect circuit. **Note** You can resume only shared Express Connect circuits.
Token	String	No	CBCE910E-D396-4944-8****	The client token that is used to ensure the idempotence of the request. You can use the client to generate a token, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to precheck the request only. Valid values: • **true**: only prechecks the request but does not resume the Express Connect circuit. The system prechecks the request syntax, instance status, and whether the required parameters are specified. An error message is returned if the request fails to pass the precheck. If the request passes the precheck, the system returns the ID of the request. • **false** (default): sends the request. If the request passes the precheck, the Express Connect circuit is resumed.
RegionId	String	Yes	cn-hangzhou	The region ID of the Express Connect circuit. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	CD14EA74-E9C3-59A9-942A-DFEC7E12818D	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=RecoverPhysicalConnection
&InstanceId=pc-bp1mrgfbtmc9brre7****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<RecoverPhysicalConnectionResponse>
  <RequestId>CD14EA74-E9C3-59A9-942A-DFEC7E12818D</RequestId>
</RecoverPhysicalConnectionResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
 "RequestId" : "CD14EA74-E9C3-59A9-942A-DFEC7E12818D"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	IncorrectStatus.PhysicalConnection	The status of %s is incorrect.	The error message returned because the status of the Express Connect circuit is invalid.
400	ResourceNotFound	The specified resource %s is not found.	The error message returned because the specified resource does not exist.

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

16.19. UpdateVirtualPhysicalConnection

Changes the VLAN ID of a hosted connection.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UpdateVirtualPhysicalConnection	The operation that you want to perform. Set the value to **UpdateVirtualPhysicalConnection**.
VlanId	Long	Yes	1	The VLAN ID of the hosted connection. Valid values: **0** to **2999**. • If the VLAN ID is set to **0**, it indicates that the switch port of the virtual border router (VBR) is a Layer 3 router interface instead of a VLAN interface. When a Layer 3 router interface is used, each Express Connect circuit corresponds to a VBR. • If the VLAN ID is set to a value from **1** to **2999**, the switch port of the VBR is a Layer 3 VLAN subinterface. When a Layer 3 VLAN subinterface is used, each VLAN ID corresponds to a VBR. In this case, the Express Connect circuit with which the VBR is associated can be used to connect to virtual private clouds (VPCs) that belong to different Alibaba Cloud accounts. VBRs in different VLANs are isolated from each other at Layer 2.
InstanceId	String	Yes	pc-bp1mrgfbtmc9brre7****	The ID of the hosted connection.
Token	String	No	CBCE910E-D396-4944-8****	The client token that is used to ensure the idempotence of the request. You can use the client to generate a token, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.
DryRun	Boolean	No	false	Specifies whether to precheck the request only. Valid values: • **true**: only prechecks the request but does not change the VLAN ID of the hosted connection. The system prechecks the request syntax, instance status, and whether the required parameters are specified. An error message is returned if the request fails to pass the precheck. If the request passes the precheck, the system returns the ID of the request. • **false** (default): sends the request. If the request passes the precheck, the VLAN ID of the hosted connection is changed.

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

Response parameters

Parameter	Type	Example	Description
RequestId	String	7035627E-1C1D-5BC7-A830-F897A35912D1	The ID of the request.
Success	String	true	Indicates whether the VLAN ID of the hosted connection is changed. Valid values: • **true**: yes • **false**: no

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=UpdateVirtualPhysicalConnection
&VlanId=1
&InstanceId=pc-bp1mrgfbtmc9brre7****
&DryRun=false
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<UpdateVirtualPhysicalConnectionResponse>
  <RequestId>7035627E-1C1D-5BC7-A830-F897A35912D1</RequestId>
  <Success>true</Success>
</UpdateVirtualPhysicalConnectionResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
 "RequestId" : "7035627E-1C1D-5BC7-A830-F897A35912D1",
 "Success" : "true"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	ResourceNotFound.PhysicalConnectionId	The specified PhysicalConnectionId [%s] is not found.	The error message returned because the specified Express Connect circuit ID (PhysicalConnectionId) does not exist.

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

16.20. ListVirtualPhysicalConnections

Queries information about hosted connections.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListVirtualPhysicalConnections	The operation that you want to perform. Set the value to **ListVirtualPhysicalConnections**.
PhysicalConnectionId	String	No	pc-bp1ciz7ekd2grn1as****	The ID of the Express Connect circuit over which the hosted connections are created. Express Connect circuits in this topic refer to shared Express Connect circuits over which hosted connections are created.
VirtualPhysicalConnectionBusinessStatus	String	No	Normal	The business status of the hosted connections. Valid values: • **Normal**: normal. • **FinancialLocked**: locked due to overdue payments. • **SecurityLocked**: locked for security reasons.
IsConfirmed	Boolean	No	true	Specifies whether the hosted connections are accepted by tenants. Valid values: • **true**: yes • **false**: no
MaxResults	Integer	No	20	The number of entries to return per page. Valid values: **1** to **100**. Default value: **20**.
NextToken	String	No	dd20****	The token for returning the next page when the data is returned in more than one page.
RegionId	String	Yes	cn-shanghai	The region ID of the hosted connections. You can call the DescribeRegions operation to query the most recent region list.
VirtualPhysicalConnectionIds.N	String	No	pc-bp1mrgfbtmc9brre7*****	The hosted connection ID. You can specify multiple hosted connection IDs. Valid values of **N**: **1** to **20**.
VirtualPhysicalConnectionStatuses.N	String	No	Confirmed	The service status of the hosted connections. Valid values: • **Confirmed**: accepted • **UnConfirmed**: not accepted • **Deleted**: deleted You can specify multiple states. Valid values of **N**: **1** to **20**.

Parameter	Type	Required	Example	Description
VirtualPhysicalConnectionAliUids.N	String	No	253460731706911258	The Alibaba Cloud account ID of the hosted connection owner. You can specify multiple Alibaba Cloud account IDs. Valid values of **N**: **1** to **20**.
VlanIds.N	String	No	10	The VLAN ID of the hosted connection. You can specify multiple VLAN IDs. Valid values of **N**: **1** to **20**.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2A55F69E-EE3D-5CBE-8805-734F7D5B46B9	The ID of the request.
VirtualPhysicalConnections	Array of VirtualPhysicalConnection		The list of hosted connections returned.
Type	String	VPC	The type of the Express Connect circuit. Default value: **VPC**.
Status	String	Enabled	The status of the Express Connect circuit. Valid values: • **Initial**: pending for approval • **Approved**: approved • **Allocating**: resource allocation in progress • **Allocated**: under construction • **Confirmed**: pending for user confirmation • **Enabled**: enabled • **Rejected**: rejected • **Canceled**: canceled • **Allocation Failed**: resource allocation failed • **Terminated**: suspended
CreationTime	String	2017-06-08T12:20:55	The time when the Express Connect circuit was created.
AdLocation	String	Server Room E***, Data Center XX, XXX Intersection, Yuhang Economic Development Zone	The geographical location of the access device.
PortNumber	String	80	The port number of the access device.
Spec	String	50M	The bandwidth limit of the hosted connection. **M** indicates Mbit/s and **G** indicates Gbit/s.
ChargeType	String	Prepaid	The billing method of the Express Connect circuit. The value is set to **Prepaid**, which indicates the subscription billing method.
Description	String	desctest	The description of the Express Connect circuit.

Parameter	Type	Example	Description
Bandwidth	Long	50	The bandwidth limit of the Express Connect circuit. Unit: Mbit/s.
EnabledTime	String	2021-10-08T10:44Z	The time when the Express Connect circuit was enabled.
LineOperator	String	CU	The connectivity provider of the Express Connect circuit. Valid values: • **CT**: China Telecom • **CU**: China Unicom • **CM**: China Mobile • **CO**: other connectivity providers in mainland China • **Equinix**: Equinix • **Other**: other connectivity providers outside mainland China
PeerLocation	String	Building XX, XX Avenue, XX District, Hangzhou, Zhejiang	The geographical location of the data center.
RedundantPhysicalConnectionId	String	pc-119mfjzm****	The ID of the redundant Express Connect circuit.
Name	String	nametest	The name of the Express Connect circuit.
CircuitCode	String	longtel001	The circuit code given by the connectivity provider for the Express Connect circuit.
EndTime	String	2021-11-08T16:00:00Z	The expiration date of the hosted connection. The time follows the ISO 8601 standard in the yyyy-MM-ddThh:mm:ssZ format. The time is displayed in UTC.
PortType	String	10GBase-LR	The port type of the Express Connect circuit. Valid values: • **100Base-T**: 100 Mbit/s copper Ethernet port • **1000Base-T**: 1,000 Mbit/s copper Ethernet port • **1000Base-LX**: 1,000 Mbit/s single-mode optical port (10 kilometers) • **10GBase-T**: 10,000 Mbit/s copper Ethernet port • **10GBase-LR**: 10,000 Mbit/s single-mode optical port (10 kilometers)
BusinessStatus	String	Normal	The business status of the Express Connect circuit. Valid values: • **Normal**: enabled. • **FinancialLocked**: locked due to overdue payments. • **SecurityLocked**: locked for security reasons.

Parameter	Type	Example	Description
LoaStatus	String	Available	The status of the letter of authorization (LOA). Valid values: • **Applying** :The LOA is pending for approval. • **Accept**: The LOA is approved. • **Available** : The LOA is available. • **Rejected**: The LOA is rejected. • **Completing**: The Express Connect circuit is under construction. • **Complete**: The Express Connect circuit is installed. • **Deleted**: The LOA is deleted.
AccessPointId	String	ap-cn-hangzhou-finance-yh-E	The ID of the access point that is associated with the Express Connect circuit.
PhysicalConnectionId	String	pc-bp1mrgfbtmc9brre7****	The ID of the hosted connection.
ProductType	String	VirtualPhysicalConnection	The type of the Express Connect circuit. Valid values: • **VirtualPhysicalConnection**: shared • **PhysicalConnection**: dedicated
ParentPhysicalConnectionId	String	pc-bp1ciz7ekd2grn1as****	The ID of the Express Connect circuit.
VirtualPhysicalConnectionStatus	String	Confirmed	The service status of the hosted connection. Valid values: • **Confirmed**: accepted • **UnConfirmed**: not accepted • **Deleted**: deleted
ParentPhysicalConnectionAliUid	String	283117732402483989	The ID of the Alibaba Cloud account to which the Express Connect circuit belongs.
OrderMode	String	PayByPhysicalConnectionOwner	The paying party of the hosted connection. Valid values: • **PayByPhysicalConnectionOwner**: the owner of the Express Connect circuit over which the hosted connection is created. • **PayByVirtualPhysicalConnectionOwner**: the owner of the hosted connection.
AliUid	String	253460731706911258	The Alibaba Cloud account ID of the hosted connection owner.
VlanId	String	10	The VLAN ID of the hosted connection.
NextToken	String	dd20****	The token for returning the next page when the data is returned in more than one page.
TotalCount	Integer	1	The total number of hosted connections queried.
Count	Integer	1	The number of hosted connections returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListVirtualPhysicalConnections
&PhysicalConnectionId=pc-bp1ciz7ekd2grn1as****
&VirtualPhysicalConnectionBusinessStatus=Normal
&VirtualPhysicalConnectionIds=["pc-bp1mrgfbtmc9brre7****"]
&IsConfirmed=true
&VirtualPhysicalConnectionStatuses=["Confirmed"]
&VirtualPhysicalConnectionAliUids=["253460731706911258"]
&VlanIds=["10"]
&MaxResults=20
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ListVirtualPhysicalConnectionsResponse>
  <TotalCount>1</TotalCount>
  <RequestId>2A55F69E-EE3D-5CBE-8805-734F7D5B46B9</RequestId>
  <VirtualPhysicalConnections>
    <Status>Enabled</Status>
    <EndTime>2021-11-08T16:00:00Z</EndTime>
    <LineOperator>CU</LineOperator>
    <OrderMode>PayByPhysicalConnectionOwner</OrderMode>
    <PhysicalConnectionId>pc-bp1mrgfbtmc9brre7****</PhysicalConnectionId>
    <ProductType>VirtualPhysicalConnection</ProductType>
    <ParentPhysicalConnectionAliUid>283117732402484000</ParentPhysicalConnectionAliUid>
    <RedundantPhysicalConnectionId/>
    <ParentPhysicalConnectionId>pc-bp1ciz7ekd2grn1as****</ParentPhysicalConnectionId>
    <BusinessStatus>Normal</BusinessStatus>
    <Type>VPC</Type>
    <AdLocation>Server Room E***, Data Center XX, XXX Intersection, Yuhang Economic Development Zone</AdLocation>
    <VirtualPhysicalConnectionStatus>Confirmed</VirtualPhysicalConnectionStatus>
    <ChargeType/>
    <Bandwidth>50</Bandwidth>
    <AccessPointId>ap-cn-hangzhou-finance-yh-E</AccessPointId>
    <EnabledTime>2021-10-08T10:44Z</EnabledTime>
    <Spec>50M</Spec>
    <VlanId>10</VlanId>
    <PortType>10GBase-LR</PortType>
    <AliUid>253460731706911260</AliUid>
  </VirtualPhysicalConnections>
  <Count>1</Count>
</ListVirtualPhysicalConnectionsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
 "TotalCount" : 1,
 "RequestId" : "2A55F69E-EE3D-5CBE-8805-734F7D5B46B9",
 "VirtualPhysicalConnections" : [ {
  "Status" : "Enabled",
  "EndTime" : "2021-11-08T16:00:00Z",
  "LineOperator" : "CU",
  "OrderMode" : "PayByPhysicalConnectionOwner",
  "PhysicalConnectionId" : "pc-bp1mrgfbtmc9brre7****",
  "ProductType" : "VirtualPhysicalConnection",
  "ParentPhysicalConnectionAliUid" : 283117732402483989,
  "RedundantPhysicalConnectionId" : "",
  "ParentPhysicalConnectionId" : "pc-bp1ciz7ekd2grn1as****",
  "BusinessStatus" : "Normal",
  "Type" : "VPC",
  "AdLocation" : "Server Room E***, Data Center XX, XXX Intersection, Yuhang Economic Development Zone",
  "VirtualPhysicalConnectionStatus" : "Confirmed",
  "ChargeType" : "",
  "Bandwidth" : 50,
  "AccessPointId" : "ap-cn-hangzhou-finance-yh-E",
  "EnabledTime" : "2021-10-08T10:44Z",
  "Spec" : "50M",
  "VlanId" : "10",
  "PortType" : "10GBase-LR",
  "AliUid" : 253460731706911258
 } ],
 "Count" : 1
}
```

Error codes

HttpCode	Error code	Error message	Description
400	IllegalParam.Bandwidth	The param of Bandwidth [%s] is illegal.	The error message returned because the specified bandwidth limit is invalid.
400	ResourceNotFound.PhysicalConnectionId	The specified PhysicalConnectionId [%s] is not found.	The error message returned because the specified Express Connect circuit ID (PhysicalConnectionId) does not exist.

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

16.21. CreateVpconnFromVbr

Pushes an Express Connect circuit to another account by adding a shared port for the account.

Description

If an Express Connect partner has created a virtual border router (VBR) for a tenant before, the Express Connect partner can push the Express Connect circuit that is associated with the VBR to the tenant account by adding a shared port for the tenant account. The service of the tenant is not interrupted in this process.

Preparations:

Before the Express Connect partner performs the operation, the Express Connect partner must notify the tenant and request the tenant to enable outbound data transfer billing. For more information, see Enable outbound data transfer billing.

What to do next:

1. After the Express Connect partner performs the operation, a shared port is added for the tenant account. The tenant must call the ConfirmPhysicalConnection operation to accept the shared port.

2. Then, the Express Connect partner must call the AttachVbrToVpconn operation to associate the VBR with the newly added shared port that belongs to the tenant account.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateVpconnFromVbr	The operation that you want to perform. Set the value to **CreateVpconnFromVbr**.
OrderMode	String	No	PayByVirtualPhysicalConnectionOwner	Specifies the party that must pay for the shared Express Connect circuit. Valid values: • **PayByPhysicalConnectionOwner**: If you set the value to PayByPhysicalConnectionOwner, the Express Connect partner must pay for the shared Express Connect circuit. • **PayByVirtualPhysicalConnectionOwner**: If you set the value to PayByVirtualPhysicalConnectionOwner, the tenant must pay for the shared Express Connect circuit.
VbrId	String	Yes	vbr-bp136flp1mf8mlq6r****	The ID of the associated VBR.
Token	String	No	CBCE910E-D396-4944-8****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.
DryRun	Boolean	No	false	Specifies whether to only precheck the request. Valid values: • **true**: checks the API request. If the request passes the precheck, the operation is not performed. Check items include the request format, instance status, and whether the required parameters are specified. If the request fails the precheck, the system returns an error. If the request passes the precheck, the system returns the ID of the request. • **false** (default): sends the API request. If the request passes the precheck, the operation is performed.
RegionId	String	Yes	cn-hangzhou	The region ID of the shared Express Connect circuit. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	5356F028-0F5C-56FC-8574-897D24379041	The ID of the request.
VirtualPhysicalConnection	String	pc-bp1mrgfbtmc9brre7****	The ID of the shared Express Connect circuit.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateVpconnFromVbr
&OrderMode=PayByVirtualPhysicalConnectionOwner
&VbrId=vbr-bp136flp1mf8mlq6r****
&DryRun=false
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateVpconnFromVbrResponse>
  <RequestId>5356F028-0F5C-56FC-8574-897D24379041</RequestId>
  <VirtualPhysicalConnection>pc-bp1mrgfbtmc9brre7****</VirtualPhysicalConnection>
</CreateVpconnFromVbrResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
 "RequestId" : "5356F028-0F5C-56FC-8574-897D24379041",
 "VirtualPhysicalConnection" : "pc-bp1mrgfbtmc9brre7****"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	OperationFailed.TargetUserPconnTrafficNotEnable	The operation failed because of TargetUserPconnTrafficNotEnable.	The error message returned because outbound data transfer billing is disabled.
400	IllegalParam.Bandwidth	The param of Bandwidth [%s] is illegal.	The error message returned because the specified bandwidth limit is invalid.
400	IncorrectStatus.VbrId	The status of %s is incorrect.	The error message returned because you cannot perform the operation when the VBR is in the current state.
400	ResourceNotFound.PhysicalConnectionId	PhysicalConnection is not found.	The error message returned because PhysicalConnectionId is invalid.

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

16.22. AttachVbrToVpconn

Associates a virtual border router (VBR) with a hosted connection.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachVbrToVpconn	The operation that you want to perform. Set the value to **AttachVbrToVpconn**.
VpconnId	String	Yes	pc-bp1mrgfbtmc9brre7**** *	The ID of the hosted connection.

Parameter	Type	Required	Example	Description
VbrId	String	Yes	vbr-bp133sn3nwjvu7twc****	The ID of the VBR.
Token	String	No	CBCE910E-D396-4944-8****	The client token that is used to ensure the idempotence of the request. The client token must be unique among different requests. It can contain only ASCII characters and cannot exceed 64 characters in length.
DryRun	Boolean	No	false	Specifies whether to precheck the request only. Valid values: • **true**: only prechecks the request but does not associate the VBR with the hosted connection. The system prechecks the request syntax, instance status, and whether the required parameters are specified. An error message is returned if the request fails to pass the precheck. If the request passes the precheck, the system returns the ID of the request. • **false** (default): sends the request. If the request passes the precheck, the VBR is associated with the hosted connection.
RegionId	String	Yes	cn-hangzhou	The region ID of the hosted connection. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	5356F028-0F5C-56FC-8574-897D24379041	The ID of the request.
VirtualPhysicalConnection	String	pc-bp1mrgfbtmc9brre7****	The ID of the hosted connection.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=AttachVbrToVpconn
&VpconnId=pc-bp1mrgfbtmc9brre7****
&VbrId=vbr-bp133sn3nwjvu7twc****
&DryRun=false
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<AttachVbrToVpconnResponse>
  <RequestId>5356F028-0F5C-56FC-8574-897D24379041</RequestId>
  <VirtualPhysicalConnection>pc-bp1mrgfbtmc9brre7****</VirtualPhysicalConnection>
</AttachVbrToVpconnResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
 "RequestId" : "5356F028-0F5C-56FC-8574-897D24379041",
 "VirtualPhysicalConnection" : "pc-bp1mrgfbtmc9brre7****"
}
```

Error codes

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

17.VPN Gateway

17.1. CreateVpnGateway

You can call this operation to create a VPN gateway.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateVpnGateway	The operation that you want to perform. Set the value to: **CreateVpnGateway**.
Bandwidth	Integer	Yes	5	The public network bandwidth of the VPN gateway. Unit: Mbit/s. Valid values: **5, 10, 20, 50, 100, and 200**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the VPN gateway is located. You can call DescribeRegions to retrieve a list of region IDs.
VpcId	String	Yes	vpc-bp1ub1yt9cvakoelj****	The ID of the VPC to which the VPN gateway belongs.
Name	String	No	MYVPN	The name of the VPN gateway. The default value is the ID of the VPN gateway. The name must be 2 to 128 characters in length and can contain letters, Chinese characters, digits, underscores (_), and hyphens (-). It must start with a letter or Chinese character and cannot start with `http://` or `https://`.
InstanceChargeType	String	No	Example for China site: PREPAY. Example for international site: POSTPAY	The billing method of the VPN gateway. Set the value to **POSTPAY**, which indicates the subscription billing method:(Pay-As-You-Go).
Period	Integer	No	1	The subscription period. Valid values: **1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, and 36**. **Note** If **InstanceChargeType** is set to **PREPAY**, this parameter is required.
AutoPay	Boolean	No	false	Specifies whether the bills for the VPN Gateway are paid automatically. Valid values: • **true**: Bills are paid automatically. • **false** (default): Bills are not paid automatically
EnableIpsec	Boolean	No	true	Specifies whether to enable the IPsec-VPN feature. Valid values: • **true**(default): enables the IPsec-VPN feature. • **false**: disables the IPsec-VPN feature.

Parameter	Type	Required	Example	Description
EnableSsl	Boolean	No	true	Specifies whether to enable the SSL-VPN feature. Valid values: • **true**: enables the SSL-VPN feature. • **false** (default): disables the SSL-VPN feature.
SslConnections	Integer	No	5	The maximum number of clients that can be connected simultaneously. Valid values: **5**,**10**, and**20**.
VSwitchId	String	No	vsw-bp1j5miw2bae9s2vt****	The ID of the VSwitch to which the VPN gateway belongs.

Response parameters

Parameter	Type	Example	Description
Name	String	myVpn	The name of the VPN gateway.
OrderId	Long	20224940022015	The ID of the order. You can pay for the order in the console.
RequestId	String	54B48E3D-DF70-471B-AA93-08E683A1B457	The ID of the request.
VpnGatewayId	String	vpn-bp1q8bgx4xnkm2ogj****	The ID of the VPN gateway.

Examples

Sample requests

```
http(s)://vpc.aliyuncs.com/? Action=CreateVpnGateway
&Bandwidth=5
&RegionId=cn-hangzhou
&VpcId=vpc-bp1ub1yt9cvakoelj****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateVpnGatewayResponse>
    <Name>myVpn</Name>
    <VpnGatewayId>vpn-bp1q8bgx4xnkm2ogj****</VpnGatewayId>
    <RequestId>54B48E3D-DF70-471B-AA93-08E683A1B457</RequestId>
</CreateVpnGatewayResponse>
```

`JSON` format

```
{
  "CreateVpnGatewayResponse": {
    "Name": "myVpn",
    "VpnGatewayId": "vpn-bp1q8bgx4xnkm2ogj****",
    "RequestId": "54B48E3D-DF70-471B-AA93-08E683A1B457"
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	Resource.QuotaFull	The quota of resource is full	The error message returned because the resource quota has reached the upper limit.

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

17.2. DescribeVpnGateways

Queries VPN gateways in a region.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeVpnGateways	The operation that you want to perform. Set the value to **DescribeVpnGateways**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the VPN gateway is created. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	No	vpc-bp1m3i0kn1nd4wiw9****	The ID of the virtual private cloud (VPC) to which the VPN gateway belongs.
VpnGatewayId	String	No	vpn-bp17lofy9fd0dnvzv****	The ID of the VPN gateway.
Status	String	No	init	The status of the VPN gateway. Valid values: • **init**: The VPN gateway is being initialized. • **provisioning** : The VPN gateway is being prepared. • **active**: The VPN gateway is running as expected. • **updating**: The VPN gateway is being updated. • **Deleting**: The VPN gateway is being deleted.
BusinessStatus	String	No	Normal	The payment status of the VPN gateway. Valid values: • **Normal**: normal • **FinancialLocked**: locked due to overdue payments
PageNumber	Integer	No	1	The number of the page to return. Default value: **1**.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: **50**. Default value: **10**.

Parameter	Type	Required	Example	Description
IncludeReservationData	Boolean	No	false	Specifies whether to return information about orders that have not taken effect. Valid values: • **false** (default): Information about orders that have not taken effect is not returned. • **true**: Information about orders that have not taken effect is returned.
Tag.N.Key	String	No	aaa	The tag key. Valid values of N: **1** to **20**. The tag key cannot be an empty string. The tag key cannot exceed 64 characters in length, and cannot start with `http://` or `https://`.
Tag.N.Value	String	No	bbb	The tag value. Valid values of N: **1** to **20**. The tag value can be an empty string. The tag value can be up to 128 characters in length and cannot start with `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
VpnGateways	Array of VpnGateway		Detailed information about the VPN gateways.
VpnGateway			
VpnGatewayId	String	vpn-bp17lofy9fd0dnvzv****	The ID of the VPN gateway.
VpcId	String	vpc-bp1m3i0kn1nd4wiw9****	The ID of the VPC to which the VPN gateway belongs.
VSwitchId	String	vsw-bp15lbk8sgtr6r5b0****	The ID of the vSwitch to which the VPN gateway is attached.
InternetIp	String	47.XX.XX.246	The public IP address of the VPN gateway.
CreateTime	Long	1515383700000	The timestamp when the VPN gateway was created.
EndTime	Long	1518105600000	The timestamp to be generated when the VPN gateway expires.
Spec	String	5M	The maximum bandwidth of the VPN gateway. Unit: Mbit/s.
Name	String	test	The name of the VPN gateway.
Description	String	test	The description of the VPN gateway.
Status	String	active	The status of the VPN gateway.
BusinessStatus	String	Normal	The payment status of the VPN gateway.

Parameter	Type	Example	Description
AutoPropagate	Boolean	true	Indicates whether BGP routes are automatically advertised to VPCs. Valid values: • **true**: yes • **false**: no
ChargeType	String	Alibaba Cloud China Site: PREPAY. Alibaba Cloud International Site: POSTPAY.	The billing method. Valid values: **POSTPAY**: pay-as-you-go
EnableBgp	Boolean	true	The BGP status of the VPN gateway. • **true**: enabled • **false**: disabled
IpsecVpn	String	enable	Indicates whether the IPsec-VPN feature is enabled. • **enable**: enabled • **disable**: disabled
ReservationData	Struct		The information about orders that have not taken effect. **Note** This parameter is returned only when **IncludeReservationData** is set to **true**.
ReservationEndTime	String	2020-07-20T16:00:00Z	If the order type is **TEMP_UPGRADE** (temporary upgrade), this parameter specifies the time when the temporary upgrade expires. If the order type is **RENEWCHANGE** (specification change) or **RENEW** (renewal), this parameter specifies the time when the renewal or specification change takes effect.
ReservationIpsec	String	enable	The IPsec-VPN status of the order that has not taken effect. Valid values: • **enable**: enabled • **disable**: disabled
ReservationMaxConnections	Integer	5	The maximum number of concurrent SSL-VPN connections for the order that has not taken effect.
ReservationOrderType	String	TEMP_UPGRADE	The type of the order that has not taken effect. Valid values: • **RENEWCHANGE**: specification change • **TEMP_UPGRADE**: temporary upgrade • **RENEW**: renewal
ReservationSpec	String	5	The bandwidth specification of the order that has not taken effect. Unit: Mbit/s.
ReservationSsl	String	enable	The SSL-VPN status of the order that has not taken effect. Valid values: • **enable**: enabled • **disable**: disabled

Parameter	Type	Example	Description
Status	String	1	The status of the order that has not taken effect. • **1**: indicates that the order of the renewal or specification change has not taken effect. • **2**: indicates that the order of the temporary upgrade has taken effect. After the temporary upgrade expires, the system restores the VPN gateway to its previous specification. In this case, **ReservationIpsec**, **ReservationMaxConnections**, **ReservationSpec**, and **ReservationSsl** indicate the previous specification.
SslMaxConnections	Long	5	The maximum number of concurrent SSL-VPN connections.
SslVpn	String	enable	Indicates whether the SSL-VPN feature is enabled. • **enable**: enabled • **disable**: disabled
Tag	String	{\"VpnNewImage\":\"true\",\"VpnVersion\":\"v1.2.2\"}	The automatically generated tag of the VPN gateway.
Tags	Array of Tag		The custom tag of the VPN gateway.
Tag			
Key	String	aaa	The tag key.
Value	String	bbb	The tag value.
VpnType	String	Normal	The type of the VPN gateway. Valid values: • **Normal**: standard • **NationalStandard**: China certification
TotalCount	Integer	1	The total number of entries returned.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned on the current page.
RequestId	String	DF11D6F6-E35A-41C3-9B20-6FC8A901FE65	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeVpnGateways
&IncludeReservationData=false
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeVpnGatewaysResponse>
 <TotalCount>1</TotalCount>
 <RequestId>0349784A-B54B-4ED9-9EEA-E6DE0DF4F0EC</RequestId>
 <PageSize>10</PageSize>
 <PageNumber>1</PageNumber>
 <VpnGateways>
    <VpnGateway>
       <Status>active</Status>
       <IpsecVpn>enable</IpsecVpn>
       <SslVpn>enable</SslVpn>
       <VpnType>Normal</VpnType>
       <EnableBgp>false</EnableBgp>
       <EndTime>1623081600000</EndTime>
       <VSwitchId>vsw-bp15lbk8sgtr6r5b0****</VSwitchId>
       <CreateTime>1612685370000</CreateTime>
       <BusinessStatus>Normal</BusinessStatus>
       <Name></Name>
       <VpcId>vpc-bp1m3i0kn1nd4wiw9****</VpcId>
       <InternetIp>47.XX.XX.246</InternetIp>
       <VpnGatewayId>vpn-bp17lofy9fd0dnvzv****</VpnGatewayId>
       <ChargeType>Prepay</ChargeType>
       <Tag>{"VpnNewImage":"true","VpnVersion":"v1.2.2"}</Tag>
       <Spec>5M</Spec>
       <SslMaxConnections>10</SslMaxConnections>
       <ReservationData></ReservationData>
    </VpnGateway>
 </VpnGateways>
</DescribeVpnGatewaysResponse>
```

`JSON` format

```
{
 "TotalCount": 1,
 "RequestId": "0349784A-B54B-4ED9-9EEA-E6DE0DF4F0EC",
 "PageSize": 10,
 "PageNumber": 1,
 "VpnGateways": {
  "VpnGateway": [
   {
    "Status": "active",
    "IpsecVpn": "enable",
    "SslVpn": "enable",
    "VpnType": "Normal",
    "EnableBgp": false,
    "EndTime": 1623081600000,
    "VSwitchId": "vsw-bp15lbk8sgtr6r5b0****",
    "CreateTime": 1612685370000,
    "BusinessStatus": "Normal",
    "Name": "",
    "VpcId": "vpc-bp1m3i0kn1nd4wiw9****",
    "InternetIp": "47.XX.XX.246",
    "VpnGatewayId": "vpn-bp17lofy9fd0dnvzv****",
    "ChargeType": "Prepay",
    "Tag": "{\"VpnNewImage\":\"true\",\"VpnVersion\":\"v1.2.2\"}",
    "Spec": "5M",
    "SslMaxConnections": 10,
    "ReservationData": {}
   }
  ]
 }
}
```

Error codes

HttpCode	Error code	Error message	Description

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform this operation on the specified resource. You can apply for the required permissions and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. To acquire the required permissions, submit a ticket.

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

17.3. DescribeVpnGateway

Queries detailed information about a VPN gateway.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeVpnGateway	The operation that you want to perform. Set the value to **DescribeVpnGateway**.
RegionId	String	Yes	cn-shanghai	The ID of the region where the VPN gateway is created. You can call the DescribeRegions operation to query the most recent region list.
VpnGatewayId	String	Yes	vpn-bp1r3v1xqkl0w519g****	The ID of the VPN gateway.
IncludeReservationData	Boolean	No	true	Specify whether to return information about orders that have not taken effect. Valid values: • **false**: Information about orders that have not taken effect is not returned. This is the default value. • **true**: Information about orders that have not taken effect is returned.

Response parameters

Parameter	Type	Example	Description
VpnGatewayId	String	vpn-bp1r3v1xqkl0w519g****	The ID of the VPN gateway.
VpcId	String	vpc-bp19m2yx1m5q0avyq****	The ID of the VPC to which the VPN gateway belongs.
VSwitchId	String	vsw-bp1dmzugdikc6hdgx****	The ID of the vSwitch to which the VPN gateway is attached.
InternetIp	String	47.XX.XX.22	The public IP address of the VPN gateway.

Parameter	Type	Example	Description
CreateTime	Long	1495382400000	The timestamp when the VPN gateway was created.
EndTime	Long	1495382400000	The timestamp to be generated when the VPN gateway expires.
Spec	String	5	The maximum bandwidth of the VPN gateway. Unit: Mbit/s.
Name	String	vpngatewayname	The name of the VPN gateway.
Description	String	vpngatewaydescription	The description of the VPN gateway.
Status	String	init	The status of the VPN gateway. Valid values: • **init**: The VPN gateway is being initialized. • **provisioning**: The VPN gateway is being prepared. • **active**: The VPN gateway is running as expected. • **updating**: The VPN gateway is being updated. • **Deleting**: The VPN gateway is being deleted.
BusinessStatus	String	Normal	The payment status of the VPN gateway. Valid values: • **Normal**: The VPN gateway is running as expected. • **FinancialLocked**: The VPN gateway is locked due to overdue payments
AutoPropagate	Boolean	true	Indicates whether BGP routes are automatically advertised to VPCs. Valid values: • **true**: yes • **false**: no
ChargeType	String	Alibaba Cloud China Site: PREPAY. Alibaba Cloud International Site: POSTPAY.	The billing method. Valid values: **POSTPAY**: pay-as-you-go
EnableBgp	Boolean	true	The BGP status of the VPN gateway. Valid values: • **true**: enabled • **false**: disabled
IpsecVpn	String	enable	Indicates whether the IPsec-VPN feature is enabled. Valid values: • **Enable**: enabled • **Disable** : disabled
RequestId	String	27E4E088-8DE0-4672-BF5C-0A412389DB9E	The ID of the request.
ReservationData	Struct		The information about the orders that have not taken effect. **Note** This parameter is returned only when **IncludeReservationData** is set to **true**.

Parameter	Type	Example	Description
ReservationEndTime	String	2020-07-20T16:00:00Z	If the order type is **TEMP_UPGRADE** (temporary upgrade), this parameter specifies the time when the temporary upgrade expires. If the order type is **RENEWCHANGE** (specification change) or **RENEW** (renewal), this parameter specifies the time when the renewal or specification change takes effect.
ReservationIpsec	String	enable	The IPsec-VPN status of the order that has not taken effect. Valid values: • **Enable**: enabled • **Disable** : disabled
ReservationMaxConnections	Integer	5	The maximum number of concurrent SSL-VPN connections for the order that has not taken effect.
ReservationOrderType	String	TEMP_UPGRADE	The type of the order that has not taken effect. Valid values: • **RENEWCHANGE**: specification change • **TEMP_UPGRADE**: temporary upgrade • **RENEW**: renewal
ReservationSpec	String	5	The bandwidth specification of the order that has not taken effect. Unit: Mbit/s.
ReservationSsl	String	enable	The SSL-VPN status of the order that has not taken effect. Valid values: • **enable**: enabled • **disable**: disabled
Status	String	1	The status of the order that has not taken effect. • **1**: indicates that the order of the renewal or specification change has not taken effect. • **2**: indicates that the order of the temporary upgrade has taken effect. After the temporary upgrade expires, the system restores the VPN gateway to its previous specification. In this case, **ReservationIpsec**, **ReservationMaxConnections**, **ReservationSpec**, and **ReservationSsl** indicate the previous specification.
SslMaxConnections	Long	5	The maximum number of concurrent SSL-VPN connections.
SslVpn	String	enable	The status of the SSL-VPN feature. • **Enable**: enabled • **Disable** : disabled
Tag	String	{\"VpnNewImage\":\"true\",\"VpnVersion\":\"v1.2.2\"}	The automatically generated tag of the VPN gateway.
Tags	Array of Tag		The custom tag of the VPN gateway.
Tag			
Key	String	aaa	The tag key.

Parameter	Type	Example	Description
Value	String	bbb	The tag value.
VpnType	String	Normal	The type of the VPN gateway. Valid values: • **Normal**: standard • **NationalStandard**: China certification

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeVpnGateway
&RegionId=cn-shanghai
&VpnGatewayId=vpn-bp1r3v1xqkl0w519g****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeVpnGatewayResponse>
 <Status>active</Status>
 <IpsecVpn>enable</IpsecVpn>
 <SslVpn>disable</SslVpn>
 <VpnType>Normal</VpnType>
 <EnableBgp>false</EnableBgp>
 <RequestId>27E4E088-8DE0-4672-BF5C-0A412389DB9E</RequestId>
 <EndTime>1616428800000</EndTime>
 <VSwitchId>vsw-bp1dmzugdikc6hdgx****</VSwitchId>
 <CreateTime>1613974090000</CreateTime>
 <BusinessStatus>Normal</BusinessStatus>
 <Name></Name>
 <VpcId>vpc-bp19m2yx1m5q0avyq****</VpcId>
 <InternetIp>47.XX.XX.22</InternetIp>
 <VpnGatewayId>vpn-bp1r3v1xqkl0w519g****</VpnGatewayId>
 <ChargeType>Prepay</ChargeType>
 <Tag>{"VpnNewImage":"true","VpnVersion":"v1.2.2"}</Tag>
 <Spec>5M</Spec>
</DescribeVpnGatewayResponse>
```

`JSON` format

```
{
 "Status": "active",
 "IpsecVpn": "enable",
 "SslVpn": "disable",
 "VpnType": "Normal",
 "EnableBgp": false,
 "RequestId": "27E4E088-8DE0-4672-BF5C-0A412389DB9E",
 "EndTime": 1616428800000,
 "VSwitchId": "vsw-bp1dmzugdikc6hdgx****",
 "CreateTime": 1613974090000,
 "BusinessStatus": "Normal",
 "Name": "",
 "VpcId": "vpc-bp19m2yx1m5q0avyq****",
 "InternetIp": "47.XX.XX.22",
 "VpnGatewayId": "vpn-bp1r3v1xqkl0w519g****",
 "ChargeType": "Prepay",
 "Tag": "{\"VpnNewImage\":\"true\",\"VpnVersion\":\"v1.2.2\"}",
 "Spec": "5M"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform this operation on the specified resource. You can apply for the required permissions and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform this operation on the specified resource. To acquire the required permissions, submit a ticket.
404	InvalidVpnGatewayInstanceId.NotFound	The specified vpn gateway instance id does not exist.	The error message returned because the specified VPN gateway does not exist. Check whether the configuration of the VPN gateway is valid.

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

17.4. DeleteVpnGateway

Deletes a VPN gateway.

> **Note** You cannot delete a VPN gateway that is associated with an IPsec-VPN connection.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteVpnGateway	The operation that you want to perform. Set the value to **DeleteVpnGateway**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the VPN gateway is created. You can call the DescribeRegions operation to query region IDs.
VpnGatewayId	String	Yes	vpn-bp1q8bgx4xnkm2ogj****	The ID of the VPN gateway.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to guarantee the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can only contain ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	>0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DeleteVpnGateway
&RegionId=cn-hangzhou
&VpnGatewayId=vpn-bp1q8bgx4xnkm2ogj****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteNatGatewayResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</DeleteNatGatewayResponse>
```

`JSON` format

```
{
 "RequestId":"0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform the operation on the specified resource. You can apply for the permission and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. To acquire the required permissions, submit a ticket.
404	InvalidVpnGatewayInstanceId.NotFound	The specified vpn gateway instance id does not exist.	The error message returned because the specified VPN gateway does not exist. You can check whether the configuration of the VPN gateway is valid.
403	ForbiddenRelease	Forbidden to release a prepaid instance within validity period	The error message returned because you cannot release a subscription VPN gateway within the subscription duration.
400	VpnGateway.Configuring	The specified service is configuring.	The error message returned because the specified service is being configured. Try again later.

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

17.5. CreateCustomerGateway

Creates a customer gateway.

Debugging

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

Request parameters

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

Parameter	Type	Required	Example	Description
IpAddress	String	Yes	101.XX.XX.12	The public IP address of the gateway device in the data center.
RegionId	String	Yes	cn-shanghai	The ID of the region where you want to create the customer gateway. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	02fb3da4-130e-11e9-8e44****	The client token that is used to ensure the idempotence of the request. You can use the client to generate a token, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.
Name	String	No	nametest	The name of the customer gateway. The name must be 2 to 128 characters in length and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter. It cannot start with `http://` or `https://`.
Description	String	No	desctest	The description of the customer gateway. The description must be 2 to 256 characters in length. It must start with a letter but cannot start with `http://` or `https://`.
Asn	String	No	65530	The autonomous system number (ASN) of the gateway device in the data center. **Asn** is a 4-byte number. You can enter the number in two segments and separate the first 16 bits from the last 16 bits with a period (.). Enter the number in each segment in the decimal format. For example, if you enter 123.456, the ASN is 8061384. The ASN is calculated by using the following formula: 123 × 65536 + 456 = 8061384.
AuthKey	String	No	AuthKey****	The authentication key of the BGP routing protocol for the gateway device in the data center. The key must be 1 to 64 characters in length. It can contain only ASCII characters and cannot contain spaces or question marks (?).

Response parameters

Parameter	Type	Example	Description
CustomerGatewayId	String	cgw-bp1jrawp82av6bws9****	The ID of the customer gateway.
IpAddress	String	101.XX.XX.12	The public IP address of the gateway device in the data center.
Name	String	nametest	The name of the customer gateway.

Parameter	Type	Example	Description
Description	String	desctest	The description of the customer gateway.
CreateTime	Long	1493363486000	The timestamp generated when the customer gateway was created.
RequestId	String	D32B3C26-6C6C-4988-93E9-D2A6444CE6AE	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateCustomerGateway
&IpAddress=101.XX.XX.12
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateCustomerGatewayResponse>
    <CustomerGatewayId>cgw-bp1aw0a5nfff03xp****</CustomerGatewayId>
    <RequestId>D32B3C26-6C6C-4988-93E9-D2A6444CE6AE</RequestId>
    <CreateTime>1493363486000</CreateTime>
    <IpAddress>101.XX.XX.12</IpAddress>
</CreateCustomerGatewayResponse>
```

`JSON` format

```
{
  "CustomerGatewayId": "cgw-bp1jrawp82av6bws9****",
  "CreateTime": 1493363599000,
  "RequestId": "D32B3C26-6C6C-4988-93E9-D2A6444CE6AE",
  "IpAddress": "101.XX.XX.12"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidAuthkey.Malformed	The specified BGP authentication key (%s) is malformed.	The error message returned because the specified BGP authentication key is invalid.
400	InvalidIpAddress.AlreadyExist	Specified IpAddress is already exist.	The error message returned because the specified IP address already exists. One user in one region cannot use duplicate IP addresses.
400	InvalidIpAddress.WrongFormat	Specified IpAddress is invalid.	The error message returned because the specified IP address is invalid.
400	InvalidName	The name is not valid	The error message returned because the name is specified in an invalid format.
400	InvalidDescription	The description is not valid	The error message returned because the description is specified in an invalid format.
400	Resource.QuotaFull	The quota of resource is full	The error message returned because the resource quota is reached.
400	OperationDenied.MissingAsn	The autonomous system number of the customer gateway is mandatory when BGP authentication key is specified.	The error message returned because when you specify the BGP authentication key, you must also specify an ASN.

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform this operation on the specified resource. You can apply for the required permissions and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform this operation on the specified resource. To acquire the required permissions, submit a ticket.

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

17.6. DescribeCustomerGateways

Queries customer gateways.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeCustomerGateways	The operation that you want to perform. Set the value to **DescribeCustomerGateways**.
RegionId	String	Yes	cn-shanghai	The ID of the region where the customer gateways are created. You can call the DescribeRegions operation to query region IDs.
CustomerGatewayId	String	No	vpn-bp1q8bgx4xnkm2ogj****	The ID of the customer gateway.
PageNumber	Integer	No	1	The number of the page to return. Default value: **1**.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: **50**. Default value: **10**.

Response parameters

Parameter	Type	Example	Description
CustomerGateways			Detailed information about the customer gateway.
CustomerGatewayId	String	cgw-bp1pvpl9r9adju6l5****	The ID of the customer gateway.
Name	String	test	The name of the customer gateway.
Description	String	test	The description of the customer gateway.
IpAddress	String	139.196.32.xxx	The IP address of the customer gateway.

Parameter	Type	Example	Description
CreateTime	Long	1492747187000	The time when the customer gateway was created.
TotalCount	Integer	1	The number of entries returned.
PageNumber	Integer	1	The number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	5BE01CD7-5A50-472D-AC14-CA181C5C03BE	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DescribeCustomerGateways
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeCustomerGatewaysResponse>
    <PageNumber>1</PageNumber>
    <TotalCount>1</TotalCount>
    <PageSize>10</PageSize>
    <RequestId>5BE01CD7-5A50-472D-AC14-CA181C5C03BE</RequestId>
    <CustomerGateways>
        <CustomerGateway>
            <Name>test</Name>
            <CustomerGatewayId>cgw-bp1pvpl9r9adju6l5****</CustomerGatewayId>
            <CreateTime>1492747187000</CreateTime>
            <IpAddress>139.196.32.xxx</IpAddress>
        </CustomerGateway>
    </CustomerGateways>
</DescribeCustomerGatewaysResponse>
```

`JSON` format

```
{
 "PageNumber":1,
 "TotalCount":1,
 "PageSize":10,
 "RequestId":"E82612A9-CB90-4D7E-B394-1DB7F6509B29",
 "CustomerGateways":{
  "CustomerGateway":[
   {
    "CustomerGatewayId":"cgw-bp1pvpl9r9adju6l5****",
    "Name":"test",
    "CreateTime":1492747187000,
    "IpAddress":"139.196.32.xxx"
   }
  ]
 }
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform the operation on the specified resource. Apply for the permissions and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. To acquire the required permissions, submit a ticket.

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

17.7. DescribeCustomerGateway

Queries a customer gateway.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeCustomerGateway	The operation that you want to perform. Set the value to **DescribeCustomerGateway**.
CustomerGatewayId	String	Yes	vpn-bp1q8bgx4xnkm2ogj****	The ID of the customer gateway.
RegionId	String	Yes	cn-shanghai	The ID of the region where the customer gateway is created. You can call the DescribeRegions operation to query region IDs.

Response parameters

Parameter	Type	Example	Description
CustomerGatewayId	String	cgw-bp1pvpl9r9adju6l5****	The ID of the customer gateway.
Name	String	test	The name of the customer gateway.
Description	String	test	The description of the customer gateway.
IpAddress	String	139.196.32.xxx	The IP address of the customer gateway.
RequestId	String	99506ECB-218F-45A5-AE8E-79518451F615	The ID of the request.
CreateTime	Long	1492747187000	The time when the customer gateway was created.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DescribeCustomerGateway
&CustomerGatewayId=vpn-bp1q8bgx4xnkm2ogj****
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeCustomerGatewayResponse>
    <Name>test</Name>
    <CustomerGatewayId>cgw-bp1pvpl9r9adju6l5****</CustomerGatewayId>
    <CreateTime>1492747187000</CreateTime>
    <RequestId>99506ECB-218F-45A5-AE8E-79518451F615</RequestId>
    <IpAddress>139.196.32.xxx</IpAddress>
</DescribeCustomerGatewayResponse>
```

`JSON` format

```
{
 "Name":"test",
 "CustomerGatewayId":"cgw-bp1pvpl9r9adju6l5****",
 "CreateTime":1492747187000,
 "RequestId":"A0457BC9-6C0F-4437-AB9D-FB2EABC1D6A2",
 "IpAddress":"139.196.32.xxx"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform the operation on the specified resource. You can apply for the permission and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. To acquire the required permissions, submit a ticket.
404	InvalidCustomerGatewayInstanceId.NotFound	The specified customer gateway instance id does not exist.	The error message returned because the specified customer gateway does not exist.

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

17.8. DeleteCustomerGateway

Deletes a specified customer gateway.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	No	DeleteCustomerGateway	The operation that you want to perform. Set the value to **DeleteCustomerGateway**.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-shanghai	The region ID of the customer gateway. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04****	The client Token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.
CustomerGatewayId	String	Yes	cgw-bp1pvpl9r9adju6l5****	The ID of the customer gateway.

Response parameters

Parameter	Type	Sample response	Description
RequestId	String	606998F0-B94D-48FE-8316-ACA81BB230DA	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteCustomerGateway
&RegionId=cn-shanghai
&CustomerGatewayId=cgw-bp1pvpl9r9adju6l5****
&Common request parameters
```

Sample responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DeleteCustomerGatewayResponse>
  <RequestId>606998F0-B94D-48FE-8316-ACA81BB230DA</RequestId>
</DeleteCustomerGatewayResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
 "RequestId" : "606998F0-B94D-48FE-8316-ACA81BB230DA"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are not authorized to perform this operation on the specified resource. Apply for the required permissions and try again.

HttpCode	Error code	Error message	Description
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are not authorized to perform this operation on the specified resource. To obtain the required permissions, submit a ticket.
404	InvalidCustomerGatewayInstanceId.NotFound	The specified customer gateway instance id does not exist.	The error message returned because the specified customer gateway instance does not exist. Check whether the ID of the customer gateway is correct.

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

17.9. ModifyCustomerGatewayAttribute

Modifies the configuration of a customer gateway.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyCustomerGatewayAttribute	The operation that you want to perform. Set the value to **ModifyCustomerGatewayAttribute**.
CustomerGatewayId	String	Yes	cgw-bp1pvpl9r9adju6l5****	The ID of the customer gateway.
RegionId	String	Yes	cn-shanghai	The ID of the region where the customer gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	02fb3da4-130e-11e9-8e44****	The client token that is used to ensure the idempotence of the request. You can use the client to generate a token, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.
Name	String	No	nametest	The name of the customer gateway. The name must be 2 to 128 characters in length, and can contain letters, digits, periods (.), underscores (_), and hyphens (-). The name must start with a letter but cannot start with `http://` or `https://`.
Description	String	No	desctest	The description of the customer gateway. The description must be 2 to 256 characters in length. It must start with a letter but cannot start with `http://` or `https://`.

Parameter	Type	Required	Example	Description
AuthKey	String	No	AuthKey****	The authentication key of the BGP routing protocol for the gateway device in the data center. The key must be 1 to 64 characters in length. It can contain only ASCII characters and cannot contain spaces or question marks (?).

Response parameters

Parameter	Type	Example	Description
CustomerGatewayId	String	cgw-bp1pvpl9r9adju6l5****	The ID of the customer gateway.
Name	String	nametest	The name of the customer gateway.
Description	String	desctest	The description of the customer gateway.
IpAddress	String	139.XX.XX.32	The static public IP address of the gateway device in the data center.
CreateTime	Long	1492747187000	The timestamp generated when the customer gateway was created.
RequestId	String	8AA5CE21-2E6A-4530-BDF5-F055849476E6	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyCustomerGatewayAttribute
&CustomerGatewayId=cgw-bp1pvpl9r9adju6l5****
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyCustomerGatewayAttributeResponse>
    <CustomerGatewayId>cgw-bp1pvpl9r9adju6l5****</CustomerGatewayId>
    <RequestId>E61293C8-AF07-4E87-A272-542680038F93</RequestId>
    <CreateTime>1492747187000</CreateTime>
    <IpAddress>139.XX.XX.32</IpAddress>
</ModifyCustomerGatewayAttributeResponse>
```

`JSON` format

```
{
  "CustomerGatewayId": "cgw-bp1pvpl9r9adju6l5****",
  "RequestId": "8AA5CE21-2E6A-4530-BDF5-F055849476E6",
  "CreateTime": 1492747187000,
  "IpAddress": "139.XX.XX.32"
}
```

Error codes

HttpCode	Error code	Error message	Description

HttpCode	Error code	Error message	Description
400	InvalidName	The name is not valid	The error message returned because the name is specified in an invalid format.
400	InvalidDescription	The description is not valid	The error message returned because the description is specified in an invalid format.
400	OperationDenied.MissingAsn	The autonomous system number of the customer gateway is mandatory when BGP authentication key is specified.	The error message returned because when you specify the BGP authentication key, you must also specify an autonomous system number (ASN).
400	InvalidAuthkey.Malformed	The specified BGP authentication key (%s) is malformed.	The error message returned because the BGP authentication key is invalid.
400	OperationDenied.VpnFinancialLocked	The associated VPN gateway is financially locked. You cannot update the attributes of the customer gateway.	The error message returned because the VPN gateway associated with the customer gateway is locked due to overdue payments and you cannot modify the configuration of the customer gateway.
400	OperationDenied.VpnConfiguring	The associated VPN gateway is being configured. You cannot update the attributes of the customer gateway.	The error message returned because the VPN gateway associated with the customer gateway is being configured and you cannot modify the configuration of the customer gateway.
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform this operation on the specified resource. You can apply for the required permissions and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform this operation on the specified resource. To acquire the required permissions, submit a ticket.
404	InvalidCustomerGatewayInstanceId.NotFound	The specified customer gateway instance id does not exist.	The error message returned because the specified customer gateway instance does not exist. Check whether the ID of the customer gateway is correct.

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

17.10. DescribeVpnConnection

Queries detailed information about an IPsec-VPN connection.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeVpnConnection	The operation that you want to perform. Set the value to **DescribeVpnConnection**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the IPsec-VPN connection is created. You can call the DescribeRegions operation to query region IDs.

Parameter	Type	Required	Example	Description
VpnConnectionId	String	Yes	vco-bp1bbi27hojx80nck****	The name of the IPsec-VPN connection.

Response parameters

Parameter	Type	Example	Description
VpnConnectionId	String	vco-bp1bbi27hojx80nck****	The name of the IPsec-VPN connection.
CustomerGatewayId	String	cgw-bp1mvj4g9kogwwcxk****	The ID of the customer gateway.
VpnGatewayId	String	vpn-bp1q8bgx4xnkm2ogj****	The ID of the VPN gateway.
Name	String	ipsec1	The name of the IPsec-VPN connection.
LocalSubnet	String	1.1.1.0/24,1.1.2.0/24	The CIDR block of the virtual private cloud (VPC).
RemoteSubnet	String	1.1.1.0/24,1.1.2.0/24	The CIDR block of the on-premises data center.
CreateTime	Long	1492753817000	The time when the IPsec-VPN connection was created.
Status	String	ike_sa_not_established	The status of the IPsec-VPN connection. Valid values: • **ike_sa_not_established**: indicates that Phase 1 negotiations failed. • **ike_sa_established**: indicates that Phase 1 negotiations succeeded. • **ipsec_sa_not_established**: indicates that Phase 2 negotiations failed. • **ipsec_sa_established**: indicates that Phase 2 negotiations succeeded.
EffectImmediately	Boolean	true	Indicates whether IPsec-VPN negotiations are initiated immediately. Valid values: • **true**: Negotiations are initiated when the configuration is changed. • **false**: Negotiations are initiated when traffic is detected. Transient connection errors may occur when negotiations are initiated.
IkeConfig			The configuration of Phase 1 negotiations.
IkeAuthAlg	String	sha1	The IKE authentication algorithm. Both SHA-1 and MD5 are supported.
IkeEncAlg	String	aes	The IKE encryption algorithm.
IkeLifetime	Long	86400	The IKE lifetime.
IkeMode	String	main	The IKE mode. Both main and aggressive modes are supported. The main mode offers higher security. If NAT traversal is enabled, we recommend that you select the aggressive mode.

Parameter	Type	Example	Description
IkePfs	String	group2	The DH group.
IkeVersion	String	ikev1	The IKE version.
LocalId	String	116.62.69.xxx	The ID of the VPN gateway. By default, it is the IP address of the VPN gateway. Both FQDN and IP formats are supported.
Psk	String	pgw6dy7d1i8in7x5	The pre-shared key.
RemoteId	String	139.196.32.xxx	The ID of the customer gateway. By default, it is the IP address of the customer gateway. Both FQDN and IP formats are supported.
IpsecConfig			The configuration of Phase 2 negotiations.
IpsecAuthAlg	String	sha1	The IPsec authentication algorithm. Both SHA-1 and MD5 are supported.
IpsecEncAlg	String	aes	The IPsec encryption algorithm.
IpsecLifetime	Long	86400	The IPsec lifetime.
IpsecPfs	String	group2	The DH group.
RequestId	String	F2310D45-BCF6-4E2E-9082-B4503844BA4C	The ID of the request.
VcoHealthCheck			Information about health checks.
Dip	String	10.0.0.xx	The destination IP address.
Enable	String	true	Indicates whether health checks are enabled. Valid values: • **false**: indicates that health checks are disabled. • **true**: indicates that health checks are enabled.
Interval	Integer	3	The interval between two consecutive health checks. Unit: seconds.
Retry	Integer	3	The maximum number of health check retries.
Sip	String	192.168.1.xx	The source IP address.
Status	String	failed	The status of the health check. Valid values:

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DescribeVpnConnection
&RegionId=cn-hangzhou
&VpnConnectionId=vco-bp1bbi27hojx80nck****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeVpnConnectionResponse>
    <PageNumber>1</PageNumber>
    <VpnConnections>
        <VpnConnection>
            <Name>c2</Name>
            <CustomerGatewayId>cgw-bp1wl8dtz3auwlav****</CustomerGatewayId>
            <Status>ike_sa_not_established</Status>
            <RemoteSubnet>192.168.0.0/16</RemoteSubnet>
            <IpsecConfig>
                <IpsecLifetime>86400</IpsecLifetime>
                <IpsecAuthAlg>md5</IpsecAuthAlg>
                <IpsecPfs>group2</IpsecPfs>
                <IpsecEncAlg>aes</IpsecEncAlg>
            </IpsecConfig>
            <EffectImmediately>false</EffectImmediately>
            <VpnGatewayId>vpn-bp1yfrjxn4d5t63tb****</VpnGatewayId>
            <CreateTime>1519391420000</CreateTime>
            <VpnConnectionId>vco-bp1w3m1p23iftycvs****</VpnConnectionId>
            <LocalSubnet>172.16.0.0/12</LocalSubnet>
            <IkeConfig>
                <IkeEncAlg>aes</IkeEncAlg>
                <RemoteId>47.97.176.xxx</RemoteId>
                <IkePfs>group2</IkePfs>
                <IkeAuthAlg>sha1</IkeAuthAlg>
                <Psk>1234567</Psk>
                <IkeMode>aggressive</IkeMode>
                <IkeLifetime>86400</IkeLifetime>
                <IkeVersion>ikev1</IkeVersion>
                <LocalId>116.62.119.xxx</LocalId>
            </IkeConfig>
        </VpnConnection>
    </VpnConnections>
    <TotalCount>1</TotalCount>
    <PageSize>10</PageSize>
    <RequestId>7D598A10-26EF-44F2-9F47-E417842F3CEA</RequestId>
</DescribeVpnConnectionResponse>
```

`JSON` format

```
{
 "PageNumber":1,
 "VpnConnections":{
  "VpnConnection":[
   {
    "CustomerGatewayId":"cgw-bp1wl8dtz3auwlavw****",
    "Name":"c2",
    "Status":"ike_sa_not_established",
    "RemoteSubnet":"192.168.0.0/16",
    "IpsecConfig":{
     "IpsecLifetime":86400,
     "IpsecAuthAlg":"md5",
     "IpsecPfs":"group2",
     "IpsecEncAlg":"aes"
    },
    "VpnGatewayId":"vpn-bp1yfrjxn4d5t63t****",
    "EffectImmediately":false,
    "VpnConnectionId":"vco-bp1w3m1p23iftycv****",
    "CreateTime":1519391420000,
    "LocalSubnet":"172.16.0.0/12",
    "IkeConfig":{
     "IkeEncAlg":"aes",
     "IkePfs":"group2",
     "RemoteId":"47.97.176.xxx",
     "IkeAuthAlg":"sha1",
     "Psk":"1234567",
     "IkeMode":"aggressive",
     "IkeLifetime":86400,
     "IkeVersion":"ikev1",
     "LocalId":"116.62.119.xxx"
    }
   }
  ]
 },
 "TotalCount":1,
 "PageSize":10,
 "RequestId":"7D598A10-26EF-44F2-9F47-E417842F3CEA"
}
```


Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform the operation on the specified resource. You can apply for the permissions and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. To acquire the required permissions, submit a ticket.
404	InvalidVpnConnectionInstanceId.NotFound	The specified vpn connection instance id does not exist.	The error message returned because the specified IPsec-VPN connection does not exist. You can check whether the configuration of the connection is valid.

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

17.11. DeleteVpnConnection

Deletes an IPsec-VPN connection.

> **Note** After an IPsec-VPN connection between a virtual private cloud (VPC) and an on-premises data center is deleted, the communication between the VPC and on-premises data center is interrupted.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteVpnConnection	The operation that you want to perform. Set the value to **DeleteVpnConnection**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the IPsec-VPN connection is created. You can call the DescribeRegions operation to query region IDs.
VpnConnectionId	String	Yes	vco-bp1bbi27hojx80nck****	The ID of the IPsec-VPN connection.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can only contain ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	606998F0-B94D-48FE-8316-ACA81BB230DA	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DeleteVpnConnection
&RegionId=cn-hangzhou
&VpnConnectionId=vco-bp1bbi27hojx80nck****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteVpnConnectionResponse>
    <RequestId>606998F0-B94D-48FE-8316-ACA81BB230DA</RequestId>
</DeleteVpnConnectionResponse>
```

`JSON` format

```
{
 "RequestId":"606998F0-B94D-48FE-8316-ACA81BB230DA"
}
```

Error codes

HttpCode	Error code	Error message	Description

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform the operation on the specified resource. Apply for the permissions and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. To acquire the required permissions, submit a ticket.
404	InvalidVpnConnectionInstanceId.NotFound	The specified vpn connection instance id does not exist.	The error message returned because the specified IPsec-VPN connection does not exist. You must check whether the ID of the IPsec-VPN connection is valid.
400	VpnGateway.Configuring	The specified service is configuring.	The error message returned because the specified service is being configured. Try again later.

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

17.12. DownloadVpnConnectionConfig

Queries an IPsec-VPN connection.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DownloadVpnConnectionConfig	The operation that you want to perform. Set the value to **DownloadVpnConnectionConfig**.
RegionId	String	Yes	cn-shanghai	The ID of the region where the IPsec-VPN connection is created. You can call the DescribeRegions operation to query region IDs.
VpnConnectionId	String	Yes	vco-bp1bbi27hojx80nck****	The ID of the IPsec-VPN connection.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0C68048B-0F70-40DA-B8AE-1B79B5CF62E3	The ID of the request.
VpnConnectionConfig			The configuration of the IPsec-VPN connection.
IkeConfig			The IKE configuration.
IkeAuthAlg	String	sha1	The IKE authentication algorithm. Both SHA-1 and MD5 are supported.
IkeEncAlg	String	aes	The IKE encryption algorithm.

Parameter	Type	Example	Description
IkeLifetime	Long	86400	The IKE lifetime.
IkeMode	String	main	The IKE mode. Both main and aggressive modes are supported. The main mode offers higher security. If NAT traversal is enabled, we recommend that you select the aggressive mode.
IkePfs	String	group2	The DH group.
IkeVersion	String	ikev1	The IKE version.
LocalId	String	116.62.69.xx	The ID of the local VPN gateway. By default, it is the IP address of the VPN gateway. Both FQDN and IP formats are supported.
Psk	String	pgw6dy7d1i8i****	The pre-shared key.
RemoteId	String	139.196.32.xx	The ID of the peering VPN gateway. By default, it is the IP address of the customer gateway. Both FQDN and IP formats are supported.
IpsecConfig			The configuration of the IPsec-VPN connection.
IpsecAuthAlg	String	sha1	The IPsec authentication algorithm. Both SHA-1 and MD5 are supported.
IpsecEncAlg	String	aes	The IPsec encryption algorithm.
IpsecLifetime	Long	86400	The IPsec lifetime.
IpsecPfs	String	group2	The DH group.
Local	String	139.196.32.xx	The ID of the VPN gateway.
LocalSubnet	String	1.1.1.0/24,1.1.2.0/24	The CIDR block of the virtual private cloud (VPC).
Remote	String	116.62.69.xx	The ID of the customer gateway.
RemoteSubnet	String	1.1.1.0/24,1.1.2.0/24	The CIDR block of the on-premises data center.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DownloadVpnConnectionConfig
&RegionId=cn-shanghai
&VpnConnectionId=vco-bp1bbi27hojx80nck****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DownloadVpnConnectionConfigResponse>
    <RequestId>6F4A035F-7060-45D7-B9BD-719372782AF6</RequestId>
    <VpnConnectionConfig>
        <RemoteSubnet>1.1.1.0/24,1.1.2.0/24</RemoteSubnet>
        <Local>139.196.32.xx</Local>
        <IpsecConfig>
            <IpsecLifetime>86400</IpsecLifetime>
            <IpsecAuthAlg>sha1</IpsecAuthAlg>
            <IpsecPfs>group2</IpsecPfs>
            <IpsecEncAlg>aes</IpsecEncAlg>
        </IpsecConfig>
        <Remote>116.62.69.xx</Remote>
        <LocalSubnet>2.2.2.0/24</LocalSubnet>
        <IkeConfig>
            <IkeEncAlg>aes</IkeEncAlg>
            <IkePfs>group2</IkePfs>
            <RemoteId>116.62.69.xx</RemoteId>
            <IkeAuthAlg>sha1</IkeAuthAlg>
            <Psk>pgw6dy7d1i8i****</Psk>
            <IkeMode>main</IkeMode>
            <IkeLifetime>86400</IkeLifetime>
            <IkeVersion>ikev1</IkeVersion>
            <LocalId>139.196.32.xx</LocalId>
        </IkeConfig>
    </VpnConnectionConfig>
</DownloadVpnConnectionConfigResponse>
```

`JSON` format

```
{
 "RequestId":"0C68048B-0F70-40DA-B8AE-1B79B5CF62E3",
 "VpnConnectionConfig":{
  "RemoteSubnet":"1.1.1.0/24,1.1.2.0/24",
  "IpsecConfig":{
   "IpsecLifetime":86400,
   "IpsecAuthAlg":"sha1",
   "IpsecPfs":"group2",
   "IpsecEncAlg":"aes"
  },
  "Local":"139.196.32.xx",
  "Remote":"116.62.69.64",
  "LocalSubnet":"2.2.2.0/24",
  "IkeConfig":{
   "IkeEncAlg":"aes",
   "RemoteId":"116.62.69.xx",
   "IkePfs":"group2",
   "IkeAuthAlg":"sha1",
   "Psk":"pgw6dy7d1i8i****",
   "IkeMode":"main",
   "IkeLifetime":86400,
   "IkeVersion":"ikev1",
   "LocalId":"139.196.32.xx"
  }
 }
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform the operation on the specified resource. Apply for the permissions and try again.

HttpCode	Error code	Error message	Description
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. To acquire the required permissions, submit a ticket.
404	InvalidVpnConnectionInstanceId.NotFound	The specified vpn connection instance id does not exist.	The error message returned because the specified IPsec-VPN connection does not exist. You must check whether the ID of the IPsec-VPN connection is valid.

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

17.13. CreateSslVpnServer

Creates an SSL-VPN server.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateSslVpnServer	The operation that you want to perform. Set the value to **CreateSslVpnServer**.
ClientIpPool	String	Yes	192.168.1.0/24	The CIDR block of the client. The CIDR block that is allocated to the virtual network interface of the client. It is not the CIDR block where the client resides. When the client accesses the server through an SSL-VPN connection, the VPN gateway selects an IP address from the specified CIDR block and assigns it to the client. **Note** This CIDR block must not conflict with the value of **LocalSubnet**.
LocalSubnet	String	Yes	10.0.0.0/8	The local CIDR block. The CIDR block to be accessed by the client through the SSL-VPN connection. This value can be the CIDR block of a virtual private cloud (VPC), vSwitch, data center that is connected to a VPC through an Express Connect circuit, or Object Storage Service (OSS).
RegionId	String	Yes	cn-shanghai	The ID of the region where the VPN gateway is created. You can call the DescribeRegions operation to query region IDs.
VpnGatewayId	String	Yes	vpn-bp1hgim8by0kc9nga****	The ID of the VPN gateway.

Parameter	Type	Required	Example	Description
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to ensure the idempotence of the request. You can use the client to generate a token, 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.
Name	String	No	sslvpnname	The name of the SSL-VPN server. The name must be 2 to 128 characters in length, and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with `http://` or `https://`.
Proto	String	No	UDP	The protocol that is used by the SSL-VPN server. Valid values: • **TCP**: TCP • **UDP** (default): UDP
Cipher	String	No	AES-128-CBC	The encryption algorithm that is used in the SSL-VPN connection. Valid values: • **AES-128-CBC** (default): the AES-128-CBC algorithm. • **AES-192-CBC**: the AES-192-CBC algorithm. • **AES-256-CBC**: the AES-256-CBC algorithm. • **none**: If you select this option, no encryption algorithm is used.
Port	Integer	No	1194	The port that is used by the SSL-VPN server. Default value: **1194**. You cannot use the following ports: **22, 2222, 22222, 9000, 9001, 9002, 7505, 80, 443, 53, 68, 123, 4510, 4560, 500, and 4500**.
Compress	Boolean	No	false	Specifies whether to enable data compression. Valid values: • **true**: enables data compression. • **false** (default): disables data compression.
EnableMultiFactorAuth	Boolean	No	true	Specifies whether to enable two-factor authentication. Valid values: • **true**: enables two-factor authentication. • **false** (default): disables two-factor authentication. **Note** To enable two-factor authentication, make sure that the VPN gateway is created after 00:00:00 (UTC+8), March 5, 2020. Only VPN gateways that are created after 00:00:00 (UTC+8), March 5, 2020 support two-factor authentication.
IDaaSInstanceId	String	No	idaas-cn-hangzhou-p****	The ID of the IDaaS instance.

Parameter	Type	Required	Example	Description
IDaaSRegionId	String	No	cn-hangzhou	The ID of the region where the IDaaS instance is created.

Response parameters

Parameter	Type	Example	Description
Name	String	test	The name of the SSL-VPN server.
RequestId	String	E98A9651-7098-40C7-8F85-C818D1EBBA85	The ID of the request.
SslVpnServerId	String	vss-bp18q7hzj6largv4v****	The ID of the SSL-VPN server.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=CreateSslVpnServer
&ClientIpPool=192.168.1.0/24
&LocalSubnet=10.0.0.0/8
&RegionId=cn-shanghai
&VpnGatewayId=vpn-bp1hgim8by0kc9nga****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateSslVpnServerResponse>
    <RequestId>E98A9651-7098-40C7-8F85-C818D1EBBA85</RequestId>
    <SslVpnServerId>vss-bp18q7hzj6largv4v****</SslVpnServerId>
    <Name>test</Name>
</CreateSslVpnServerResponse>
```

`JSON` format

```
{
  "RequestId": "E98A9651-7098-40C7-8F85-C818D1EBBA85",
  "SslVpnServerId": "vss-bp18q7hzj6largv4v****",
  "Name": "test"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform the operation on the specified resource. You can apply for the permissions and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform this operation on the specified resource. To obtain the required permissions, submit a ticket.
400	Resource.QuotaFull	The quota of resource is full	The error message returned because the quota is reached.
400	InvalidName	The name is not valid	The error message returned because the format of the specified name is invalid.

HttpCode	Error code	Error message	Description
404	InvalidVpnGatewayInstanceId.NotFound	The specified vpn gateway instance id does not exist.	The error message returned because the specified VPN gateway does not exist. Check whether the configuration of the VPN gateway is valid.
400	VpnGateway.Configuring	The specified service is configuring.	The error message returned because the operation is not allowed when the specified service is being configured. Try again later.
400	VpnGateway.FinancialLocked	The specified service is financial locked.	The error message returned because the service is suspended due to overdue payments. Top up your account first.
400	QuotaExceeded.VpnRouteEntry	The number of route entries to the VPN gateway in the VPC routing table has reached the quota limit.	The error message returned because the number of routes that point to the VPN gateway in the VPC route table reaches the quota.

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

17.14. DescribeSslVpnServers

Queries SSL-VPN servers.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSslVpnServers	The operation that you want to perform. Set the value to **DescribeSslVpnServers**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the SSL-VPN server is created. You can call the DescribeRegions operation to query region IDs.
Name	String	No	test	The name of the SSL-VPN server.
PageNumber	Integer	No	1	The number of the page to return. Default value: **1**.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: **50**. Default value: **10**.
SslVpnServerId	String	No	vss-bp15j3du13gq1dgey****	The ID of the SSL-VPN server.
VpnGatewayId	String	No	vpn-bp1on0xae9d771ggi****	The ID of the VPN gateway.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
PageNumber	Integer	1	The number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	085CA5EA-1E76-43A8-981B-E0208DECA0CB	The ID of the request.
SslVpnServers			Detailed information about the SSL-VPN server.
Cipher	String	AES-128-CBC	The encryption algorithm.
ClientIpPool	String	10.10.1.0/24	The client IP address pool.
Compress	Boolean	false	Indicates whether the transmitted data is compressed.
Connections	Integer	0	The total number of current connections.
CreateTime	Long	1544668844000	The time when the SSL-VPN server was created.
InternetIp	String	47.96.167.xxx	The public IP address.
LocalSubnet	String	192.168.0.0/24	The CIDR block of the client.
MaxConnections	Integer	5	The maximum number of connections.
Name	String	test	The name of the SSL-VPN server.
Port	Integer	1194	The port used by the SSL-VPN server.
Proto	String	UDP	The protocol used by the SSL-VPN server.
RegionId	String	cn-hangzhou	The ID of the region where the SSL-VPN server is created.
SslVpnServerId	String	vss-bp15j3du13gq1dgey****	The ID of the SSL-VPN server.
VpnGatewayId	String	vpn-bp1on0xae9d771ggi****	The ID of the VPN gateway.
TotalCount	Integer	1	The total number of entries returned.

Examples

Sample requests

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

Sample success responses

`XML` format

```
<DescribeSslVpnServersResponse>
    <PageNumber>1</PageNumber>
    <TotalCount>1</TotalCount>
    <PageSize>10</PageSize>
    <SslVpnServers>
        <SslVpnServer>
            <RegionId>cn-hanghzou</RegionId>
            <SslVpnServerId>vss-bp18q7hzj6largv4v****</SslVpnServerId>
            <VpnGatewayId>vpn-bp1q8bgx4xnkm2ogj****</VpnGatewayId>
            <Name>test</Name>
            <CLientIpPool>10.10.10.20/24</CLientIpPool>
            <LocalSubnet>10.10.10.10/24</LocalSubnet>
            <Proto>UDP</Proto>
            <Port>1194</Port>
            <Cipher>AES-128-CBC</Cipher>
            <Compress>true</Compress>
            <CreateTime>1492753580000</CreateTime>
            <Connections>0</Connections>
            <MaxConnections>5</MaxConnections>
            <InternetIp>47.98.xx.xx</InternetIp>
        </SslVpnServer>
    </SslVpnServers>
    <RequestId>DF11D6F6-E35A-41C3-9B20-6FC8A901FE65</RequestId>
</DescribeSslVpnServersResponse>
```

`JSON` format

```
{
 "PageNumber":"1",
 "TotalCount":"1",
 "SslVpnServers":{
  "SslVpnServer":{
   "VpnGatewayId":"vpn-bp1q8bgx4xnkm2ogj****",
   "CLientIpPool":"10.10.10.20/24",
   "Proto":"UDP",
   "Cipher":"AES-128-CBC",
   "InternetIp":"47.98.xx.xx",
   "SslVpnServerId":"vss-bp18q7hzj6largv4v****",
   "Name":"test",
   "Port":"1194",
   "MaxConnections":"5",
   "RegionId":"cn-hanghzou",
   "CreateTime":"1492753580000",
   "Compress":"true",
   "LocalSubnet":"10.10.10.10/24",
   "Connections":"0"
  }
 },
 "PageSize":"10",
 "RequestId":"DF11D6F6-E35A-41C3-9B20-6FC8A901FE65"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform this operation on the specified resource. You can apply for the permissions and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform this operation on the specified resource. To acquire the required permissions, submit a ticket.

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

17.15. DeleteSslVpnServer

Deletes an SSL-VPN server.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteSslVpnServer	The operation that you want to perform. Set the value to **DeleteSslVpnServer**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the SSL-VPN server is created. You can call the DescribeRegions operation to query region IDs.
SslVpnServerId	String	Yes	vss-bp18q7hzj6largv4v****	The ID of the SSL-VPN server.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to guarantee the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can only contain ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	606998F0-B94D-48FE-8316-ACA81BB230DA	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DeleteSslVpnServer
&RegionId=cn-hangzhou
&SslVpnServerId=vss-bp18q7hzj6largv4v****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteSslVpnServerResponse>
    <RequestId>606998F0-B94D-48FE-8316-ACA81BB230DA</RequestId>
</DeleteSslVpnServerResponse>
```

`JSON` format

```
{
 "RequestId":"606998F0-B94D-48FE-8316-ACA81BB230DA"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform the operation on the specified resource. You can apply for the permission and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. To acquire the required permissions, submit a ticket.
400	VpnGateway.Configuring	The specified service is configuring.	The error message returned because the specified service is being configured. Try again later.
400	VpnGateway.FinancialLocked	The specified service is financial locked.	The error message returned because the service is suspended due to overdue payments. Add funds before you enable the service.

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

17.16. ModifySslVpnServer

Modifies the configurations of an SSL-VPN server.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	ModifySslVpnServer	The name of this action. Value: **ModifySslVpnServer**
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the VPN Gateway belongs To query the region ID, call DescribeRegions.
SslVpnServerId	String	Yes	vss-bp18q7hzj6largv4v****	The ID of the SSL-VPN server.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	A client token used to guarantee the idempotence of requests. This parameter value is generated by the client and must be unique. It must be 1 to 64 ASCII characters in length.
Name	String	No	test	The name of the SSL-VPN server. The name must be 2 to 128 characters in length. It must start with a letter and can contain numbers, periods (.), underscores ( ), and hyphens (-). It cannot start with `http://` or `https://`.
ClientIpPool	String	No	10.30.30.0/2	The IP address pool of the client.
LocalSubnet	String	No	10.20.20.0/24	The CIDR block of the local client.

Parameter	Type	Required?	Example value	Description
Proto	String	No	UDP	The protocol used by the SSL-VPN server. Valid values: • **TCP**: TCP protocol • **UDP**(default): UDP protocol
Cipher	String	No	AES-128-CBC	The encryption algorithm used by the SSL-VPN server. Valid values: • **AES-128-CBC** (default): AES-128-CBC algorithm • **AES-192-CBC**: AES-192-CBC algorithm • **AES-256-CBC**: AES-256-CBC algorithm • **none**: No encryption algorithm is used.
Port	Integer	No	1194	The port used by the SSL-VPN server. Default value:**1194**. The following ports cannot be used: **22, 2222, 22222, 9000, 9001, 9002, 7505, 80, 443, 53, 68, 123, 4510, 4560, 500, and 4500**.
Compress	Boolean	No	false	Indicates whether to compress the communication. Valid values: • **true** (default): Compresses the communication. • **false**: Do not compress the communication.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	DF11D6F6-E35A-41C3-9B20-6FC8A901FE65	The ID of the request.
RegionId	String	cn-hangzhou	The region of the SSL-VPN server.
SslVpnServerId	String	vss-bp18q7hzj6largv4v****	The ID of the SSL-VPN server.
VpnGatewayId	String	vpn-bp1q8bgx4xnkm2ogj****	The ID of the VPN Gateway instance.
Name	String	test	The name of the SSL-VPN server.
LocalSubnet	String	10.20.20.0/24	The CIDR block of the local client.
ClientIpPool	String	10.30.30.0/24	The IP address pool of the client.
CreateTime	Long	1492753580000	The time at which the SSL-VPN server was created.
Cipher	String	AES-128-CBC	The encryption algorithm used.
Proto	String	UDP	The protocol used by the SSL-VPN server.
Port	Integer	1194	The port of the SSL-VPN server.
Compress	Boolean	false	Indicates whether to compress the communication.

Parameter	Type	Example value	Description
Connections	Integer	0	The number of currnet connections.
MaxConnections	Integer	5	The maximum number of connections.
InternetIp	String	47.98.xx.xx	The public IP address.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=ModifySslVpnServer
&RegionId=cn-hangzhou
&SslVpnServerId=vss-bp18q7hzj6largv4****
&<CommonParameters>
```

Response example

`XML` format

```
<ModifySslVpnServerResponse>
    <PageNumber>1</PageNumber>
    <TotalCount>1</TotalCount>
    <PageSize>10</PageSize>
    <SslVpnServers>
        <SslVpnServer>
            <RegionId>cn-hanghzou</RegionId>
            <SslVpnServerId>vss-bp18q7hzj6largv4v****</SslVpnServerId>
            <VpnGatewayId>vpn-bp1q8bgx4xnkm2ogj****</VpnGatewayId>
            <Name>test</Name>
            <CClientIpPool>10.30.30.0/24</CClientIpPool>
            <LocalSubnet>10.20.20.0/24</LocalSubnet>
            <Proto>UDP</Proto>
            <Port>1194</Port>
            <Cipher>AES-128-CBC</Cipher>
            <Compress>true</Compress>
            <CreateTime>1492753580000</CreateTime>
            <Connections>0</Connections>
            <MaxConnections>5</MaxConnections>
            <InternetIp>47.98.xx.xx</InternetIp>
        </SslVpnServer>
    </SslVpnServers>
    <RequestId>DF11D6F6-E35A-41C3-9B20-6FC8A901FE65</RequestId>
</ModifySslVpnServerResponse>
```

`JSON` format

```
{
  "PageNumber": "1",
  "TotalCount": "1",
  "PageSize": "10",
  "SslVpnServers": {
    "SslVpnServer": {
      "RegionId": "cn-hanghzou",
      "SslVpnServerId": "vss-bp18q7hzj6largv4v****",
      "VpnGatewayId": "vpn-bp1q8bgx4xnkm2ogj****",
      "Name": "test",
      "CLientIpPool": "10.30.30.0/24",
      "LocalSubnet": "10.20.20.0/24",
      "Proto": "UDP",
      "Port": "1194",
      "Cipher": "AES-128-CBC",
      "Compress": "true",
      "CreateTime": "1492753580000",
      "Connections": "0",
      "MaxConnections": "5",
      "InternetIp": "47.98.xx.xx"
    }
  },
  "RequestId": "DF11D6F6-E35A-41C3-9B20-6FC8A901FE65"
}
```


Errors

HTTP status code	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	You are not authorized to operate on this resource.
403	Forbidden	User not authorized to operate on the specified resource.	You are not authorized to operate on this resource.
400	InvalidName	The name is not valid	The name format is invalid.
400	VpnGateway.Configuring	The specified service is configuring.	The specified service is being configured.
400	VpnGateway.FinancialLocked	The specified service is financial locked.	The specified service is locked due to insufficient account balance.

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

17.17. DeleteSslVpnClientCert

Deletes an SSL-VPN client certificate.

Debugging

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

Request parameters

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

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where the SSL-VPN client certificate is created. You can call the DescribeRegions operation to query region IDs.
SslVpnClientCertId	String	Yes	vsc-bp1n8wcf134yl0osr****	The ID of the SSL-VPN client certificate.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to guarantee the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can only contain ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	606998F0-B94D-48FE-8316-ACA81BB230DA	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DeleteSslVpnClientCert
&RegionId=cn-hangzhou
&SslVpnClientCertId=vsc-bp1n8wcf134yl0osr****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteSslVpnClientCertResponse>
    <RequestId>606998F0-B94D-48FE-8316-ACA81BB230DA</RequestId>
</DeleteSslVpnClientCertResponse>
```

`JSON` format

```
{
 "RequestId":"606998F0-B94D-48FE-8316-ACA81BB230DA"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform this operation on the specified resource. You can apply for the permission and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. To acquire the required permissions, submit a ticket.

HttpCode	Error code	Error message	Description
400	VpnGateway.Configuring	The specified service is configuring.	The error message returned because the specified service is being configured. Try again later.

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

17.18. ModifySslVpnClientCert

Modifies the name of an SSL-VPN client certificate.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySslVpnClientCert	The operation that you want to perform. Set the value to **ModifySslVpnClientCert**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the SSL-VPN client certificate is created. You can call the DescribeRegions operation to query region IDs.
SslVpnClientCertId	String	Yes	vsc-bp1n8wcf134yl0osrc****	The ID of the SSL-VPN client certificate.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to guarantee the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can only contain ASCII characters and cannot exceed 64 characters in length.
Name	String	No	cert2	The name of the SSL-VPN client certificate. The name must be 2 to 128 characters in length, and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter. It cannot start with `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
Name	String	cert2	The name of the SSL-VPN client certificate.
RequestId	String	606998F0-B94D-48FE-8316-ACA81BB230DA	The ID of the request.
SslVpnClientCertId	String	vsc-bp1n8wcf134yl0osr****	The ID of the SSL-VPN client certificate.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=ModifySslVpnClientCert
&RegionId=cn-hangzhou
&SslVpnClientCertId=vsc-bp1n8wcf134yl0osr****
&Name=cert2
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifySslVpnClientCertResponse>
    <SslVpnClientCertId>vsc-bp1n8wcf134yl0osr****</SslVpnClientCertId>
    <Name>cert2</Name>
    <RequestId>606998F0-B94D-48FE-8316-ACA81BB230DA</RequestId>
</ModifySslVpnClientCertResponse>
```

`JSON` format

```
{
 "Name":"cert2",
 "RequestId":"606998F0-B94D-48FE-8316-ACA81BB230DA",
 "SslVpnClientCertId":"vsc-bp1n8wcf134yl0osr****"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform the operation on the specified resource. You can apply for the permissions and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. To acquire the required permissions, submit a ticket.
400	InvalidName	The name is not valid	The error message returned because the format of the specified name parameter is invalid.

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

17.19. ModifyVpnGatewayAttribute

You can call this operation to modify the name and description of a VPN gateway.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyVpnGatewayAttribute	The operation that you want to perform. Set the value to **ModifyVpnGatewayAttribute**.
RegionId	String	Yes	cn-shanghai	The region ID of the VPN gateway. You can call the DescribeRegions operation to query the region ID.

Parameter	Type	Required	Example	Description
VpnGatewayId	String	Yes	vpn-bp1q8bgx4xnkm2ogj****	The ID of the VPN gateway.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to ensure the idempotence of the request. The value of this parameter is generated by a client. The value must be unique among different requests and must be 1 to 64 ASCII characters in length.
Name	String	No	myvpn	The name of the VPN gateway. The name must be 2 to 128 characters in length and start with a letter or Chinese character. It can contain letters, Chinese characters, digits, periods (.), underscores (_), and hyphens (-). The name cannot start with `http://` or `https://`.
Description	String	No	VPN gateway	The description of the VPN gateway. The description must be 2 to 256 characters in length and start with a letter or Chinese character. It cannot start with `http://` or `https://`.
AutoPropagate	Boolean	No	true	Specifies whether to automatically propagate BGP routes to the VPC. Valid values: • **true**: enables BGP route propagation. • **false**: disables BGP route propagation.

Response parameters

Parameter	Type	Example	Description
VpnGatewayId	String	vpn-bp1q8bgx4xnkm2ogj****	The ID of the VPN gateway.
VpcId	String	vpc-bp1ub1yt9cvakoel****	The ID of the VPC to which the VPN gateway belongs.
VSwitchId	String	vsw-bp1y9ovl1cu9ou4tv****	The ID of the VSwitch to which the VPN gateway belongs.
InternetIp	String	116.62.69.xxx	The public IP address of the VPN gateway.
CreateTime	Long	1492753580000	The time when the VPN gateway was created.
EndTime	Long	1495382400000	The time when the VPN gateway expires.
Spec	String	5M	The specification of the VPN gateway.
Name	String	test	The name of the VPN gateway.
Description	String	test	The description of the VPN gateway.
Status	String	active	The status of the VPN gateway.

Parameter	Type	Example	Description
BusinessStatus	String	Normal	The payment status of the VPN gateway.
AutoPropagate	Boolean	true	Indicates whether BGP routes are automatically propagated to the VPC. • **true**: BGP route propagation is enabled. • **false**: BGP route propagation is disabled.
EnableBgp	Boolean	true	The BGP status of the VPN gateway. • **true**: indicates that BGP is enabled. • **false**: indicates that BGP is disabled.
IntranetIp	String	172.16.104.xxx	The private IP address of the VPN gateway.
RequestId	String	54B48E3D-DF70-471B-AA93-08E683A1B457	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=ModifyVpnGatewayAttribute
&RegionId=cn-shanghai
&VpnGatewayId=vpn-bp1q8bgx4xnkm2ogj****
&<Common request parameter>
```

Sample success response

`XML` format

```
<ModifyVpnGatewayAttributeResponse>
    <EnableBgp>true</EnableBgp>
    <RequestId>CA5C51BD-EF81-44FF-8311-5AC81ADECC9D</RequestId>
    <EndTime>1592236800000</EndTime>
    <VSwitchId>vsw-gw8m2k04wt3onzehf****</VSwitchId>
    <CreateTime>1589526435000</CreateTime>
    <AutoPropagate>true</AutoPropagate>
    <IntranetIp>10.0.0.251</IntranetIp>
    <Name>VPN11</Name>
    <VpcId>vpc-gw82wgx7a8fakx4co****</VpcId>
    <InternetIp>8.xx.xx.192</InternetIp>
    <VpnGatewayId>vpn-gw8bvv722zwjht7ia****</VpnGatewayId>
    <Spec>5M</Spec>
</ModifyVpnGatewayAttributeResponse>
```

`JSON` format

```
{
  "EnableBgp": true,
  "RequestId": "CA5C51BD-EF81-44FF-8311-5AC81ADECC9D",
  "EndTime": 1592236800000,
  "VSwitchId": "vsw-gw8m2k04wt3onzehf****",
  "CreateTime": 1589526435000,
  "AutoPropagate": true,
  "IntranetIp": "10.0.0.251",
  "Name": "VPN11",
  "VpcId": "vpc-gw82wgx7a8fakx4co****",
  "InternetIp": "8.xx.xx.192",
  "VpnGatewayId": "vpn-gw8bvv722zwjht7ia****",
  "Spec": "5M"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are not authorized to perform this operation on the specified resource. You can apply for the permission and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are not authorized to perform this operation on the specified resource. To require the permission, submit a ticket.
404	InvalidVpnGatewayInstanceId.NotFound	The specified vpn gateway instance id does not exist.	The error message returned because the specified VPN connection does not exist. You can check whether the configuration of the VPN connection is valid.
400	InvalidName	The name is not valid	The error message returned because the format of the specified name parameter is invalid.
400	InvalidDescription	The description is not valid	The error message returned because the format of the specified description parameter is invalid.

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

17.20. CreateVpnConnection

You can call this operation to create an IPsec VPN connection.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateVpnConnection	The operation that you want to perform. Set the value to **CreateVpnConnection**.
CustomerGatewayId	String	Yes	vpn-bp1q8bgx4xnk****	The ID of the customer gateway.
LocalSubnet	String	Yes	1.1.1.0/24,1.1.2.0/24	The CIDR block of the VPC to be connected with the on-premises data center. This parameter is used for Phase 2 negotiations. Separate multiple CIDR blocks with commas (,). Example: 192.168.1.0/24,192.168.2.0/24.
RegionId	String	Yes	cn-shanghai	The region ID of the IPsec VPN connection. You can call the DescribeRegions operation to query the region ID.
RemoteSubnet	String	Yes	1.1.1.0/24,1.1.2.0/24	The CIDR block of the on-premises data center. This parameter is used for Phase 2 negotiations. Separate multiple CIDR blocks with commas (,). Example: 192.168.3.0/24,192.168.4.0/24.

Parameter	Type	Required	Example	Description
VpnGatewayId	String	Yes	vpn-bp1q8bgx4xnkm****	The ID of the VPN gateway.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-001****	The client token that is used to guarantee the idempotence of the request. This parameter value is generated by the client and must be unique. The token must be 1 to 64 ASCII characters in length.
Name	String	No	IPsec	The name of the IPsec VPN connection. The name must be 2 to 128 characters in length and can contain letters, Chinese characters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter or Chinese character and cannot start with `http://` or `https://`.
EffectImmediately	Boolean	No	false	Specifies whether to delete a negotiated IPsec VPN tunnel and initiate a negotiation again. Valid values: • **true**: initiates negotiations after the configuration is completed. • **false** (default): initiates negotiations when inbound traffic is detected.
IkeConfig	String	No	{"IkeVersion":"ikev1","IkeMode":"main","IkeEncAlg":"aes","IkeAuthAlg":"sha1","IkePfs":"group2","IkeLifetime":86400}	The configurations of Phase 1 negotiations: • **IkeConfig.Psk**: the pre-shared key used for authentication between the IPsec VPN gateway and the customer gateway. By default, a random value is generated. You can also specify a pre-shared key. The description can be up to 100 characters in length. • **IkeConfig.IkeVersion**: the version of the IKE protocol. Valid values: **IKEv1** | **IKEv2**. Default value: **IKEv1**. • **IkeConfig.IkeMode**: the negotiation mode of IKE V1. Valid values: **main** | **aggressive**. Default value: **main**. • **IkeConfig.IkeEncAlg**: the encryption algorithm used in Phase 1 negotiations. Valid values: **AES** | **AES192** | **AES256** | **DES** | **3DES**. Default value: **AES**. • **IkeConfig.IkeAuthAlg**: the authentication algorithm used in Phase 1 negotiations. Valid values: **MD5** | **SHA1**. Default value: **MD5**. • **IkeConfig.IkePfs**: the Diffie-Hellman key exchange algorithm used in Phase 1 negotiations. Valid values: **Group1** | **Group2** | **Group5** | **Group14** | **Group24**. Default value: **Group2**. • **IkeConfig.IkeLifetime**: the SA lifetime as a result of Phase 1 negotiations. Valid values: **0 to 86400**. Unit: seconds. Default value: **86400**. • **IkeConfig.LocalIdIPsec**: the identifier of the VPN gateway. This parameter can contain up to 100 characters. The default value is the public IP address of the VPN gateway. • **IkeConfig.RemoteId**: the identifier of the customer gateway. This parameter can contain up to 100 characters. The default value is the public IP address of the customer gateway.

Parameter	Type	Required	Example	Description
IpsecConfig	String	No	{"IpsecEncAlg":"aes","IpsecAuthAlg":"sha1","IpsecPfs":"group2","IpsecLifetime":86400}	The configurations of Phase 2 negotiations: • **IpsecConfig.IpsecEncAlg**: the encryption algorithm used in Phase 2 negotiations. Valid values: **AES** | **AES192** | **AES256** | **DES** | **3DES**. Default value: **AES**. • **IpsecConfig. IpsecAuthAlg**: the authentication algorithm used in Phase 2 negotiations. Valid values: **MD5** | **SHA1**. Default value: **MD5**. • **IpsecConfig. IpsecPfs**: the Diffie-Hellman group for perfect forward secrecy (PFS). The Diffie-Hellman key exchange algorithm used in Phase 2 negotiations. Valid values: **Group1** | **Group2** | **Group5** | **Group14** | **Group24**. Default value: **Group2**. • **IpsecConfig. IpsecLifetime**: the SA lifetime value as a result of Phase 2 negotiations. Valid values: **0 to 86400**. Unit: seconds. Default value: **86400**.
HealthCheckConfig	String	No	{"enable":"true","dip":"192.168.xx.2","sip":"192.168.xx.2","interval":"3","retry":"3"}	The health check configurations: • **HealthCheckConfig.enable**: specifies whether to enable health checks. Valid values: **true|false** (default) • **HealthCheckConfig.dip**: the destination IP address configured for health checks. • **HealthCheckConfig.sip**: the source IP address configured for health checks. • **HealthCheckConfig.interval**: the interval between health check retries. Unit: seconds. • **HealthCheckConfig.retry**: the maximum number of health check retries.
AutoConfigRoute	Boolean	No	true	Specifies whether to automatically configure routes. Valid values: • **true** (default): Routes are automatically configured. • **false**: Routes are not automatically configured.
EnableDpd	Boolean	No	true	Specifies whether to enable dead peer detection (DPD). Valid values: • **true**(Default): enables the DPD feature. The IPsec initiator sends DPD packets to verify the existence and availability of IPsec peers. If no feedback is received from the peer within a specified period of time, the IPsec initiator will disconnect the IPsec tunnel. ISAKMP SA and the corresponding IPsec SA are deleted. The security tunnel is also deleted. • **false**: disables the DPD feature. The IPsec initiator does not send DPD packets.
EnableNatTraversal	Boolean	No	true	Specifies whether to enable the NAT traversal feature. Valid values: • **true**(Default): enables the NAT traversal feature. After NAT traversal is enabled, the initiator does not need to check the UDP ports during IKE negotiations and can automatically discover NAT gateway devices along the VPN tunnel. • **false**: disables the NAT traversal feature.

Parameter	Type	Required	Example	Description
BgpConfig	String	No	{"EnableBgp":"true","LocalAsn":"10001","TunnelCidr":"169.254.11.0/30","LocalBgpIp":"169.254.11.1"}	BGP configurations: • **BgpConfig.EnableBgp**: specifies whether to enable Border Gateway Protocol (BGP). Valid values: **true** | **false**. • **BgpConfig.LocalAsn**: the local autonomous system number. • **BgpConfig.TunnelCidr**: the IPsec tunnel CIDR block. The mask length of the CIDR block in 169.254.0.0/16 is 30. • **LocalBgpIp**: the local BGP IP address of. This IP address is within the IPsec tunnel CIDR block.

Response parameters

Parameter	Type	Example	Description
VpnConnectionId	String	vco-bp15oes1py4i6****	The ID of the IPsec VPN connection.
CreateTime	Long	1544666102000	The time when the IPsec VPN connection was created.
Name	String	test	The name of the IPsec VPN connection.
RequestId	String	082AD562-B8DB-4BB2-861F-DA1FCA01FD76	The ID of the request.

Examples

Sample requests:

```
http(s)://[Endpoint]/? Action=CreateVpnConnection
&CustomerGatewayId=vpn-bp1q8bgx4xnk****
&LocalSubnet=1.1.1.0/24,1.1.2.0/24
&RegionId=cn-shanghai
&RemoteSubnet=1.1.1.0/24,1.1.2.0/24
&VpnGatewayId=vpn-bp1q8bgx4xnkm****
&<Common request parameter>
```

Sample success response

`XML` format

```
<CreateVpnConnectionResponse>
    <VpnConnectionId>vco-bp1bbi27hojx8****</VpnConnectionId>
    <CreateTime>1493363928000</CreateTime>
</CreateVpnConnectionResponse>
```

`JSON` format

```
{
  "CreateTime": 1544666102000,
  "VpnConnectionId": "vco-bp15oes1py4i6****"
}
```

Error codes

HttpCode	Error code	Error message	Description

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are not authorized to perform this operation on the specified resource. You can apply for the permission and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are not authorized to perform this operation on the specified resource. To require the permission, submit a ticket.
400	Resource.QuotaFull	The quota of resource is full	The error message returned because the resource quota has reached the upper limit.
404	InvalidCustomerGatewayInstanceId.NotFound	The specified customer gateway instance id does not exist.	The error message returned because the specified instance ID does not exist.
404	InvalidVpnGatewayInstanceId.NotFound	The specified vpn gateway instance id does not exist.	The error message returned because the specified VPN gateway does not exist. You can check whether the configuration of the VPN connection is valid.
400	InvalidVpnConnection.AlreadyExists	Vpn connection already exists.	The error message returned because the VPN connection already exists.
400	VpnGateway.Configuring	The specified service is configuring.	The error message returned because the specified service is being configured. Try again later.
400	VpnGateway.FinancialLocked	The specified service is financial locked.	The error message returned because the service is overdue. Add funds before you enable the service.
400	QuotaExceeded.PolicyBasedRoute	The maximum number of policy-based routes is exceeded. Existing routes: %s. Routes to be created: %s. Maximum routes: %s.	The error message returned because the number of policy-based routing entries has reached the upper limit. The maximum number of entries that you can create is %s. The number of existing entries is %s. You are now creating %s entries.

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

17.21. DescribeVpnConnections

Queries IPsec-VPN connections.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeVpnConnections	The operation that you want to perform. Set the value to **DescribeVpnConnections**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the IPsec-VPN connection is established. You can call the DescribeRegions operation to query the most recent region list.
VpnGatewayId	String	No	vpn-bp1q8bgx4xnkx****	The ID of the VPN gateway.

Parameter	Type	Required	Example	Description
CustomerGatewayId	String	No	cgw-bp1mvj4g9kogw****	The ID of the customer gateway.
PageNumber	Integer	No	1	The number of the page to return. Default value: **1**.
PageSize	Integer	No	10	The number of entries to return on each page. Default value: **10**. Valid values: **1** to **50**.
VpnConnectionId	String	No	vco-bp15oes1py4i6****	The ID of the IPsec-VPN connection.

Response parameters

Parameter	Type	Example	Description
VpnConnections	Array of VpnConnection		The list of IPsec-VPN connections.
VpnConnection			
IkeConfig	Struct		The configurations of Phase 1 negotiations.
IkeAuthAlg	String	sha1	The IKE authentication algorithm.
IkeEncAlg	String	aes	The IKE encryption algorithm.
IkeLifetime	Long	86400	The IKE lifetime. Unit: seconds.
IkeMode	String	main	The IKE negotiation mode.
IkePfs	String	group2	The DH group.
IkeVersion	String	ikev1	The version of the IKE protocol.
LocalId	String	116.XX.XX.64	The identifier of the local side. The default value is the IP address of the VPN gateway. The value can be a fully qualified domain name (FQDN) or an IP address.
Psk	String	pgw6dy7****	The pre-shared key.
RemoteId	String	139.XX.XX.167	The ID of the customer gateway. By default, it is the IP address of the customer gateway. The value can be an FQDN or an IP address.
IpsecConfig	Struct		The configuration of Phase 2 negotiations.
IpsecAuthAlg	String	sha1	The IPsec authentication algorithm.
IpsecEncAlg	String	aes	The IPsec encryption algorithm.
IpsecLifetime	Long	86400	The IPsec lifetime. Unit: seconds.

Parameter	Type	Example	Description
IpsecPfs	String	group2	The DH group.
VpnConnectionId	String	vco-bp10lz7aejumd****	The ID of the IPsec-VPN connection.
CustomerGatewayId	String	cgw-bp1mvj4g9kogw****	The ID of the customer gateway.
VpnGatewayId	String	vpn-bp1q8bgx4xnkm****	The ID of the VPN gateway.
Name	String	nametest	The name of the IPsec-VPN connection.
LocalSubnet	String	192.168.0.0/16,172.17.0.0/16	The CIDR block of the VPC. CIDR blocks are separated with commas (,).
RemoteSubnet	String	10.0.0.0/8,172.16.0.0/16	The CIDR block of the data center. CIDR blocks are separated with commas (,).
CreateTime	Long	1492753817000	The timestamp generated when the IPsec-VPN connection was established.
Status	String	ipsec_sa_established	The status of the IPsec-VPN connection. Valid values: • **ike_sa_not_established**: Phase 1 negotiations failed. • **ike_sa_established**: Phase 1 negotiations were successful. • **ipsec_sa_not_established**: Phase 2 negotiations failed. • **ipsec_sa_established**: Phase 2 negotiations were successful.
EffectImmediately	Boolean	true	Indicates whether the connection immediately takes effect. Valid values: • **true**: Negotiations are reinitiated when the configuration is changed. • **false**: Negotiations are reinitiated when traffic is detected. When negotiations are reinitiated, transient connections may occur.
EnableDpd	Boolean	true	Indicates whether dead peer detection (DPD) is enabled. Valid values: • **true**: DPD is enabled. The initiator of the IPsec-VPN connection sends DPD packets to verify the existence and availability of the peer. If no feedback is received from the peer within a specified period of time, the connection fails. ISAKMP SA and IPsec SA are deleted. The security tunnel is also deleted. • **false**: DPD is disabled. The IPsec initiator does not send DPD packets.

Parameter	Type	Example	Description
EnableNatTraversal	Boolean	true	Indicates whether NAT traversal is enabled. Valid values: • **true**: NAT traversal is enabled. After NAT traversal is enabled, the initiator does not check the UDP ports during IKE negotiations and can automatically discover NAT gateway devices along the VPN tunnel. • **false**: NAT traversal is disabled.
RemoteCaCertificate	String	-----BEGIN CERTIFICATE----- MIIB7zCCAZW****	The CA certificate of the peer.
VcoHealthCheck	Struct		The health check configurations.
Dip	String	192.168.0.1	The destination IP address.
Enable	String	true	Indicates whether health checks are enabled. Valid values: • **true**: enabled • **false**: disabled
Interval	Integer	2	The time interval between two consecutive health checks. Unit: seconds.
Retry	Integer	3	The number of times that health check packets are resent.
Sip	String	192.168.0.50	The source IP address.
Status	String	success	The status of the health check. Valid values: • **failed**: abnormal • **success**: normal
VpnBgpConfig	Struct		The configurations of the BGP routing protocol.
AuthKey	String	AuthKey****	The authentication key of the BGP routing protocol.
LocalAsn	Long	45104	The autonomous system number (ASN) on the Alibaba Cloud side.
LocalBgpIp	String	169.XX.XX.32	The BGP IP address on the Alibaba Cloud side.
PeerAsn	Long	65530	The ASN of the peer.
PeerBgpIp	String	169.XX.XX.30	The BGP IP address of the peer.
Status	String	success	The negotiation status of the BGP routing protocol. • **success**: normal • **false**: abnormal

Parameter	Type	Example	Description
TunnelCidr	String	169.254.10.0/30	The CIDR block of the IPsec tunnel. The CIDR block belongs to 169.254.0.0/16. The mask of the CIDR block is 30 bits in length.
TotalCount	Integer	2	The total number of entries returned.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	238752DC-0693-49BE-9C85-711D5691D3E5	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeVpnConnections
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format


```
<DescribeVpnConnectionsResponse>
 <TotalCount>2</TotalCount>
 <RequestId>238752DC-0693-49BE-9C85-711D5691D3E5</RequestId>
 <PageSize>10</PageSize>
 <PageNumber>1</PageNumber>
 <VpnConnections>
    <VpnConnection>
       <LocalSubnet>10.0.0.0/8</LocalSubnet>
       <Status>ipsec_sa_established</Status>
       <CustomerGatewayId>cgw-gw8usu4zsk23pf69f****</CustomerGatewayId>
       <CreateTime>1590495160000</CreateTime>
       <Name>VPN1-CGW22</Name>
       <EffectImmediately>false</EffectImmediately>
       <RemoteSubnet>192.168.0.0/16</RemoteSubnet>
       <VcoHealthCheck>
          <Status>failed</Status>
          <Enable>true</Enable>
          <Dip>192.168.0.1</Dip>
          <Sip>192.168.0.2</Sip>
          <Retry>2</Retry>
          <Interval>2</Interval>
       </VcoHealthCheck>
       <VpnGatewayId>vpn-gw8bvv722zwjht7ia****</VpnGatewayId>
       <IpsecConfig>
          <IpsecPfs>group2</IpsecPfs>
          <IpsecEncAlg>aes</IpsecEncAlg>
          <IpsecAuthAlg>sha1</IpsecAuthAlg>
          <IpsecLifetime>86400</IpsecLifetime>
       </IpsecConfig>
       <VpnConnectionId>vco-gw8tylx7hvwhl7tu8****</VpnConnectionId>
       <IkeConfig>
          <IkeAuthAlg>sha1</IkeAuthAlg>
          <LocalId>8.XX.XX.192</LocalId>
          <IkeEncAlg>aes</IkeEncAlg>
          <IkeVersion>ikev1</IkeVersion>
          <IkeMode>main</IkeMode>
          <IkeLifetime>86400</IkeLifetime>
          <Psk>123456</Psk>
          <RemoteId>8.XX.XX.146</RemoteId>
```

```
            <RemoteId>8.XX.XX.146</RemoteId>
            <IkePfs>group2</IkePfs>
        </IkeConfig>
        <VpnBgpConfig>
            <Status>success</Status>
            <LocalAsn>45104</LocalAsn>
            <TunnelCidr>169.254.10.0/30</TunnelCidr>
            <PeerBgpIp>169.XX.XX.30</PeerBgpIp>
            <PeerAsn>65531</PeerAsn>
            <LocalBgpIp>169.XX.XX.32</LocalBgpIp>
        </VpnBgpConfig>
    </VpnConnection>
    <VpnConnection>
        <LocalSubnet>192.168.0.0/16</LocalSubnet>
        <Status>ipsec_sa_established</Status>
        <CustomerGatewayId>cgw-gw819u3zrifo8m5iz****</CustomerGatewayId>
        <CreateTime>1590495260000</CreateTime>
        <Name>VPN2-CGW1</Name>
        <EffectImmediately>false</EffectImmediately>
        <RemoteSubnet>10.0.0.0/8</RemoteSubnet>
        <VcoHealthCheck>
            <Status>success</Status>
            <Enable>true</Enable>
            <Dip>192.168.0.1</Dip>
            <Sip>192.168.0.56</Sip>
            <Retry>2</Retry>
            <Interval>2</Interval>
        </VcoHealthCheck>
        <VpnGatewayId>vpn-gw8uofjyg2db32o89****</VpnGatewayId>
        <IpsecConfig>
            <IpsecPfs>group2</IpsecPfs>
            <IpsecEncAlg>aes</IpsecEncAlg>
            <IpsecAuthAlg>sha1</IpsecAuthAlg>
            <IpsecLifetime>86400</IpsecLifetime>
        </IpsecConfig>
        <VpnConnectionId>vco-gw837v1ybfh74b6dy****</VpnConnectionId>
        <IkeConfig>
            <IkeAuthAlg>sha1</IkeAuthAlg>
            <LocalId>8.XX.XX.146</LocalId>
            <IkeEncAlg>aes</IkeEncAlg>
            <IkeVersion>ikev1</IkeVersion>
            <IkeMode>main</IkeMode>
            <IkeLifetime>86400</IkeLifetime>
            <Psk>123456</Psk>
            <RemoteId>8.XX.XX.192</RemoteId>
            <IkePfs>group2</IkePfs>
        </IkeConfig>
        <VpnBgpConfig>
            <Status>success</Status>
            <LocalAsn>45104</LocalAsn>
            <TunnelCidr>169.254.10.0/30</TunnelCidr>
            <PeerBgpIp>169.254.XX.XX</PeerBgpIp>
            <PeerAsn>65530</PeerAsn>
            <LocalBgpIp>169.254.XX.XX</LocalBgpIp>
        </VpnBgpConfig>
    </VpnConnection>
  </VpnConnections>
</DescribeVpnConnectionsResponse>
```


`JSON` format


```
{
  "TotalCount": 2,
  "RequestId": "238752DC-0693-49BE-9C85-711D5691D3E5",
  "PageSize": 10,
  "PageNumber": 1,
  "VpnConnections": {
    "VpnConnection": [
      {
        "LocalSubnet": "10.0.0.0/8",
```

```
      "Status": "ipsec_sa_established",
      "CustomerGatewayId": "cgw-gw8usu4zsk23pf69f****",
      "CreateTime": 1590495160000,
      "Name": "VPN1-CGW22",
      "EffectImmediately": false,
      "RemoteSubnet": "192.168.0.0/16",
      "VcoHealthCheck": {
        "Status": "failed",
        "Enable": "true",
        "Dip": "192.168.0.1",
        "Sip": "192.168.0.2",
        "Retry": 2,
        "Interval": 2
      },
      "VpnGatewayId": "vpn-gw8bvv722zwjht7ia****",
      "IpsecConfig": {
        "IpsecPfs": "group2",
        "IpsecEncAlg": "aes",
        "IpsecAuthAlg": "sha1",
        "IpsecLifetime": 86400
      },
      "VpnConnectionId": "vco-gw8tylx7hvwhl7tu8****",
      "IkeConfig": {
        "IkeAuthAlg": "sha1",
        "LocalId": "8.XX.XX.192",
        "IkeEncAlg": "aes",
        "IkeVersion": "ikev1",
        "IkeMode": "main",
        "IkeLifetime": 86400,
        "Psk": "123456",
        "RemoteId": "8.XX.XX.146",
        "IkePfs": "group2"
      },
      "VpnBgpConfig": {
        "Status": "success",
        "LocalAsn": 45104,
        "TunnelCidr": "169.254.10.0/30",
        "PeerBgpIp": "169.XX.XX.30",
        "PeerAsn": 65531,
        "LocalBgpIp": "169.XX.XX.32"
      }
    },
    {
      "LocalSubnet": "192.168.0.0/16",
      "Status": "ipsec_sa_established",
      "CustomerGatewayId": "cgw-gw819u3zrifo8m5iz****",
      "CreateTime": 1590495260000,
      "Name": "VPN2-CGW1",
      "EffectImmediately": false,
      "RemoteSubnet": "10.0.0.0/8",
      "VcoHealthCheck": {
        "Status": "success",
        "Enable": "true",
        "Dip": "192.168.0.1",
        "Sip": "192.168.0.56",
        "Retry": 2,
        "Interval": 2
      },
      "VpnGatewayId": "vpn-gw8uofjyg2db32o89****",
      "IpsecConfig": {
        "IpsecPfs": "group2",
        "IpsecEncAlg": "aes",
        "IpsecAuthAlg": "sha1",
        "IpsecLifetime": 86400
      },
      "VpnConnectionId": "vco-gw837v1ybfh74b6dy****",
      "IkeConfig": {
        "IkeAuthAlg": "sha1",
        "LocalId": "8.XX.XX.146",
```

```
            "IkeEncAlg": "aes",
            "IkeVersion": "ikev1",
            "IkeMode": "main",
            "IkeLifetime": 86400,
            "Psk": "123456",
            "RemoteId": "8.XX.XX.192",
            "IkePfs": "group2"
          },
          "VpnBgpConfig": {
            "Status": "success",
            "LocalAsn": 45104,
            "TunnelCidr": "169.254.10.0/30",
            "PeerBgpIp": "169.XX.XX.30",
            "PeerAsn": 65530,
            "LocalBgpIp": "169.XX.XX.32"
          }
        }
      ]
    }
}
```


Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform this operation on the specified resource. You can apply for the required permissions and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform this operation on the specified resource. To acquire the required permissions, submit a ticket.

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

17.22. ModifyVpnConnectionAttribute

Modifies the configuration of an IPsec-VPN connection.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyVpnConnectionAttribute	The operation that you want to perform. Set the value to **ModifyVpnConnectionAttribute**.
RegionId	String	Yes	cn-shanghai	The ID of region where the IPsec-VPN connection is created. You can call the DescribeRegions operation to query region IDs.
VpnConnectionId	String	Yes	vco-bp1bbi27hojx80nck****	The name of the IPsec-VPN connection.

Parameter	Type	Required	Example	Description
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token is used to ensure the idempotence of the request. The value of this parameter is generated by a client. The value must be unique among different requests and must be 1 to 64 ASCII characters in length.
Name	String	No	IPsec	The name of the IPsec-VPN connection. The name must be 2 to 128 characters in length, and can contain, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter. The name cannot start with `http://` or `https://`.
LocalSubnet	String	No	1.1.1.0/24,1.1.2.0/24	The CIDR block of the virtual private cloud (VPC) that you want to connect to the on-premises data center. This parameter is used for Phase 2 negotiations. Separate multiple CIDR blocks with commas (,). Example: 192.168.1.0/24,192.168.2.0/24.
RemoteSubnet	String	No	1.1.1.0/24,1.1.2.0/24	The CIDR block of the on-premises data center. This parameter is used for Phase 2 negotiations. Separate multiple CIDR blocks with commas (,). Example: 192.168.3.0/24,192.168.4.0/24.
EffectImmediately	Boolean	No	false	Specifies whether to delete the current IPsec-VPN connection and re-initiate the negotiations. Valid values: • **true**: re-initiates the negotiations after the configuration is completed. • **false** (default): re-initiates the negotiations when inbound traffic is detected.

Parameter	Type	Required	Example	Description
IkeConfig	String	No	{"IkeVersion":"ikev1","IkeMode":"main","IkeEncAlg":"aes","IkeAuthAlg":"sha1","IkePfs":"group2","IkeLifetime":86400}	The configuration of Phase 1 negotiations: • **IkeConfig.Psk**: the pre-shared key used for authentication between the IPsec-VPN gateway and the customer gateway. You can specify a key or use the default key that is randomly generated by the system. The key must be 1 to 100 characters in length. • **IkeConfig.IkeVersion**: the version of the IKE protocol. Valid values: IKEv1 and IKEv2. Default value: IKEv1. • **IkeConfig.IkeMode**: the negotiation mode of IKE V1. Valid values: main and aggressive. Default value: main. • **IkeConfig.IkeEncAlg**: the encryption algorithm of Phase 1 negotiations. Valid values: aes, aes192, aes256, des, and 3des. Default value: aes. • **IkeConfig.IkeAuthAlg**: the authentication algorithm of Phase 1 negotiations. Valid values: md5 and sha1. Default value: sha. IkeConfig.IkePfs: the Diffie-Hellman key exchange algorithm used by Phase 1 negotiations. Valid values: group1, group2, group5, group14, and group24. Default value: group2. • **IkeConfig.IkeLifetime**: the SA lifetime as a result of Phase 1 negotiations. Valid values: 0 to 86400. Unit: seconds. Default value: 86400. • **IkeConfig.LocalIdIPsec**: the identifier of the VPN gateway. This parameter can contain up to 100 characters. By default, it is the public IP address of the VPN gateway. • **IkeConfig.RemoteId**: the identifier of the customer gateway. This parameter can contain up to 100 characters. The default value is the public IP address of the customer gateway.
IpsecConfig	String	No	{"IpsecEncAlg":"aes","IpsecAuthAlg":"sha1","IpsecPfs":"group2","IpsecLifetime":86400}	The configuration of Phase 2 negotiations: • **IpsecConfig.IpsecEncAlg**: the encryption algorithm of Phase 2 negotiations. Valid values: aes, aes192, aes256, des, and 3des. Default value: aes. • **IpsecConfig. IpsecAuthAlg**: the authentication algorithm used in Phase 2 negotiations. Valid values: MD5 and SHA1. Default value: SHA1. • **IpsecConfig. IpsecPfs**: the Diffie-Hellman group for perfect forward secrecy (PFS). The Diffie-Hellman key exchange algorithm used in Phase 1 negotiations. Valid values: group1, group2, group5, group14, and group24. Default value: group2. • **IpsecConfig. IpsecLifetime**: the SA lifetime as a result of Phase 2 negotiations. Valid values: 0 to 86400. Unit: seconds. Default value: 86400.

Parameter	Type	Required	Example	Description
HealthCheckConfig	String	No	{"enable":"true","dip":"192.168.xx.2","sip":"192.168.xx.2","interval":"3","retry":"3"}	The health check configuration: • **HealthCheckConfig.enable**: specifies whether to enable health checks. Valid values: **true and false**. Default value: false.. • **HealthCheckConfig.dip**: the destination IP address configured for health checks. • **HealthCheckConfig.sip**: the source IP address configured for health checks. • **HealthCheckConfig.interval**: the interval between health check retries. Unit: seconds. • **HealthCheckConfig.retry**: the maximum number of health check retries.
AutoConfigRoute	Boolean	No	true	Specifies whether to automatically advertise route entries. Valid values: • **true** (default): Route entries are automatically advertised. • **false**: Route entries are not automatically advertised.
EnableDpd	Boolean	No	true	Specifies whether to enable dead peer detection (DPD). Valid values: • **true** (default): enables the DPD feature. The IPsec initiator sends DPD packets to verify the existence and availability of the IPsec peer. If no feedback is received from the peer within a specified period of time, the IPsec peer is considered disconnected. Consequently, the ISAKMP SA, IPsec SA, and IPsec-VPN connection are deleted. • **false**: disables the DPD feature. The IPsec initiator does not send DPD packets.
EnableNatTraversal	Boolean	No	true	Specifies whether to enable NAT traversal. Valid values: • **true** (default): enables NAT traversal. After NAT traversal is enabled, the initiator does not check the UDP ports during IKE negotiations and can automatically discover NAT gateway devices along the IPsec-VPN connection. • **false**: disables NAT traversal.

Response parameters

Parameter	Type	Example	Description
VpnConnectionId	String	vco-bp1bbi27hojx80nck****	The name of the IPsec-VPN connection.
CustomerGatewayId	String	vpn-bp1q8bgx4xnkm2ogj****	The ID of the customer gateway.
VpnGatewayId	String	vpn-bp1q8bgx4xnkm2ogj****	The ID of the VPN gateway.
Name	String	test	The name of the IPsec-VPN connection.
LocalSubnet	String	1.1.1.0/24,1.1.2.0/24	The CIDR block of the VPC.

Parameter	Type	Example	Description
RemoteSubnet	String	1.1.1.0/24,1.1.2.0/24	The CIDR block of the on-premises data center.
CreateTime	Long	1492753817000	The time when the IPsec-VPN connection was created.
Description	String	description	The description of the IPsec-VPN connection.
EffectImmediately	Boolean	false	Indicates whether IPsec-VPN negotiations are initiated immediately. Valid values: • **true**: Negotiations are initiated after the configuration is completed. • **false** (default): Negotiations are initiated when inbound data transfer is detected.
EnableDpd	Boolean	true	Indicates whether dead peer detection (DPD) is enabled. Valid values: • **false**: DPD is disabled. • **true**: DPD is enabled.
EnableNatTraversal	Boolean	true	Indicates whether NAT traversal is enabled. Valid values: • **false**: NAT traversal is disabled. • **true**: NAT traversal is enabled.
IkeConfig	Struct		The configuration of Phase 1 negotiations.
IkeAuthAlg	String	sha1	The IKE authentication algorithm.
IkeEncAlg	String	aes	The IKE encryption algorithm.
IkeLifetime	Long	86400	The IKE lifetime.
IkeMode	String	main	The IKE mode.
IkePfs	String	group2	The DH group.
IkeVersion	String	ikev1	The IKE version.
LocalId	String	116.xx.xx.64	The ID of the VPN gateway. By default, it is the IP address of the VPN gateway. Both FQDN and IP formats are supported.
Psk	String	pgw6dy7d1i8i****	The pre-shared key.
RemoteId	String	139.xx.xx.167	The ID of the customer gateway. By default, it is the IP address of the customer gateway. Both FQDN and IP formats are supported.
IpsecConfig	Struct		The configuration of Phase 2 negotiations.

Parameter	Type	Example	Description
IpsecAuthAlg	String	sha1	The IPsec authentication algorithm. Both SHA-1 and MD5 are supported.
IpsecEncAlg	String	aes	The IPsec encryption algorithm.
IpsecLifetime	Long	86400	The IPsec lifetime.
IpsecPfs	String	group2	The DH group.
RequestId	String	7DB79D0C-5F27-4AB5-995B-79BE55102F90	The ID of the request.
VcoHealthCheck	Struct		The health check configuration.
Dip	String	1.1.1.xx	The destination IP address.
Enable	String	true	Specifies whether health check is enabled. Valid values: • **true**: Health check is enabled. • **false**: Health check is disabled.
Interval	Integer	3	The time interval of health check retries. Unit: seconds.
Retry	Integer	1	The number of attempts for resending health check probes.
Sip	String	2.2.2.xx	The source IP address specified for health checks.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=ModifyVpnConnectionAttribute
&RegionId=cn-shanghai
&VpnConnectionId=vco-bp1bbi27hojx80nck****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyVpnConnectionAttributeResponse>
    <Name>vpn</Name>
    <CustomerGatewayId>cgw-bp1pvpl9r9adju6l5****</CustomerGatewayId>
    <RemoteSubnet>2.2.2.0/24</RemoteSubnet>
    <IpsecConfig>
        <IpsecLifetime>86400</IpsecLifetime>
        <IpsecAuthAlg>sha1</IpsecAuthAlg>
        <IpsecPfs>group2</IpsecPfs>
        <IpsecEncAlg>aes</IpsecEncAlg>
    </IpsecConfig>
    <EffectImmediately>false</EffectImmediately>
    <VpnGatewayId>vpn-bp1q8bgx4xnkm2ogj****</VpnGatewayId>
    <CreateTime>1492753817000</CreateTime>
    <VpnConnectionId>vco-bp10lz7aejumd2vxo****</VpnConnectionId>
    <RequestId>57070A3D-38F2-40A6-A1C9-DB14542EF54D</RequestId>
    <LocalSubnet>1.1.1.0/24,1.1.2.0/24</LocalSubnet>
    <IkeConfig>
        <IkeEncAlg>aes</IkeEncAlg>
        <RemoteId>139.196.32.xx</RemoteId>
        <IkePfs>group2</IkePfs>
        <IkeAuthAlg>sha1</IkeAuthAlg>
        <Psk>pgw6dy7d1i8i****</Psk>
        <IkeMode>main</IkeMode>
        <IkeLifetime>86400</IkeLifetime>
        <IkeVersion>ikev1</IkeVersion>
        <LocalId>116.62.69.xx</LocalId>
    </IkeConfig>
</ModifyVpnConnectionAttributeResponse>
```

`JSON` format

```
{
  "Name": "vpn",
  "CustomerGatewayId": "cgw-bp1pvpl9r9adju6l5****",
  "RemoteSubnet": "2.2.2.0/24",
  "IpsecConfig": {
    "IpsecLifetime": 86400,
    "IpsecAuthAlg": "sha1",
    "IpsecPfs": "group2",
    "IpsecEncAlg": "aes"
  },
  "EffectImmediately": false,
  "VpnGatewayId": "vpn-bp1q8bgx4xnkm2ogj****",
  "CreateTime": 1492753817000,
  "VpnConnectionId": "vco-bp10lz7aejumd2vxo****",
  "RequestId": "7DB79D0C-5F27-4AB5-995B-79BE55102F90",
  "LocalSubnet": "1.1.1.0/24,1.1.2.0/24",
  "IkeConfig": {
    "IkeEncAlg": "aes",
    "RemoteId": "139.196.32.xx",
    "IkePfs": "group2",
    "IkeAuthAlg": "sha1",
    "Psk": "pgw6dy7d1i8i****",
    "IkeMode": "main",
    "IkeLifetime": 86400,
    "IkeVersion": "ikev1",
    "LocalId": "116.62.69.xx"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform the operation on the specified resource. You can apply for the permissions and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. To acquire the required permissions, submit a ticket.
404	InvalidVpnConnectionInstanceId.NotFound	The specified vpn connection instance id does not exist.	The error message returned because the specified IPsec-VPN connection does not exist. You can check whether the configuration of the IPsec-VPN connection is valid.
400	VpnGateway.Configuring	The specified service is configuring.	The error message returned because the operation is not allowed when the specified service is being configured. Try again later.
400	VpnGateway.FinancialLocked	The specified service is financial locked.	The error message returned because the service is suspended due to overdue payments. Add funds before you enable the service.
400	InvalidName	The name is not valid	The error message returned because the format of the specified name is invalid.

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

17.23. CreateSslVpnClientCert

Creates an SSL client certificate.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateSslVpnClientCert	The operation that you want to perform. Set the value to **CreateSslVpnClientCert**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the associated VPN gateway is created. You can call the DescribeRegions operation to query region IDs.
SslVpnServerId	String	Yes	vss-m5et0q3iy1qex328w****	The ID of the SSL server.

Parameter	Type	Required	Example	Description
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e04115b	The client token that is used to guarantee the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can only contain ASCII characters and cannot exceed 64 characters in length.
Name	String	No	SslVpnClientCert1	The name of the SSL client certificate. The name must be 2 to 128 characters in length, and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter, and cannot start with `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
Name	String	SslVpnClientCert	The name of the SSL client certificate.
RequestId	String	079874CD-AEC1-43E6-AC03-ADD96B6E4907	The ID of the request.
SslVpnClientCertId	String	vsc-m5euof6s5jy8vs5kd****	The ID of the SSL client certificate.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=CreateSslVpnClientCert
&RegionId=cn-hangzhou
&SslVpnServerId=vss-m5et0q3iy1qex328w****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateSslVpnClientCertResponse>
    <SslVpnClientCertId>vsc-bp1n8wcf134yl0osr****</SslVpnClientCertId>
    <RequestId>606998F0-B94D-48FE-8316-ACA81BB230DA</RequestId>
</CreateSslVpnClientCertResponse>
```

`JSON` format

```
{
 "RequestId":"606998F0-B94D-48FE-8316-ACA81BB230DA",
 "SslVpnClientCertId":"vsc-bp1n8wcf134yl0osr****"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform the operation on the specified resource. Apply for the permissions and try again.

HttpCode	Error code	Error message	Description
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. To acquire the required permissions, submit a ticket.
400	Resource.QuotaFull	The quota of resource is full	The error message returned because the quota limit is reached.
400	VpnGateway.Configuring	The specified service is configuring.	The error message returned because the specified service is being configured. Try again later.
400	VpnGateway.FinancialLocked	The specified service is financial locked.	The error message returned because the service is suspended due to overdue payments. Top up your account first.
400	InvalidName	The name is not valid	The error message returned because the format of the specified name is invalid.

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

17.24. DescribeSslVpnClientCerts

Queries one or more SSL client certificates.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DescribeSslVpnClientCerts	The name of this action. Value: **DescribeSslVpnClientCerts**.
RegionId	String	Yes	cn-hangzhou	The region of the SSL client certificate to query. To query the region ID, call DescribeRegions.
Name	String	No	cert1	The name of the SSL client certificate.
PageNumber	Integer	No	1	The page number. Default value: **1**.
PageSize	Integer	No	10	The number of entries per page in the case of a paged query result. Maximum value: **50**. Default value: **10**.
SslVpnClientCertId	String	No	vsc-bp1n8wcf134yl0osr****	The ID of the SSL client certificate.
SslVpnServerId	String	No	vss-bp18q7hzj6largv4v****	The ID of the SSL server.

Response parameters

Parameter	Type	Example value	Description
PageNumber	Integer	1	The current page number.
PageSize	Integer	10	The number of entries per page.

Parameter	Type	Example value	Description
RequestId	String	5BE01CD7-5A50-472D-AC14-CA181C5C03BE	The ID of the request.
SslVpnClientCertKeys	Array		The details of SSL client certificates.
SslVpnClientCertKey			The details of SSL client certificates.
CreateTime	Long	1492747187000	The time when the SSL client certificate was created.
EndTime	Long	1494966335000	The time when the SSL client certificate expires.
Name	String	cert1	The name of the SSL client certificate.
RegionId	String	cn-hangzhou	The region of the SSL client certificate.
SslVpnClientCertId	String	vsc-bp1n8wcf134yl0osr****	The ID of the SSL client certificate.
SslVpnServerId	String	vss-bp18q7hzj6largv4v****	The ID of the SSL server.
Status	String	normal	The status of the client certificate. • **expiring-soon**: The certificate will expire in one week. • **normal**: Indicates that the certificate is in the normal state. • **expired**: Indicates that the certificate is expired.
TotalCount	Integer	1	The total number of entries.

Examples

Request example

```
http(s)://vpc.aliyuncs.com/? Action=DescribeSslVpnClientCerts
&RegionId=cn-hangzhou
&<Common request parameters>
```

Response example

`XML` format

```
<DescribeSslVpnServersResponse>
    <PageNumber>1</PageNumber>
    <TotalCount>1</TotalCount>
    <PageSize>10</PageSize>
    <SslVpnServers>
        <SslVpnServer>
            <RegionId>cn-hanghzou</RegionId>
            <SslVpnServerId>vss-bp18q7hzj6largv4v****</SslVpnServerId>
            <VpnGatewayId>vpn-bp1q8bgx4xnkm2ogj****</VpnGatewayId>
            <Name>test</Name>
            <CLientIpPool>10.10.10.20/24</CLientIpPool>
            <LocalSubnet>10.10.10.10/24</LocalSubnet>
            <Proto>UDP</Proto>
            <Port>1194</Port>
            <Cipher>AES-128-CBC</Cipher>
            <Compress>true</Compress>
            <CreateTime>1492753580000</CreateTime>
            <Connections>0</Connections>
            <MaxConnections>5</MaxConnections>
            <InternetIp>47.98.xx.xx</InternetIp>
        </SslVpnServer>
    </SslVpnServers>
    <RequestId>DF11D6F6-E35A-41C3-9B20-6FC8A901FE65</RequestId>
</DescribeSslVpnServersResponse>
```

`JSON` format

```
{
 "DescribeSslVpnServersResponse":{
  "PageNumber":"1",
  "TotalCount":"1",
  "SslVpnServers":{
   "SslVpnServer":{
    "VpnGatewayId":"vpn-bp1q8bgx4xnkm2ogj****",
    "CLientIpPool":"10.10.10.20/24",
    "Proto":"UDP",
    "Cipher":"AES-128-CBC",
    "InternetIp":"47.98.xx.xx",
    "SslVpnServerId":"vss-bp18q7hzj6largv4v****",
    "Name":"test",
    "Port":"1194",
    "MaxConnections":"5",
    "RegionId":"cn-hanghzou",
    "CreateTime":"1492753580000",
    "Compress":"true",
    "LocalSubnet":"10.10.10.10/24",
    "Connections":"0"
   }
  },
  "PageSize":"10",
  "RequestId":"DF11D6F6-E35A-41C3-9B20-6FC8A901FE65"
 }
}
```

Errors

HTTP status code	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	You are not authorized to operate on this resource.
403	Forbidden	User not authorized to operate on the specified resource.	You are not authorized to operate on this resource.

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

17.25. DeleteVpnPbrRouteEntry

Deletes a VPN policy-based route.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteVpnPbrRouteEntry	The operation that you want to perform. Set the value to **DeleteVpnPbrRouteEntry**.
NextHop	String	Yes	vco-bp15oes1py4i66rmd****	The next hop of the policy-based route.
RegionId	String	Yes	cn-hangzhou	The region of the VPN policy-based route. You can call the DescribeRegions operation to query region IDs.
RouteDest	String	Yes	10.0.0.0/24	The destination CIDR block of the policy-based route.
RouteSource	String	Yes	192.168.1.0/24	The source CIDR block of the policy-based route.
VpnGatewayId	String	Yes	vpn-bp1a3kqjiiq9legfx****	The ID of the VPN gateway.
Weight	Integer	Yes	0	The weight of the policy-based route. Valid values: **0** or **100**.
ClientToken	String	No	d7d24a21-f4ba-4454-9173-b3828dae492b	The client token that is used to ensure the idempotence of the request. The client generates the value. Ensure that the value is unique among different requests. The token must contain 1 to 64 ASCII characters in length.
OverlayMode	String	No	Ipsec	The tunneling protocol. Set the value to **Ipsec** (IPsec tunneling protocol).

Response parameters

Parameter	Type	Example	Description
RequestId	String	5BE01CD7-5A50-472D-AC14-CA181C5C03BE	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=DeleteVpnPbrRouteEntry
&NextHop=vco-bp15oes1py4i66rmd****
&RegionId=cn-hangzhou
&RouteDest=10.0.0.0/24
&RouteSource=192.168.1.0/24
&VpnGatewayId=vpn-bp1a3kqjiiq9legfx****
&Weight=0
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteVpnPbrRouteEntryResponse>
    <RequestId>5BE01CD7-5A50-472D-AC14-CA181C5C03BE</RequestId>
</DeleteVpnPbrRouteEntryResponse>
```

`JSON` format

```
{
 "RequestId":"E82612A9-CB90-4D7E-B394-1DB7F6509B29"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are not authorized to perform this operation on the specified resource. You can apply for the permission and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are not authorized to perform this operation on the specified resource. To acquire the required permissions, submit a ticket.
400	Resource.QuotaFull	The quota of resource is full	The error message returned because the resource quota has reached the upper limit.
404	InvalidVpnGatewayInstanceId.NotFound	The specified vpn gateway instance id does not exist.	The error message returned because the specified VPN gateway does not exist. You can check whether the configuration of the VPN gateway is valid.
400	VpnGateway.Configuring	The specified service is configuring.	The error message returned because the specified service is being configured. Try again later.
400	VpnGateway.FinancialLocked	The specified service is financial locked.	The error message returned because the service is overdue. Add funds before you enable the service.

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

17.26. DeleteVpnRouteEntry

Deletes a VPN destination route.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DeleteVpnRouteEntry	The name of this action. Value: **DeleteVpnRouteEntry**
NextHop	String	Yes	vco-bp15oes1py4i66rmd****	The next hop of the destination route.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the VPN destination route belongs. To query the region ID, call DescribeRegions.
RouteDest	String	Yes	10.0.0.0/24	The destination CIDR block of the destination route entry.
VpnGatewayId	String	Yes	vpn-bp1a3kqjiiq9legfx****	The ID of the VPN Gateway.
Weight	Integer	Yes	0	The weight of the destination route entry. Valid values: **0|100**.
ClientToken	String	No	d7d24a21-f4ba-4454-9173-b3828dae492b	The client token that guarantees the idempotence of the request. The value of this parameter is generated by the client and must be unique among different requests. It must be 1 to 64 ASCII characters in length.
OverlayMode	String	No	Ipsec	The tunneling protocol. Valid value: **Ipsec** (IPsec tunneling protocol).

Response parameters

Parameter	Type	Example value	Description
RequestId	String	5BE01CD7-5A50-472D-AC14-CA181C5C03BE	The ID of the request.

Examples

Request example

```
http(s)://[Endpoint]/? Action=DeleteVpnRouteEntry
&NextHop=vco-bp15oes1py4i66rmd****
&RegionId=cn-hangzhou
&RouteDest=10.0.0.0/24
&VpnGatewayId=vpn-bp1a3kqjiiq9legfx****
&Weight=0
&<CommonParameters>
```

Response example

`XML` format

```
<DeleteVpnRouteEntryResponse>
    <RequestId>5BE01CD7-5A50-472D-AC14-CA181C5C03BE</RequestId>
</DeleteVpnRouteEntryResponse>
```

`JSON` format

```
{
 "RequestId":"E82612A9-CB90-4D7E-B394-1DB7F6509B29"
}
```

Errors

HTTP status code	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	You are not authorized to operate on this resource.
403	Forbidden	User not authorized to operate on the specified resource.	You are not authorized to operate on this resource.
400	Resource.QuotaFull	The quota of resource is full	The resource quota has been reached.
404	InvalidVpnGatewayInstanceId.NotFound	The specified vpn gateway instance id does not exist.	The specified VPN Gateway does not exist.
400	VpnGateway.Configuring	The specified service is configuring.	The specified service is being configured.
400	VpnGateway.FinancialLocked	The specified service is financial locked.	The specified service is locked due to insufficient account balance.

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

17.27. CreateVpnPbrRouteEntry

Creates a policy-based route for a VPN gateway.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateVpnPbrRouteEntry	The operation that you want to perform. Set the value to **CreateVpnPbrRouteEntry**.
NextHop	String	Yes	vco-bp15oes1py4i66rmd****	The next hop of the policy-based route.
PublishVpc	Boolean	Yes	true	Specifies whether to advertise the policy-based route to the route table of the associated virtual private cloud (VPC). Valid values: • **true**: Advertises the policy-based route to the route table of the associated VPC . • **false**: Does not advertise the policy-based route to the route table of the associated VPC.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the policy-based route is created. You can call the DescribeRegions operation to query region IDs.
RouteDest	String	Yes	10.0.0.0/24	The destination CIDR block of the policy-based route.

Parameter	Type	Required	Example	Description
RouteSource	String	Yes	192.168.1.0/24	The source CIDR block of the policy-based route.
VpnGatewayId	String	Yes	vpn-bp1a3kqjiiq9legfx****	The ID of the VPN gateway.
Weight	Integer	Yes	0	The weight of the policy-based route. Valid values: **0** and **100**.
ClientToken	String	No	d7d24a21-f4ba-4454-9173-b3828dae492b	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can only contain ASCII characters and cannot exceed 64 characters in length.
Description	String	No	vpnroute1	The description of the policy-based route.
OverlayMode	String	No	Ipsec	The tunneling protocol.

Response parameters

Parameter	Type	Example	Description
CreateTime	Long	1492747187000	The time when the policy-based route was created.
Description	String	vpnroute1	The description of the policy-based route.
NextHop	String	vco-bp15oes1py4i66rmd****	The next hop of the policy-based route.
OverlayMode	String	Ipsec	The tunneling protocol.
RequestId	String	5BE01CD7-5A50-472D-AC14-CA181C5C03BE	The ID of the request.
RouteDest	String	10.0.0.0/24	The destination CIDR block of the policy-based route.
RouteSource	String	192.168.1.0/24	The source CIDR block of the policy-based route.
State	String	normal	The status of the policy-based route. Valid values: • **published**: The route is advertised. • **normal**: The route is not advertised.
VpnInstanceId	String	vpn-bp1cmw7jh1nfe43m9****	The ID of the VPN gateway.
Weight	Integer	0	The weight of the policy-based route. Valid values: **0** and **100**.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=CreateVpnPbrRouteEntry
&NextHop=vco-bp15oes1py4i66rmd****
&PublishVpc=true
&RegionId=cn-hangzhou
&RouteDest=10.0.0.0/24
&RouteSource=192.168.1.0/24
&VpnGatewayId=vpn-bp1a3kqjiiq9legfx****
&Weight=0
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateVpnPbrRouteEntryResponse>
  <RouteDest>10.0.0.0/24</RouteDest>
  <RouteSource>192.168.1.0/24</RouteSource>
  <VpnInstanceId>vpn-bp1cmw7jh1nfe43m9****</VpnInstanceId>
  <OverlayMode>Ipsec</OverlayMode>
  <State>published</State>
  <Weight>100</Weight>
  <CreateTime>1563873294331</CreateTime>
  <NextHop>vco-bp1tui07ob10fmuro****</NextHop>
</CreateVpnPbrRouteEntryResponse>
```

`JSON` format

```
{
 "RouteDest":"10.0.0.0/24",
 "VpnInstanceId":"vpn-bp1cmw7jh1nfe43m9****",
 "OverlayMode":"Ipsec",
 "Weight":100,
 "State":"published",
 "NextHop":"vco-bp1tui07ob10fmuro****",
 "CreateTime":1563873294331,
 "RouteSource":"192.168.1.0/24"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform the operation on the specified resource. You can apply for permissions and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. To acquire the required permissions, submit a ticket.
400	Resource.QuotaFull	The quota of resource is full	The error message returned because the resource quota has reached the upper limit.
404	InvalidVpnGatewayInstanceId.NotFound	The specified vpn gateway instance id does not exist.	The error message returned because the specified VPN gateway does not exist. You can check whether the configuration of the VPN gateway is valid.
400	VpnGateway.Configuring	The specified service is configuring.	The error message returned because the specified service is being configured. Try again later.
400	VpnGateway.FinancialLocked	The specified service is financial locked.	The error message returned because the service is suspended due to overdue payments. Add funds before you enable the service.

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

17.28. DescribeVpnRouteEntries

Queries a VPN destination route.

Debug

Use OpenAPI Explorer to perform debug operations and generate SDK code examples.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DescribeVpnRouteEntries	The name of this action. Value: **DescribeVpnRouteEntries**.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the VPN destination route belongs. To query the region ID, call DescribeRegions.
VpnGatewayId	String	Yes	vpn-bp1a3kqjiiq9legfx****	The ID of the VPN Gateway.
PageNumber	Integer	No	1	The page number. Default value: **1**.
PageSize	Integer	No	10	The number of rows per page in the paged query. Maximum value: **50**. Default value: **10**.

Response parameters

Parameter	Type	Example value	Description
PageNumber	Integer	10	The current page number.
PageSize	Integer	10	The number of entries per page.
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.
TotalCount	Integer	10	The total number of entries.
VpnRouteEntries			The details of the VPN destination route.
CreateTime	Long	1492747187000	The time when the VPN route was created.
NextHop	String	vco-bp15oes1py4i66rmd****	The next hop of the destination route.
RouteDest	String	10.0.0.0/24	The destination CIDR block of the destination route.
State	String	published	The status of the VPN destination route.
VpnInstanceId	String	vpn-bp1cmw7jh1nfe43m9****	The ID of the VPN Gateway.
Weight	Integer	0	The weight of the destination route. Valid values: **0|100**.

Examples

Request example

```
http(s)://[Endpoint]/? Action=DescribeVpnRouteEntries
&RegionId=cn-hangzhou
&VpnGatewayId=vpn-bp1a3kqjiiq9legfx****
&<CommonParameters>
```

Response example

`XML` format

```
<DescribeVpnRouteEntriesResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>1</TotalCount>
  <VpnRouteEntries>
    <VpnRouteEntry>
      <RouteDest>10.0.0.0/24</RouteDest>
      <VpnInstanceId>vpn-bp1cmw7jh1nfe43m9****</VpnInstanceId>
      <State>normal</State>
      <Weight>100</Weight>
      <CreateTime>1563874074000</CreateTime>
      <NextHop>vco-bp1tui07ob10fmuro****</NextHop>
    </VpnRouteEntry>
  </VpnRouteEntries>
  <PageSize>10</PageSize>
  <RequestId>BF3995A6-FA4F-4C74-B90F-89ECF4BFF4D5</RequestId>
</DescribeVpnRouteEntriesResponse>
```

`JSON` format

```
{
 "PageNumber":1,
 "TotalCount":1,
 "PageSize":10,
 "VpnRouteEntries":{
  "VpnRouteEntry":[
   {
    "RouteDest":"10.0.0.0/24",
    "VpnInstanceId":"vpn-bp1cmw7jh1nfe43m9****",
    "Weight":100,
    "State":"normal",
    "NextHop":"vco-bp1tui07ob10fmuro****",
    "CreateTime":1563874074000
   }
  ]
 },
 "RequestId":"BF3995A6-FA4F-4C74-B90F-89ECF4BFF4D5"
}
```

Errors

HTTP status code	Error code	Error message	Description
403	Forbidden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	You are not authorized to use this resource. Apply for the permission and try again.
403	Forbidden	User not authorized to operate on the specified resource.	You are not authorized to use this resource. For more information, open a ticket.

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

17.29. ModifyVpnRouteEntryWeight

Modifies the weight of a VPN destination route.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	ModifyVpnRouteEntryWeight	The name of this action. Value: **ModifyVpnRouteEntryWeight**
NewWeight	Integer	Yes	100	The new weight. Valid values: **0|100**.
NextHop	String	Yes	vco-bp15oes1py4i66rmd****	The next hop of the destination route.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the VPN destination route belongs. To query the region ID, call DescribeRegions.
RouteDest	String	Yes	10.0.0.0/24	The destination CIDR block of the destination route entry.
VpnGatewayId	String	Yes	vpn-bp1a3kqjiiq9legfx****	The ID of the VPN Gateway.
Weight	Integer	Yes	0	The previous weight before the modification. Valid values: **0|100**.
ClientToken	String	No	d7d24a21-f4ba-4454-9173-b3828dae492b	The client token used to guarantee the idempotence of the request. The value of this parameter is generated by the client and must be unique among different requests. It must be 1 to 64 ASCII characters in length.
OverlayMode	String	No	Ipsec	The tunneling protocol. Valid value: **Ipsec** (IPsec tunneling protocol).

Response parameters

Parameter	Type	Example value	Description
RequestId	String	5BE01CD7-5A50-472D-AC14-CA181C5C03BE	The ID of the request.

Examples

Request example

```
http(s)://[Endpoint]/? Action=ModifyVpnRouteEntryWeight
&NewWeight=100
&NextHop=vco-bp15oes1py4i66rmd****
&RegionId=cn-hangzhou
&RouteDest=10.0.0.0/24
&VpnGatewayId=vpn-bp1a3kqjiiq9legfx****
&Weight=0
&<CommonParameters>
```

Response example

`XML` format

```
<ModifyVpnRouteEntryWeightResponse>
    <RequestId>5BE01CD7-5A50-472D-AC14-CA181C5C03BE</RequestId>
</ModifyVpnRouteEntryWeightResponse>
```

`JSON` format

```
{
  "RequestId": "E82612A9-CB90-4D7E-B394-1DB7F6509B29"
}
```

Errors

HTTP status code	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	You are not authorized to operate on this resource.
403	Forbidden	User not authorized to operate on the specified resource.	You are not authorized to operate on this resource.
400	Resource.QuotaFull	The quota of resource is full	The resource quota has been reached.
404	InvalidVpnGatewayInstanceId.NotFound	The specified vpn gateway instance id does not exist.	The specified VPN Gateway does not exist.
400	VpnGateway.Configuring	The specified service is configuring.	The specified service is being configured.
400	VpnGateway.FinancialLocked	The specified service is financial locked.	The specified service is locked due to insufficient account balance.

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

17.30. PublishVpnRouteEntry

Publishes a VPN route to a VPC.

Debug

Use OpenAPI Explorer to perform debug operations and generate SDK code examples.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	PublishVpnRouteEntry	The name of this action. Value: **PublishVpnRouteEntry**.
NextHop	String	Yes	vco-bp15oes1py4i66rmd****	The next hop of the VPN route.
PublishVpc	Boolean	Yes	true	Indicates whether to publish the VPN route to the VPC. Valid values: • **true**: The VPN route is published to the VPC. • **false**: The VPN route is not published to the VPC.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the VPN route belongs. To query the region ID, call DescribeRegions.

Parameter	Type	Required?	Example value	Description
RouteDest	String	Yes	10.0.0.0/24	The destination CIDR block of the VPN route.
RouteType	String	Yes	pbr	The type of the VPN route. Valid values: • **pbr**: policy route. • **dbr**: destination route.
VpnGatewayId	String	Yes	vpn-bp1a3kqjiiq9legfx****	The ID of the VPN Gateway.
ClientToken	String	No	d7d24a21-f4ba-4454-9173-b3828dae492b	The client token used to guarantee the idempotence of the request. The value of this parameter is generated by the client and must be unique among different requests. It must be 1 to 64 ASCII characters in length.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	5BE01CD7-5A50-472D-AC14-CA181C5C03BE	The ID of the request.

Examples

Request example

```
http(s)://[Endpoint]/? Action=PublishVpnRouteEntry
&NextHop=vco-bp15oes1py4i66rmd****
&PublishVpc=true
&RegionId=cn-hangzhou
&RouteDest=10.0.0.0/24
&RouteType=PBR
&VpnGatewayId=vpn-bp1a3kqjiiq9legfx****
&<CommonParameters>
```

Response example

`XML` format

```
<PublishVpnRouteEntryResponse>
    <RequestId>EE4C2417-9437-4333-BDEB-8493F7AA7258</RequestId>
</PublishVpnRouteEntryResponse>
```

`JSON` format

```
{
 "RequestId":"CB2793A8-845F-444C-8E93-76F1BBDF9C78"
}
```

Errors

HTTP status code	Error code	Error message	Description
403	Forbidden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	You are not authorized to use this resource. Apply for the permission and try again.

HTTP status code	Error code	Error message	Description
403	Forbidden	User not authorized to operate on the specified resource.	You are not authorized to use this resource. For more information, open a ticket.
400	Resource.QuotaFull	The quota of resource is full.	The resource quota has been reached.
404	InvalidVpnGatewayInstanceId.NotFound	The specified vpn gateway instance id does not exist.	The specified VPN Gateway does not exist.
400	VpnGateway.Configuring	The specified service is configuring.	The specified service is being configured.
400	VpnGateway.FinancialLocked	The specified service is financial locked.	The specified service is locked due to insufficient account balance.

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

17.31. DescribeVpnPbrRouteEntries

Queries a VPN policy route.

Debug

Use OpenAPI Explorer to perform debug operations and generate SDK code examples.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DescribeVpnPbrRouteEntries	The name of this action. Value: **DescribeVpnPbrRouteEntries**.
RegionId	String	Yes	cn-hangzhou	The region of the VPN policy route. To query the region ID, call DescribeRegions.
VpnGatewayId	String	Yes	vpn-bp1a3kqjiiq9legfx****	The ID of the VPN Gateway.
PageNumber	Integer	No	10	The page number. Default value: **1**.
PageSize	Integer	No	10	The number of rows per page in the paged query. Maximum value: **50**. Default value: **10**.

Response parameters

Parameter	Type	Example value	Description
PageNumber	Integer	1	The current page number.
PageSize	Integer	10	The number of entries per page.
RequestId	String	5BE01CD7-5A50-472D-AC14-CA181C5C03BE	The ID of the request.
TotalCount	Integer	12	The number of queried entries.
VpnPbrRouteEntries			The details of the VPN policy route.

Parameter	Type	Example value	Description
CreateTime	Long	1492747187000	The time when the policy route was created.
NextHop	String	vco-bp15oes1py4i66rmd****	The next hop of the policy route.
RouteDest	String	10.0.0.0/24	The destination CIDR block of the policy route.
RouteSource	String	192.168.0.0/24	The source CIDR block of the policy route.
State	String	published	The status of the VPN policy route. Valid values: • **published**: The VPN policy route is published. • **normal**: The VPN policy route is not published.
VpnInstanceId	String	vpn-bp1cmw7jh1nfe43m9****	The ID of the VPN Gateway.
Weight	Integer	0	The weight of the policy route. Valid values: **0**|**100**.

Examples

Request example

```
http(s)://[Endpoint]/? Action=DescribeVpnPbrRouteEntries
&RegionId=cn-hangzhou
&VpnGatewayId=vpn-bp1a3kqjiiq9legfx****
&<CommonParameters>
```

Response example

`XML` format

```
<DescribeVpnPbrRouteEntriesResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>1</TotalCount>
  <RequestId>E5D94DC7-AEC7-4E73-A203-61B04D1F1160</RequestId>
  <PageSize>10</PageSize>
  <VpnPbrRouteEntries>
    <VpnPbrRouteEntry>
      <RouteDest>10.0.0.0/32</RouteDest>
      <VpnInstanceId>vpn-bp1cmw7jh1nfe43m9****</VpnInstanceId>
      <State>published</State>
      <Weight>100</Weight>
      <CreateTime>1563881012000</CreateTime>
      <NextHop>vco-bp1tui07ob10fmuro****</NextHop>
      <RouteSource>11.0.0.0/32</RouteSource>
    </VpnPbrRouteEntry>
  </VpnPbrRouteEntries>
</DescribeVpnPbrRouteEntriesResponse>
```

`JSON` format

```
{
 "PageNumber":1,
 "TotalCount":1,
 "PageSize":10,
 "RequestId":"E5D94DC7-AEC7-4E73-A203-61B04D1F1160",
 "VpnPbrRouteEntries":{
  "VpnPbrRouteEntry":[
   {
    "RouteDest":"10.0.0.0/32",
    "VpnInstanceId":"vpn-bp1cmw7jh1nfe43m9****",
    "Weight":100,
    "State":"published",
    "RouteSource":"11.0.0.0/32",
    "NextHop":"vco-bp1tui07ob10fmuro****",
    "CreateTime":1563881012000
   }
  ]
 }
}
```


Errors

HTTP status code	Error code	Error message	Description
403	Forbidden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	You are not authorized to use this resource. Apply for the permission and try again.
403	Forbidden	User not authorized to operate on the specified resource.	You are not authorized to use this resource. For more information, open a ticket.

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

17.32. ModifyVpnPbrRouteEntryWeight

Modifies the weight of a VPN policy route.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	ModifyVpnPbrRouteEntryWeight	The name of this action. Value: **ModifyVpnPbrRouteEntryWeight**.
NewWeight	Integer	Yes	100	The new weight. Valid values: **0|100**.
NextHop	String	Yes	vco-bp15oes1py4i66rmd****	The next hop of the policy route.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the VPN policy route belongs. To query the region ID, call DescribeRegions.
RouteDest	String	Yes	10.0.0.0/24	The destination CIDR block of the policy route.
RouteSource	String	Yes	192.168.1.0/24	The source CIDR block of the policy route.

Parameter	Type	Required?	Example value	Description
VpnGatewayId	String	Yes	vpn-bp1a3kqjiiq9legfx****	The ID of the VPN Gateway.
Weight	Integer	Yes	0	The weight set before the VPN policy route is modified. Valid values: **0|100**.
ClientToken	String	No	d7d24a21-f4ba-4454-9173-b3828dae492b	The client token. It is used to ensure the idempotence of the request. The value of this parameter is generated by the client and must be unique among different requests. It must be 1 to 64 ASCII characters in length.
OverlayMode	String	No	Ipsec	The tunneling protocol. Valid value: **Ipsec** (IPsec tunneling protocol).

Response parameters

Parameter	Type	Example value	Description
RequestId	String	5BE01CD7-5A50-472D-AC14-CA181C5C03BE	The ID of the request.

Examples

Request example

```
http(s)://[Endpoint]/? Action=ModifyVpnPbrRouteEntryWeight
&NewWeight=100
&NextHop=vco-bp15oes1py4i66rmd****
&RegionId=cn-hangzhou
&RouteDest=10.0.0.0/24
&RouteSource=192.168.1.0/24
&VpnGatewayId=vpn-bp1a3kqjiiq9legfx****
&Weight=100
&<CommonParameters>
```

Response example

`XML` format

```
<ModifyVpnPbrRouteEntryWeightResponse>
    <RequestId>5BE01CD7-5A50-472D-AC14-CA181C5C03BE</RequestId>
</ModifyVpnPbrRouteEntryWeightResponse>
```

`JSON` format

```
{
 "RequestId":"E82612A9-CB90-4D7E-B394-1DB7F6509B29"
}
```

Errors

HTTP status code	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	You are not authorized to operate on this resource.
403	Forbidden	User not authorized to operate on the specified resource.	You are not authorized to operate on this resource.

HTTP status code	Error code	Error message	Description
400	Resource.QuotaFull	The quota of resource is full	The resource quota has been reached.
404	InvalidVpnGatewayInstanceId.NotFound	The specified vpn gateway instance id does not exist.	The specified VPN Gateway does not exist.
400	VpnGateway.Configuring	The specified service is configuring.	The specified service is being configured.
400	VpnGateway.FinancialLocked	The specified service is financial locked.	The specified service is locked due to insufficient account balance.

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

17.33. CreateVpnRouteEntry

Creates a VPN destination route.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	CreateVpnRouteEntry	The name of this action.Value: **CreateVpnRouteEntry**
NextHop	String	Yes	vco-bp15oes1py4i66rmd****	The next hop of the destination route entry.
PublishVpc	Boolean	Yes	true	Indicates whether to publish the destination route to the VPC. Valid values: • **true**: Publish the destination route to the VPC. • **false**: Do not publish the destination route to the VPC.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the VPN destination route belongs. To query the region ID, call DescribeRegions.
RouteDest	String	Yes	10.0.0.0/24	The destination CIDR block of the destination route.
VpnGatewayId	String	Yes	vpn-bp1a3kqjiiq9legfx****	The ID of the VPN Gateway.
Weight	Integer	Yes	0	The weight of the destination route. Valid values: **0|100**.
ClientToken	String	No	d7d24a21-f4ba-4454-9173-b3828dae492b	The client token used to guarantee the idempotence of the request. This parameter value is generated by the client and must be unique. It must be 1 to 64 ASCII characters in length.
Description	String	No	mytest	The description of the VPN destination route.

Parameter	Type	Required?	Example value	Description
OverlayMode	String	No	Ipsec	The overlay mode.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	5BE01CD7-5A50-472D-AC14-CA181C5C03BE	The ID of the request.
VpnInstanceId	String	vpn-bp1cmw7jh1nfe43m9****	The ID of the VPN Gateway.
RouteDest	String	10.0.0.0/24	The destination CIDR block of the destination route.
NextHop	String	vco-bp15oes1py4i66rmd****	The next hop of the destination route.
Weight	Integer	0	The weight of the destination route. Valid values: **0|100**.
OverlayMode	String	Ipsec	The overlay mode.
Description	String	mytest	The description of the VPN destination route.
State	String	Published	The status of the VPN destination route.
CreateTime	Long	1492747187000	The time when the VPN destination route was created.

Examples

Request example

```
http(s)://[Endpoint]/? Action=CreateVpnRouteEntry
&NextHop=vco-bp15oes1py4i66rmd****
&PublishVpc=true
&RegionId=cn-hangzhou
&RouteDest=10.0.0.0/24
&VpnGatewayId=vpn-bp1a3kqjiiq9legfx****
&Weight=0
&<CommonParameters>
```

Response example

`XML` format

```
<CreateVpnRouteEntryResponse>
  <RouteDest>10.0.0.0/24</RouteDest>
  <VpnInstanceId>vpn-bp1cmw7jh1nfe43m9****</VpnInstanceId>
  <OverlayMode>Ipsec</OverlayMode>
  <State>published</State>
  <Weight>100</Weight>
  <CreateTime>1563873294331</CreateTime>
  <NextHop>vco-bp1tui07ob10fmuro****</NextHop>
    <RequestId>EE4C2417-9437-4333-BDEB-8493F7AA7258</RequestId>
</CreateVpnRouteEntryResponse>
```

`JSON` format

```
{
  "RouteDest": "10.0.0.0/24",
  "VpnInstanceId": "vpn-bp1cmw7jh1nfe43m9****",
  "OverlayMode": "Ipsec",
  "State": "published",
  "Weight": 100,
  "CreateTime": 1563873294331,
  "NextHop": "vco-bp1tui07ob10fmuro****",
  "RequestId":"CB2793A8-845F-444C-8E93-76F1BBDF9C78"
}
```

Errors

HTTP status code	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	You are not authorized to operate on this resource.
403	Forbidden	User not authorized to operate on the specified resource.	You are not authorized to operate on this resource.
400	Resource.QuotaFull	The quota of resource is full	The resource quota has been reached.
404	InvalidVpnGatewayInstanceId.NotFound	The specified vpn gateway instance id does not exist.	The specified VPN Gateway does not exist.
400	VpnGateway.Configuring	The specified service is configuring.	The specified service is being configured.
400	VpnGateway.FinancialLocked	The specified service is financial locked.	The specified service is locked due to insufficient account balance.

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

17.34. DescribeVpnSslServerLogs

Queries the log of an SSL-VPN server.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	No	DescribeVpnSslServerLogs	The operation that you want to perform. Set the value to **DescribeVpnSslServerLogs**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the SSL-VPN server is created. You can call the DescribeRegions operation to query the most recent region list.
VpnSslServerId	String	Yes	vss-bp155e9yclsg1xgq4****	The ID of the SSL-VPN server.
SslVpnClientCertId	String	No	vsc-m5euof6s5jy8vs5kd****	The ID of the SSL client certificate.

Parameter	Type	Required	Example	Description
From	Integer	No	1600738962	The beginning of the time range to query. The value must be a UTC timestamp that is accurate to seconds. For example, 1600738962 indicates 09:42:42 (UTC) on September 22, 2020. **Note** If you specify **From**, you must also specify **To** or **MinutePeriod**.
To	Integer	No	1600738962	The end of the time range to query. The value must be a UTC timestamp that is accurate to seconds. For example, 1600738962 indicates 09:42:42 (UTC) on September 22, 2020. **Note** If you specify **To**, you must also specify **From** or **MinutePeriod**.
MinutePeriod	Integer	No	10	The interval at which log data is queried. Unit: minutes. **Note** If both **From** and **To** are not specified, you must specify **MinutePeriod**.
PageNumber	Integer	No	1	The number of the page to return. Default value: **1**.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: **50**. Default value: **10**.

Response parameters

Parameter	Type	Example	Description
PageSize	Integer	1	The number of entries returned per page.
PageNumber	Integer	1	The number of the returned page.
RequestId	String	5BE01CD7-5A50-472D-AC14-CA181C5C03BE	The ID of the request.
Count	Integer	10	The number of log entries.
IsCompleted	Boolean	true	Indicates whether the log data is accurate. Valid values: • **true**: accurate • **false**: inaccurate
Data	Array of String	"date": "Mon, 25 Oct 2021 08:53:11 GMT"	An array of log entries. Each item in the array indicates a log entry.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeVpnSslServerLogs
&RegionId=cn-hangzhou
&VpnSslServerId=vss-bp155e9yclsg1xgq4****
&From=1600738962
&To=1600738962
&MinutePeriod=10
&Common request parameters
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeVpnSslServerLogsResponse>
  <PageSize>1</PageSize>
  <PageNumber>1</PageNumber>
  <RequestId>5BE01CD7-5A50-472D-AC14-CA181C5C03BE</RequestId>
  <Count>10</Count>
  <IsCompleted>true</IsCompleted>
  <Data>"date": "Mon, 25 Oct 2021 08:53:11 GMT"</Data>
</DescribeVpnSslServerLogsResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
 "PageSize" : 1,
 "PageNumber" : 1,
 "RequestId" : "5BE01CD7-5A50-472D-AC14-CA181C5C03BE",
 "Count" : 10,
 "IsCompleted" : true,
 "Data" : [ "\"date\": \"Mon, 25 Oct 2021 08:53:11 GMT\"" ]
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	The error message returned because you are unauthorized to perform this operation on the specified resource. Apply for the required permissions and try again.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform this operation on the specified resource. To acquire the required permissions, submit a ticket.

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

17.35. DescribeSslVpnClientCert

Queries the information about a specified SSL client certificate.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DescribeSslVpnClientCert	The name of this action. Value: **DescribeSslVpnClientCert**.

Parameter	Type	Required?	Example value	Description
RegionId	String	Yes	cn-hangzhou	The region of the SSL client certificate to query. To query the region ID, call DescribeRegions.
SslVpnClientCertId	String	Yes	vsc-bp17r58rjf5r1gjyr****	The ID of the SSL client certificate to query.

Response parameters

Parameter	Type	Example value	Description
CaCert	String	Ca certificate	The CA certificate.
ClientCert	String	Client certificate	The client certificate.
ClientConfig	String	Client configuration	The client configuration.
ClientKey	String	Client key	The client key.
CreateTime	Long	1552550980000	The time when the SSL client certificate was created.
EndTime	Long	1647158980000	The time when the SSL client certificate expires.
Name	String	abc	The name of the client certificate.
RegionId	String	cn-hangzhou	The region of the SSL client certificate.
RequestId	String	5BE01CD7-5A50-472D-AC14-CA181C5C03BE	The ID of the request.
SslVpnClientCertId	String	vsc-bp13k5mp4tg8v3z9b****	The ID of the SSL client certificate.
SslVpnServerId	String	vss-bp155e9yclsg1xgq4****	The ID of the SSL server.
Status	String	normal	The status of the client certificate. • **expiring-soon**: The certificate will expire in one week. • **normal**: Indicates that the certificate is in the normal state. • **expired**: Indicates that the certificate is expired.

Examples

Request example

```
http(s)://vpc.aliyuncs.com/? Action=DescribeSslVpnClientCert
&RegionId=cn-hangzhou
&SslVpnClientCertId=vsc-bp17r58rjf5r1gjyr****
&<CommonParameters>
```

Response example

`XML` format

```
<DescribeSslVpnServersResponse>
    <Name>df</Name>
    <Status>normal</Status>
    <ClientConfig>****</ClientConfig>
    <ClientCert>****</ClientCert>
    <CreateTime>1552550980000</CreateTime>
    <RegionId>cn-hangzhou</RegionId>
    <RequestId>49D54005-6E0E-4132-B305-F3A24DEDDDC9</RequestId>
    <EndTime>1647158980000</EndTime>
    <SslVpnClientCertId>vsc-bp13k5mp4tg8v3z9b****</SslVpnClientCertId>
    <ClientKey>****</ClientKey>
    <CaCert>****</CaCert>
    <SslVpnServerId>vss-bp155e9yclsg1xgq4****</SslVpnServerId>
</DescribeSslVpnServersResponse>
```

`JSON` format

```
{
 "Name":"df",
 "ClientConfig":"****",
 "Status":"normal",
 "ClientCert":"****",
 "RequestId":"49D54005-6E0E-4132-B305-F3A24DEDDDC9",
 "RegionId":"cn-hangzhou",
 "CreateTime":1552550980000,
 "SslVpnClientCertId":"vsc-bp13k5mp4tg8v3z9b****",
 "EndTime":1647158980000,
 "ClientKey":"****",
 "SslVpnServerId":"vss-bp155e9yclsg1xgq4****",
 "CaCert":"****"
}
```

Errors

HTTP status code	Error code	Error message	Description
403	Forbbiden.SubUser	User not authorized to operate on the specified resource as your account is created by another user.	You are not authorized to operate on this resource.
403	Forbidden	User not authorized to operate on the specified resource.	You are not authorized to operate on this resource.

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

18.NAT Gateway

18.1. CreateNatGateway

Creates a NAT gateway.

Usage notes

You can call this operation to create an enhanced Internet NAT gateway or a virtual private cloud (VPC) NAT gateway.

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

- When you create an enhanced NAT gateway for the first time, the system automatically creates the service-linked role AliyunServiceRoleForNatgw. Then, the system attaches the permission policy AliyunServiceRolePolicyForNatgw to the role. This allows the NAT gateway to access other resources on Alibaba Cloud. For more information, see Service-linked roles.
- After you create an enhanced Internet NAT gateway, a route entry is automatically added to the route table of the VPC. The destination CIDR block of the route entry is 0.0.0.0/0 and the next hop is the NAT gateway. This ensures that traffic is routed to the NAT gateway.
- **CreateNatGateway** is an asynchronous operation. After you make a request, an ID of an Internet NAT gateway or a VPC NAT gateway is returned, but the specified NAT gateway is not created. The system creates the NAT gateway in the background. You can call the DescribeNatGateways to query the status of a NAT gateway:
  - If a NAT gateway is in the **Creating** state, the NAT gateway is being created. In this case, you can only perform query operations.
  - If a NAT gateway is in the **Available** state, the NAT gateway is created. It takes approximately 1 to 3 minutes to create a NAT gateway.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateNatGateway	The operation that you want to perform. Set the value to **CreateNatGateway**.
RegionId	String	Yes	cn-hangzhou	The region ID of the NAT gateway. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	Yes	vpc-bp1di7uewzmtvfuq8****	The ID of the VPC to which the NAT gateway belongs.

Parameter	Type	Required	Example	Description
VSwitchId	String	Yes	vsw-bp1e3se98n9fq8hle****	The ID of the vSwitch to which the Internet NAT gateway is attached. When you create a NAT gateway, you must specify a vSwitch for the NAT gateway. Then, the system assigns an idle private IP address from the vSwitch to the NAT gateway. • To create a NAT gateway in an existing vSwitch, make sure that the zone to which the vSwitch belongs supports NAT gateways. In addition, the vSwitch must have idle IP addresses. • If you do not have a vSwitch in the VPC, create a vSwitch in the zone that supports NAT gateways. Then, specify the vSwitch for the NAT gateway. **Note** You can query the zones that support enhanced NAT gateway by calling the ListEnhanhcedNatGatewayAvailableZones operation. You can query the number of available IP addresses in a vSwitch by calling the DescribeVSwitches operation.
NatType	String	Yes	Enhanced	The type of the NAT gateway. Set the value to **Enhanced**, which specifies an enhanced Internet NAT gateway. For more information, see Release notes of enhanced Internet NAT gateways.
NetworkType	String	No	internet	The type of the NAT gateway. Valid values: • **internet**: an Internet NAT gateway • **intranet**: a VPC NAT gateway
InstanceChargeType	String	No	PostPaid	The billing method of the NAT gateway. Set the value to **PostPaid**, which specifies the pay-as-you-go billing method. Default value: **PostPaid**. For more information, see Pay-as-you-go.
Spec	String	No	Small	The specification of the NAT gateway. Ignore this parameter.
InternetChargeType	String	No	PayByLcu	The metering method of the NAT gateway. Set the value to **PayByLcu**, which specifies the pay-by-actual-usage metering method.
Name	String	No	fortest	The name of the NAT gateway. The name must be 1 to 128 characters in length. If you do not set this parameter, a hyphen (-) is used as the name by default.
Description	String	No	testnat	The description of the NAT gateway. The description must be 1 to 256 characters in length.
PricingCycle	String	No	Month	Subscription. Ignore this parameter.
AutoPay	Boolean	No	false	Specifies whether to enable automatic payment. Ignore this parameter.

Parameter	Type	Required	Example	Description
Duration	String	No	1	The duration of the subscription. Ignore this parameter.
ClientToken	String	No	5A2CFF0E-5718-45B5-9D4D-70B3FF3898	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. **ClientToken** can contain only ASCII characters and cannot exceed 64 characters in length. **Note** If you do not set this parameter, the system automatically uses the request ID as the client token. The ID of each request may be unique.
SecurityProtectionEnabled	Boolean	No	false	Specifies whether to enable the firewall feature. Valid values: • **false** (default): no • **true**: yes
IcmpReplyEnabled	Boolean	No	false	Specifies whether to enable the ICMP non-retrieval feature. Valid values: • **false** (default): no • **true**: yes

Response parameters

Parameter	Type	Example	Description
NatGatewayId	String	ngw-112za33e4****	The ID of the NAT gateway.
ForwardTableIds	List	ftb-11tc6xgmv****	The list of DNAT entries.
RequestId	String	2315DEB7-5E92-423A-91F7-4C1EC9AD97C3	The ID of the request.
SnatTableIds	List	stb-SnatTableIds****	The list of SNAT entries.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateNatGateway
&RegionId=cn-hangzhou
&VpcId= vpc-bp1di7uewzmtvfuq8****
&VSwitchId=vsw-bp1e3se98n9fq8hle****
&NatType=Enhanced
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateNatGatewayResponse>
 <RequestId>2315DEB7-5E92-423A-91F7-4C1EC9AD97C3</RequestId>
 <SnatTableIds>
    <SnatTableId>stb-SnatTableIds****</SnatTableId>
 </SnatTableIds>
 <ForwardTableIds>
    <ForwardTableId>ftb-11tc6xgmv****</ForwardTableId>
 </ForwardTableIds>
 <NatGatewayId>ngw-112za33e4****</NatGatewayId>
</CreateNatGatewayResponse>
```

`JSON` format

```
{
  "CreateNatGatewayResponse": {
    "RequestId": "2315DEB7-5E92-423A-91F7-4C1EC9AD97C3",
    "SnatTableIds": {
      "SnatTableId": "stb-SnatTableIds****"
    },
    "ForwardTableIds": {
      "ForwardTableId": "ftb-11tc6xgmv****"
    },
    "NatGatewayId": "ngw-112za33e4****"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidVPCStatus	vpc incorrect status.	The error message returned because the operation is not supported when the VPC is in the current state. Check whether the state of the VPC is valid.
400	InvalidNatGatewayName.MalFormed	NatGateway name is not valid.	The error message returned because the specified gateway name is invalid.
400	InvalidNatGatewayDescription.MalFormed	NatGateway description is not valid.	The error message returned because the specified description is invalid.
400	MissingParameter.BandwidthPackage	only support one BandwidthPackage be created with NatGateway.	The error message returned because no EIP bandwidth plan is specified.
400	MissingParameter	Miss mandatory parameter.	The error message returned because required parameters are not set. Check whether you have set all the required parameters before you call this operation.
400	QuotaExceeded.BandwidthPackageIps	The specified ipCount exceeded quota.	The error message returned because the number of IP addresses has reached the upper limit. Request a quota increase on the Quota Management page.
400	InvalidParameter.Name.Malformed	The specified Name is not valid.	The error message returned because the specified name format is invalid.
400	InvalidParameter.Description.Malformed	The specified Description is not valid.	The error message returned because the specified description is invalid.
400	ZONE_NO_AVAILABLE_IP	The Zone have no available ip.	The error message returned because no IP address is available in the zone.
400	InvalidParameter.BandwidthPackage.n.ISP.ValueNotSupport	The specified ISP of BandwidthPackage is not valid.	The error message returned because the specified Internet Service Provider (ISP) of the EIP bandwidth plan is invalid.

HttpCode	Error code	Error message	Description
400	InvalidNatGatewayId.NotFound	The NatGatewayId not exist.	The error message returned because the specified NAT gateway ID does not exist. Check whether the value of the NatGatewayId parameter is valid.
400	VswitchStatusError	The VSwitch is creating .	The error message returned because the operation is not supported when the vSwitch is being created.
400	VpcStatusError	The Vpc is creating .	The error message returned because the operation is not supported when the VPC is being created.
400	InvalidParameter.Spec.ValueNotSupported	The specified Spec is not valid.	The error message returned because the specified gateway size is invalid.
400	Forbidden.CheckEntryRuleQuota	Route entry quota rule check error.	The error message returned because an error occurred when the system was checking the quota of route entries.
400	OperationFailed.VswNotBelongToVpc	Operation failed because the specified VSwitch is not bound to the same VPC with NAT gateway.	The error message returned because the specified vSwitch and NAT gateway are not deployed in the same VPC.
400	OperationFailed.EnhancedUserIsUnAuthorized	Operation failed because the user is not authorized to create an enhanced NAT gateway.	The error message returned because you do not have the permissions to create enhanced NAT gateways.
400	OperationUnsupported.PrePaidPyByLcu	The operation failed because the subscription NAT gateway does not support the pay-by-LCU billing method.	The error message returned because subscription NAT gateways do not support the pay-by-CU metering method.
400	OperationFailed.NormalInventoryNotEnough	Standard NAT gateways are no longer offered. You can create enhanced NAT gateways and set the correct natType.	The error message returned because you can no longer create standard NAT gateways. Set the NatType parameter to Enhanced when you create a NAT gateway.
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.
404	InvalidVpcId.NotFound	Specified value of VpcId is not found in our record.	The error message returned because the specified VPC does not exist. Check whether the specified VPC is valid.
404	InvalidZoneId.NotFound	Specified value of ZoneId is not exists.	The error message returned because the specified zone does not exist.
404	InvalidZoneId.NotFound	Can not find ZoneId for allocated ip.	The error message returned because the zone of the specified IP address is invalid.

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

18.2. ListEnhanhcedNatGatewayAvailableZones

Queries the zones that support NAT gateways.

Description

You can call this operation to query zones that support Internet NAT gateways and virtual private cloud (VPC) NAT gateways. The term "NAT gateway" in this topic refers to both NAT gateway types.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListEnhanhcedNatGatewayAvailableZones	The operation that you want to perform. Set the value to **ListEnhanhcedNatGatewayAvailableZones**.
RegionId	String	Yes	me-east-1	The ID of the region that you want to query. You can call the DescribeRegions operation to query the most recent region list. In this example, zones that support NAT gateways in the UAE (Dubai) region are queried.

Response parameters

Parameter	Type	Example	Description
RequestId	String	8AE6F367-52EA-535D-9A3D-EF23D70527C8	The ID of the request.
Zones	Array of Zone		The list of zones.
LocalName	String	Dubai Zone A	The name of the zone.
ZoneId	String	me-east-1a	The ID of the zone.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListEnhanhcedNatGatewayAvailableZones
&RegionId=me-east-1
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ListEnhanhcedNatGatewayAvailableZonesResponse>
 <RequestId>8AE6F367-52EA-535D-9A3D-EF23D70527C8</RequestId>
 <Zones>
    <ZoneId>me-east-1a</ZoneId>
    <LocalName>Dubai Zone A</LocalName>
 </Zones>
</ListEnhanhcedNatGatewayAvailableZonesResponse>
```

`JSON` format

```
{
  "RequestId": "8AE6F367-52EA-535D-9A3D-EF23D70527C8",
  "Zones": {
    "ZoneId": "me-east-1a",
    "LocalName": "Dubai Zone A"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

18.3. UpdateNatGatewayNatType

Upgrades a standard Internet NAT gateway to an enhanced Internet NAT gateway.

Description

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

- UpdateNatGatewayNatType is an asynchronous operation. After you make a request, the ID of the request is returned but the NAT gateway is not upgraded. The system upgrades the NAT gateway in the background. You can call the GetNatGatewayConvertStatus operation to query the upgrading progress of a NAT gateway. For more information, see GetNatGatewayConvertStatus.
  - If a NAT gateway is in the **processing state**, it indicates that the NAT gateway is being upgraded. You can only query the state of the NAT gateway. Other operations are not supported.
  - If a NAT gateway is in the **successful** state, it indicates that the NAT gateway is upgraded.
  - If a NAT gateway is in the **failed** state, it indicates that the system failed to upgrade the NAT gateway.
- Standard NAT gateways and enhanced NAT gateways use the same billing method and billable items.
- It takes about 5 minutes to upgrade a standard NAT gateway to an enhanced NAT gateway. During the upgrade process, transient connections may occur once or twice.
- You can only upgrade standard NAT gateways to enhanced NAT gateways. You are not allowed to downgrade enhanced NAT gateways to standard NAT gateways.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UpdateNatGatewayNatType	The operation that you want to perform. Set the value to **UpdateNatGatewayNatType**.
NatGatewayId	String	Yes	ngw-bp1b0lic8uz4r6vf2****	The ID of the standard NAT gateway to be upgraded.
NatType	String	Yes	Enhanced	The type of the Internet NAT gateway. Set the value to **Enhanced**, which specifies an enhanced Internet NAT gateway.
RegionId	String	Yes	cn-qingdao	The ID of the region where the NAT gateway that you want to upgrade is created. You can call the DescribeRegions operation to query the most recent region list.
VSwitchId	String	Yes	vsw-bp17nszybg8epodke*** *	The vSwitch to which the enhanced Internet NAT gateway belongs. **Note** If you do not set this parameter, the system creates an Internet NAT gateway in a random vSwitch of a virtual private cloud (VPC).

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: **true**: prechecks the request without upgrading the Internet NAT gateway. The system checks whether your AccessKey pair is valid, whether the Resource Access Management (RAM) user is authorized, and whether required parameters are set. If the request fails the precheck, the corresponding error message is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. **false** (default): If the request passes the precheck, a 2XX HTTP status code is returned and the standard NAT gateway is upgraded.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. **ClientToken** can contain only ASCII characters. It cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://vpc.aliyuncs.com/?Action=UpdateNatGatewayNatType
&NatGatewayId=ngw-bp1b0lic8uz4r6vf2****
&NatType=Enhanced
&RegionId=cn-qingdao
&VSwitchId=vsw-bp17nszybg8epodke****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<UpdateNatGatewayNatTypeResponse>
    <RequestId>7C01CA72-73FD-4056-B16A-42E392D47625</RequestId>
</UpdateNatGatewayNatTypeResponse>
```

`JSON` format

```
{
  "RequestId": "7C01CA72-73FD-4056-B16A-42E392D47625"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

HttpCode	Error code	Error message	Description
400	OperationUnsupported.NatConvert	The NAT gateway conversion function is not supported.	The error message returned because the NAT gateway upgrade feature is not supported.
400	NATGW_NOT_EXIST	The specified NAT gateway does not exist.	The error message returned because the specified NAT gateway does not exist.
400	OperationFailed.VpcNotExist	The specified VPC does not exist.	The error message returned because the specified VPC does not exist.
400	OperationFailed.VswNotExist	The specified VSwitch does not exist.	The error message returned because the specified vSwitch does not exist.
400	OperationFailed.NatTypeNotEnhanced	Operation failed because the specified NAT gateway type is not enhanced.	The error message returned because the specified gateway is not an enhanced NAT gateway.
400	OperationFailed.NatGwBindWithBandwidthPackage	Operation failed because the NAT gateway is bound to bandwidth packages.	The error message returned because one or more NAT service plans are associated with the NAT gateway.
400	IncorrectStatus.NatGateway	The status of NAT gateway is incorrect.	The error message returned because the state of the NAT gateway is invalid.
400	OperationFailed.EipInMiddleStatus	Operation failed because the status of EIP associated with the specified NAT gateway is abnormal.	The error message returned because the state of the elastic IP address (EIP) that is associated with the specified NAT gateway is abnormal.
400	OperationFailed.SnatInMiddleStatus	Operation failed because the status of the SNAT entry of the specified NAT gateway is abnormal.	The error message returned because the state of the Source Network Address Translation (SNAT) entry for the NAT gateway is abnormal.
400	OperationFailed.DnatInMiddleStatus	Operation failed because the status of the DNAT entry associated with the NAT gateway is abnormal.	The error message returned because the state of the Destination Network Address Translation (DNAT) entry for the NAT gateway is abnormal.
400	OperationFailed.NatGwRouteInMiddleStatus	Operation failed because the status of the route entry associated with the NAT gateway is abnormal.	The error message returned because the state of the route entry that is associated with the NAT gateway is abnormal.
400	OperationFailed.EnhancedInventoryNotEnough	The enhanced NAT gateway inventory is insufficient in the specified zone.	The error message returned because the stock of enhanced NAT gateways is insufficient in the specified zone.
400	OperationFailed.EnhancedUserIsUnAuthorized	Operation failed because the user is not authorized to create an enhanced NAT gateway.	The error message returned because you do not have the permissions to create enhanced NAT gateways.
400	OperationFailed.EnhancedRegion	Operation failed because enhanced NAT gateways are not available for sale in the specified region.	The error message returned because enhanced NAT gateways are not available for sale in the specified region.
400	OperationFailed.EnhancedQuotaExceed	Operation failed because the maximum number of enhanced NAT gateways in the same VPC is exceeded.	The error message returned because the number of enhanced NAT gateways in the specified VPC has reached the upper limit.
400	InvalidBandwidthPackageIdNumber.NotSupported	The number of BandwidthPackageIds exceeds the limit.	The error message returned because the number of EIP bandwidth plans has reached the upper limit.
400	OperationFailed.VswNotBelongToVpc	Operation failed because the specified VSwitch is not bound to the same VPC with NAT gateway.	The error message returned because the specified vSwitch and NAT gateway are not deployed in the same VPC.

HttpCode	Error code	Error message	Description
400	OperationUnsupported.VpcAttachedCen	Operation failed because the VPC is attached to CEN.	The error message returned because the VPC is attached to a Cloud Enterprise Network (CEN) instance.
400	OperationUnsupported.RouterInterfaceExist	Operation failed because the VPC has a router interface.	The error message returned because the VPC has a router interface.
400	OperationFailed.VRouterNotExist	Operation failed because the VRouter does not exist.	The error message returned because the vRouter does not exist.
400	OperationFailed.SnatQuotaExceed	Operation failed because the maximum number of SNAT entry is exceeded.	The error message returned because the number of SNAT entries has reached the upper limit.
400	OperationFailed.DnatQuotaExceed	Operation failed because the maximum number of forward entry is exceeded.	The error message returned because the number of DNAT entries has reached the upper limit.
400	OperationFailed.VswBindedRouteTable	The operation failed because a custom route table that contains subnet routes is associated with the specified VSwitch.	The error message returned because the specified vSwitch is associated with a subnet route table.
400	OperationFailed.VswBindedAcl	The operation failed because a network ACL is associated with the specified VSwitch.	The error message returned because the specified vSwitch is associated with a network ACL.
400	Forbidden.Convert	User does not have permission to operate.	The error message returned because you are not authorized to perform the operation.

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

18.4. GetNatGatewayConvertStatus

Queries the switch status of an Internet NAT gateway.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetNatGatewayConvertStatus	The operation that you want to perform. Set the value to **GetNatGatewayConvertStatus**.
NatGatewayId	String	Yes	ngw-bp1b0lic8uz4r6vf2****	The ID of the Internet NAT gateway to be queried.
RegionId	String	Yes	cn-qingdao	The ID of the region to which the NAT gateway belongs.

Response parameters

Parameter	Type	Example	Description
ConvertSteps	Array of ConvertStep		The status during the switch.

Parameter	Type	Example	Description
StepName	String	init	Valid values: • **init**: initializing • **check**: checking configurations • **configure**: pushing configurations • **activate**: switching • **conf_delete**: deleting configurations • **rollback**: rolling back • **end_success**: switched • **end_fail**: failed
StepStartTime	String	2020-08-26T08:27:19Z	The time when the switch started.
StepStatus	String	successful	The switch status. Valid values: • **processing**: switching • **successful**: switched • **failed**: failed
DstNatType	String	Enhanced	The type of the NAT gateway. Set the value to **Enhanced**, which specifies an enhanced Internet NAT gateway.
NatGatewayId	String	ngw-bp1b0lic8uz4r6vf2****	The ID of the Internet NAT gateway.
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://vpc.aliyuncs.com/?Action=GetNatGatewayConvertStatus
&NatGatewayId=ngw-bp1b0lic8uz4r6vf2****
&RegionId=cn-qingdao
&<Common request parameters>
```

Sample success responses

`XML` format

```
<GetNatGatewayConvertStatusResponse>
 <RequestId>566678F2-BF11-4701-9569-D888191DAF5F</RequestId>
 <DstNatType>Enhanced</DstNatType>
 <Bid>12345</Bid>
 <ConvertSteps>
    <StepName>init</StepName>
    <StepStatus>successful</StepStatus>
    <StepStartTime>2020-08-26T08:27:19Z</StepStartTime>
 </ConvertSteps>
 <ConvertSteps>
    <StepName>check</StepName>
    <StepStatus>successful</StepStatus>
    <StepStartTime>2020-08-26T08:27:19Z</StepStartTime>
 </ConvertSteps>
 <ConvertSteps>
    <StepName>configure</StepName>
    <StepStatus>successful</StepStatus>
    <StepStartTime>2020-08-26T08:27:19Z</StepStartTime>
 </ConvertSteps>
 <ConvertSteps>
    <StepName>activate</StepName>
    <StepStatus>successful</StepStatus>
    <StepStartTime>2020-08-26T08:27:54Z</StepStartTime>
 </ConvertSteps>
 <ConvertSteps>
    <StepName>conf_delete</StepName>
    <StepStatus>successful</StepStatus>
    <StepStartTime>2020-08-26T08:27:58Z</StepStartTime>
 </ConvertSteps>
 <ConvertSteps>
    <StepName>end_success</StepName>
    <StepStatus>successful</StepStatus>
    <StepStartTime>2020-08-26T08:28:00Z</StepStartTime>
 </ConvertSteps>
 <NatGatewayId>ngw-p0w4fb0mospbkaw9n****</NatGatewayId>
 <AliUid>12345678</AliUid>
</GetNatGatewayConvertStatusResponse>
```

`JSON` format

```
{
 "RequestId": "566678F2-BF11-4701-9569-D888191DAF5F",
 "DstNatType": "Enhanced",
 "Bid": "12345",
 "ConvertSteps": [
  {
   "StepName": "init",
   "StepStatus": "successful",
   "StepStartTime": "2020-08-26T08:27:19Z"
  },
  {
   "StepName": "check",
   "StepStatus": "successful",
   "StepStartTime": "2020-08-26T08:27:19Z"
  },
  {
   "StepName": "configure",
   "StepStatus": "successful",
   "StepStartTime": "2020-08-26T08:27:19Z"
  },
  {
   "StepName": "activate",
   "StepStatus": "successful",
   "StepStartTime": "2020-08-26T08:27:54Z"
  },
  {
   "StepName": "conf_delete",
   "StepStatus": "successful",
   "StepStartTime": "2020-08-26T08:27:58Z"
  },
  {
   "StepName": "end_success",
   "StepStatus": "successful",
   "StepStartTime": "2020-08-26T08:28:00Z"
  }
 ],
 "NatGatewayId": "ngw-p0w4fb0mospbkaw9n****",
 "AliUid": "12345678"
}
```


Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

18.5. ModifyNatGatewayAttribute

Modifies the name and description of a NAT gateway.

Description

You can call this operation to query an Internet NAT gateway or a virtual private cloud (VPC) NAT gateway. The term "NAT gateway" in this topic refers to both NAT gateway types.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyNatGatewayAttribute	The operation that you want to perform. Set the value to **ModifyNatGatewayAttribute**.
NatGatewayId	String	Yes	ngw-2ze0dcn4mq31qx2jc****	The ID of the NAT gateway whose configuration you want to modify.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the NAT gateway that you want to upgrade is created. You can call the DescribeRegions operation to query the most recent region list.
Name	String	No	nat123	The name of the NAT gateway that you want to modify. The name must be 1 to 128 characters in length, and can contain digits, periods (.), underscores (_), and hyphens (-). The name must start with a letter but cannot start with `http://` or `https://`. **Note** You cannot leave both **Name** and **Description** empty.
Description	String	No	fortest	The description of the NAT gateway. The description must be 1 to 256 characters in length. It must start with a letter, but cannot start with `http://` or `https://`.
IcmpReplyEnabled	Boolean	No	false	Specifies whether to enable the ICMP non-retrieval feature. Valid values: • **false** (default): no • **true**: yes

Response parameters

Parameter	Type	Example	Description
RequestId	String	AB5F62CF-2B60-4458-A756-42C9DFE108D1	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyNatGatewayAttribute
&NatGatewayId=ngw-2ze0dcn4mq31qx2jc****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyNatGatewayAttributeResponse>
  <RequestId>2315DEB7-5E92-423A-91F7-4C1EC9AD97C3</RequestId>
</ModifyNatGatewayAttributeResponse>
```

`JSON` format

```
{
 "RequestId": "2315DEB7-5E92-423A-91F7-4C1EC9AD97C3"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidParameter.Name.Malformed	The specified Name is not valid.	The error message returned because the specified name format is invalid.
400	InvalidParameter.Description.Malformed	The specified Description is not valid.	The error message returned because the specified description is invalid.
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.
404	InvalidNatGatewayId.NotFound	The specified NatGatewayId does not exist in our records.	The error message returned because the specified NAT gateway ID does not exist. Check whether the value of the NatGatewayId parameter is valid.

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

18.6. ModifyNatGatewaySpec

Upgrades a subscription Internet NAT gateway.

Description

Note

- You cannot call this operation to downgrade an Internet NAT gateway. You can downgrade an Internet NAT gateway only in the console.
- When you call this operation to upgrade a subscription Internet NAT gateway, an order is generated. After you complete the payment in the order center, the Internet NAT gateway is upgraded.

ModifyNatGatewaySpec is an asynchronous operation. After you make a request, the ID of the request is returned but the Internet NAT gateway is not upgraded. The system upgrades the NAT gateway in the background. You can call the DescribeNatGateways operation to query the status of an Internet NAT gateway:

- If an Internet NAT gateway is in the **Modifying** state, the NAT gateway is being upgraded. In this case, you can only perform query operations.
- If an Internet NAT gateway is in the **Available** state, the Internet NAT gateway is upgraded.

Internet NAT gateways are available in different sizes. The size of an Internet NAT gateway determines the SNAT performance, which includes the maximum number of connections and the number of new connections per second. However, the size of a NAT gateway does not affect the data throughput. The following table describes the correlations between different sizes of Internet NAT gateways and SNAT performance metrics.

Specification	Maximum connection	Number of new connections per second
Small	10,000	1,000
Medium	50,000	5,000
Large	200,000	10,000

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyNatGatewaySpec	The operation that you want to perform. Set the value to **ModifyNatGatewaySpec**.
NatGatewayId	String	Yes	ngw-bp1uewa15k4iy5770****	The ID of the Internet NAT gateway that you want to upgrade.
RegionId	String	Yes	cn-hangzhou	The region ID of the Internet NAT gateway. You can call the DescribeRegions operation to query the most recent region list.
Spec	String	Yes	Middle	The size of the Internet NAT gateway. Valid values: • **Small**: small • **Middle**: medium • **Large**: large
AutoPay	Boolean	No	false	Specifies whether to enable automatic payment. Valid values: • **true**: enables automatic payment. Payments are automatically made. • **false**: disables automatic payment. If you select this option, you must go to the Order Center to complete the payment after an order is generated.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. **ClientToken** can contain only ASCII characters. It cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	DBD4E4A2-786E-4BD2-8EB6-107FFC2B5B7D	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyNatGatewaySpec
&NatGatewayId=ngw-bp1uewa15k4iy5770****
&RegionId=cn-hangzhou
&Spec=Middle
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyNatGatewaySpecResponse>
  <RequestId>DBD4E4A2-786E-4BD2-8EB6-107FFC2B5B7D</RequestId>
</ModifyNatGatewaySpecResponse>
```

`JSON` format

```
{
  "RequestId": "DBD4E4A2-786E-4BD2-8EB6-107FFC2B5B7D"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.
404	InvalidNatGatewayId.NotFound	The specified NatGatewayId does not exist in our records.	The error message returned because the specified NAT gateway ID does not exist. Check whether the NAT gateway ID is valid.
400	NATGW_MODIFY_SPEC_SAME	The specified Spec is same with now.	The error message returned because the specified gateway size is the same as the current one.
400	InvalidParameter.Spec.ValueNotSupported	The specified Spec is not valid.	The error message returned because the specified gateway size is invalid.

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

18.7. DescribeNatGateways

Queries NAT gateways.

Description

You can call this operation to query an Internet NAT gateway or a virtual private cloud (VPC) NAT gateway. The term "NAT gateway" in this topic refers to both NAT gateway types.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeNatGateways	The operation that you want to perform. Set the value to **DescribeNatGateways**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the NAT gateways are deployed. You can call the DescribeRegions operation to query the most recent region list.
NatGatewayId	String	No	ngw-bp1uewa15k4iy5770****	The ID of the NAT gateway that you want to query.
VpcId	String	No	vpc-bp15zckdt37pq72z****	The ID of the virtual private cloud (VPC) where the NAT gateway is deployed.
Name	String	No	test	The name of the NAT gateway.

Parameter	Type	Required	Example	Description
InstanceChargeType	String	No	PostPaid	The billing method of the NAT gateway. Valid values: • **PostPaid**: pay-as-you-go • **PrePaid**: subscription **Note** If the NAT gateways are created on Alibaba Cloud International Site, set the value to **PostPaid**.
Spec	String	No	Large	The size of the Internet NAT gateway. Valid values: • **Small** (default): small • **Middle**: medium • **Large**: large
NatType	String	No	Normal	The type of the Internet NAT gateway. Valid values: • **Normal**: standard • **Enhanced**: enhanced
ResourceGroupId	String	No	rg-bp67acfmxazb4ph****	The ID of the resource group to which the NAT gateway belongs.
PageNumber	Integer	No	10	The number of the page to return. Default value: **1**.
PageSize	Integer	No	1	The number of entries to return on each page. Maximum value: **50**. Default value: **10**.
DryRun	Boolean	No	true	Specifies whether to precheck this request. Valid values: • **true**: prechecks the request only. Resources are not queried. The system checks whether your AccessKey pair is valid, whether the Resource Access Management (RAM) user is authorized, and whether required parameters are set. If the request fails the precheck, the corresponding error message is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: prechecks the request. This is the default value. After the request passes the precheck, a 2xx HTTP status code is returned and resources are queried.

Parameter	Type	Required	Example	Description
Status	String	No	Available	The status of the NAT gateway. Valid values: • **Creating**: After you send a request to create a NAT gateway, the system creates the NAT gateway in the background. The NAT gateway remains in the **Creating** state until the operation is completed. • **Available**: If the operation is successful, the NAT gateway is created and the NAT gateway changes to the Available state. • **Modifying**: After you send a request to modify a NAT gateway, the system modifies the NAT gateway in the background. The NAT gateway remains in the **Modifying** state until the operation is completed. • **Deleting**: After you send a request to delete a NAT gateway, the system deletes the NAT gateway in the background. The NAT gateway remains in the **Deleting** state until the operation is completed. • **Converting**: After you send a request to upgrade a standard NAT gateway to an enhanced NAT gateway, the system upgrades the NAT gateway in the background. The NAT gateway remains in the **Converting** state until the operation is completed.
NetworkType	String	No	internet	The type of the NAT gateway. Valid values: • **internet**: an Internet NAT gateway • **intranet**: a VPC NAT gateway

Response parameters

Parameter	Type	Example	Description
NatGateways	Array of NatGateway		Detailed information about the NAT gateways.
NatGateway			
BusinessStatus	String	Normal	The state of the NAT gateway. Valid values: • **Normal**: normal • **FinancialLocked**: locked due to overdue payments
CreationTime	String	2020-06-08T12:20:20Z	The time when the NAT gateway was created. The time follows the ISO 8601 standard in UTC in the YYYY-MM-DDThh:mm:ssZ format.
DeletionProtection	Boolean	true	Indicates whether the deletion protection feature is enabled. Valid values: • **true**: enabled • **false**: disabled
Description	String	NAT	The description of the NAT gateway.
EcsMetricEnabled	Boolean	true	Indicates whether the traffic monitoring feature is enabled. Valid values: • **true**: enabled • **false**: disabled

Parameter	Type	Example	Description
ExpiredTime	String	2020-08-26T16:00Z	The time when the NAT gateway expires.
ForwardTableIds	List	ftb-uf6gj3mhsg94qsqst****	The ID of the DNAT table.
IcmpReplyEnabled	Boolean	false	Indicates whether the ICMP non-retrieval feature is enabled. Valid values: • **true**: enabled • **false**: disabled
InstanceChargeType	String	PostPaid	The billing method of the NAT gateway. Valid values: • **PostPaid**: pay-as-you-go • **PrePaid**: subscription **Note** If the NAT gateways are created on Alibaba Cloud International Site, the value is set to **PostPaid**.
InternetChargeType	String	PayBySpec	The metering method for the NAT gateway. Valid values: • **PayBySpec**: pay-by-specification • **PayByLcu**: pay-by-actual-usage
IpLists	Array of IpList		The IP address information about the NAT gateway.
IpList			
IpAddress	String	116.62.XX.XX	The elastic IP addresses (EIPs) that are associated with the NAT gateway.
PrivateIpAddress	String	192.168.XX.XX	The private IP address of the NAT gateway.
SnatEntryEnabled	Boolean	false	Indicates whether IP addresses that are used in DNAT entries can be specified in SNAT entries. Valid values: • **true**: yes • **false**: no
Name	String	abc	The name of the NAT gateway.
NatGatewayId	String	ngw-bp1047e2d4z7kf2ki****	The ID of the NAT gateway.
NatGatewayPrivateInfo	Struct		The private network information about the enhanced Internet NAT gateway. **Note** If **NatType** is set to **Normal**, all parameters returned in this list are empty.
EniInstanceId	String	10	The ID of the elastic network interface (ENI).

Parameter	Type	Example	Description
EniType	String	Secondary	The type of the ENI. Valid values: • **Primary**: primary • **Secondary**: secondary
IzNo	String	cn-hangzhou-b	The zone to which the NAT gateway belongs.
MaxBandwidth	Integer	5120	The maximum bandwidth. Unit: Mbit/s.
PrivateIpAddress	String	192.168.XX.XX	The private IP address.
VswitchId	String	vsw-bp1s2laxhdf9ayjbo****	The ID of the vSwitch to which the NAT gateway belongs.
NatType	String	Normal	The type of the Internet NAT gateway. Valid values: • **Normal**: normal • **Enhanced**: enhanced
NetworkType	String	internet	The type of the NAT gateway. Valid values: • **internet**: an Internet NAT gateway • **intranet**: a VPC NAT gateway
RegionId	String	cn-hangzhou	The ID of the region where the NAT gateway is deployed.
ResourceGroupId	String	rg-bp67acfmxazb4ph****	The ID of the resource group.
SecurityProtectionEnabled	Boolean	false	Indicates whether the firewall feature is enabled. Valid values: • **false**: no • **true**: yes
SnatTableIds	List	stb-uf6dalcdu0krz423p****	The ID of the SNAT table that is associated with the NAT gateway.
Spec	String	Small	The type of the NAT gateway. Valid values: • **Small**: small • **Middle**: medium • **Large**: large

Parameter	Type	Example	Description
Status	String	Creating	The state of the NAT gateway. Valid values: • **Creating**: After you send a request to create a NAT gateway, the system creates the NAT gateway in the background. The NAT gateway remains in the Creating state until the operation is completed. • **Available**: If the operation is successful, the NAT gateway is created and the NAT gateway changes to the Available state. • **Modifying**: After you send a request to modify a NAT gateway, the system modifies the NAT gateway in the background. The NAT gateway remains in the Modifying state until the operation is completed. • **Deleting**: After you send a request to delete a NAT gateway, the system deletes the NAT gateway in the background. The NAT gateway remains in the Deleting state until the operation is completed. • **Converting**: After you send a request to upgrade a standard NAT gateway to an enhanced NAT gateway, the system upgrades the NAT gateway in the background. The NAT gateway remains in the Converting state until the operation is completed.
VpcId	String	vpc-bp15zckdt37pq72z****	The ID of the virtual private cloud (VPC) to which the NAT gateway belongs.
PageNumber	Integer	10	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The ID of the request.
TotalCount	Integer	10	The total number of entries returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeNatGateways
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeNatGatewaysResponse>
 <TotalCount>10</TotalCount>
 <RequestId>4EC47282-1B74-4534-BD0E-403F3EE64CAF  </RequestId>
 <PageSize>10</PageSize>
 <PageNumber>10</PageNumber>
 <NatGateways>
    <NatGateway>
       <Status>Creating</Status>
       <Description>NAT</Description>
       <ResourceGroupId>rg-bp67acfmxazb4ph****</ResourceGroupId>
       <InstanceChargeType>PostPaid</InstanceChargeType>
       <SecurityProtectionEnabled>false</SecurityProtectionEnabled>
       <DeletionProtection>true</DeletionProtection>
       <BusinessStatus>Normal</BusinessStatus>
       <NatType>Normal</NatType>
       <Name>abc</Name>
       <InternetChargeType>PayBySpec</InternetChargeType>
       <EcsMetricEnabled>true</EcsMetricEnabled>
       <VpcId>vpc-bp15zckdt37pq72z****</VpcId>
       <NetworkType>internet</NetworkType>
       <ExpiredTime>2020-08-26T16:00Z</ExpiredTime>
       <IcmpReplyEnabled>false</IcmpReplyEnabled>
       <CreationTime>2020-06-08T12:20:20Z</CreationTime>
       <RegionId>cn-hangzhou</RegionId>
       <Spec>Small</Spec>
       <NatGatewayId>ngw-bp1047e2d4z7kf2ki****</NatGatewayId>
       <IpLists>
          <IpList>
             <PrivateIpAddress>192.168.XX.XX</PrivateIpAddress>
             <SnatEntryEnabled>false</SnatEntryEnabled>
             <IpAddress>116.62.XX.XX</IpAddress>
          </IpList>
       </IpLists>
       <ForwardTableIds>
          <ForwardTableId>ftb-uf6gj3mhsg94qsqst****</ForwardTableId>
       </ForwardTableIds>
       <SnatTableIds>
          <SnatTableId>stb-uf6dalcdu0krz423p****</SnatTableId>
       </SnatTableIds>
       <NatGatewayPrivateInfo>
          <IzNo>cn-hangzhou-b</IzNo>
          <PrivateIpAddress>192.168.XX.XX</PrivateIpAddress>
          <MaxBandwidth>5120</MaxBandwidth>
          <EniType>Secondary</EniType>
          <EniInstanceId>10</EniInstanceId>
          <VswitchId>vsw-bp1s2laxhdf9ayjbo****</VswitchId>
       </NatGatewayPrivateInfo>
    </NatGateway>
 </NatGateways>
</DescribeNatGatewaysResponse>
```


`JSON` format

```
{
  "TotalCount": 10,
  "RequestId": "4EC47282-1B74-4534-BD0E-403F3EE64CAF",
  "PageSize": 10,
  "PageNumber": 10,
  "NatGateways": {
    "NatGateway": {
      "Status": "Creating",
      "Description": "NAT",
      "ResourceGroupId": "rg-bp67acfmxazb4ph****",
      "InstanceChargeType": "PostPaid",
      "SecurityProtectionEnabled": false,
      "DeletionProtection": true,
      "BusinessStatus": "Normal",
      "NatType": "Normal",
      "Name": "abc",
      "InternetChargeType": "PayBySpec",
      "EcsMetricEnabled": true,
      "VpcId": "vpc-bp15zckdt37pq72z****",
      "NetworkType": "internet",
      "ExpiredTime": "2020-08-26T16:00Z",
      "IcmpReplyEnabled": false,
      "CreationTime": "2020-06-08T12:20:20Z",
      "RegionId": "cn-hangzhou",
      "Spec": "Small",
      "NatGatewayId": "ngw-bp1047e2d4z7kf2ki****",
      "IpLists": {
        "IpList": {
          "PrivateIpAddress": "192.168.XX.XX",
          "SnatEntryEnabled": false,
          "IpAddress": "116.62.XX.XX"
        }
      },
      "ForwardTableIds": {
        "ForwardTableId": "ftb-uf6gj3mhsg94qsqst****"
      },
      "SnatTableIds": {
        "SnatTableId": "stb-uf6dalcdu0krz423p****"
      },
      "NatGatewayPrivateInfo": {
        "IzNo": "cn-hangzhou-b",
        "PrivateIpAddress": "192.168.XX.XX",
        "MaxBandwidth": 5120,
        "EniType": "Secondary",
        "EniInstanceId": 10,
        "VswitchId": "vsw-bp1s2laxhdf9ayjbo****"
      }
    }
  }
}
```


Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

18.8. GetNatGatewayAttribute

Queries the information about a specified NAT gateway.

Descriptions

You can call this operation to query an Internet NAT gateway or a virtual private cloud (VPC) NAT gateway. The term "NAT gateway" in this topic refers to both NAT gateway types.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-qingdao	The region ID of the NAT gateway. You can call the DescribeRegions operation to query the most recent region list.
NatGatewayId	String	Yes	ngw-bp1b0lic8uz4r6vf2****	The ID of the NAT gateway.
RegionId	String	Yes	cn-qingdao	The region ID of the NAT gateway. You can call the DescribeRegions operation to query the most recent region list.
Action	String	No	GetNatGatewayAttribute	The operation that you want to perform. Set the value to **GetNatGatewayAttribute**.

Response parameters

Parameter	Type	Example	Description
VpcId	String	vpc-bp15zckdt37pq72z****	The ID of the VPC to which the NAT gateway belongs.
CreationTime	String	2017-06-08T12:20:20Z	The time when the NAT gateway was created. The time follows the ISO 8601 standard in UTC in the YYYY-MM-DDThh:mm:ssZ format.
Status	String	Available	The status of the NAT gateway. Valid values: • **Creating**: being created When a NAT gateway is being created, the operation is asynchronous. The NAT gateway remains in the **Creating** state until it is created. • **Available**: available After a NAT gateway is created, it remains in a stable state. • **Modifying**: being modified When a NAT gateway is being upgraded or downgraded, the operation is asynchronous. The NAT gateway remains in the **Modifying** state until it is upgraded or downgraded. • **Deleting**: being deleted When a NAT gateway is being deleted, the operation is asynchronous. The NAT gateway remains in the **Deleting** state until it is deleted. • **Converting**: being converted When a standard NAT gateway is being converted to an enhanced NAT gateway, the operation is asynchronous. The NAT gateway remains in the **Deleting** state until it is converted.
NatType	String	Enhanced	The type of the Internet NAT gateway. Only **Enhanced** is returned, which specifies an enhanced Internet NAT gateway.

Parameter	Type	Example	Description
NetworkType	String	internet	The type of the NAT gateway. Valid values: • **internet**: an Internet NAT gateway • **intranet**: a VPC NAT gateway
RegionId	String	cn-qingdao	The region ID of the NAT gateway.
EcsMetricEnabled	Boolean	true	Indicates whether the traffic monitoring feature is enabled. Valid values: • **true**: yes • **false**: no
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The ID of the request.
Description	String	NAT	The description of the NAT gateway.
ExpiredTime	String	2017-08-26T16:00Z	The time when the NAT gateway expires.
ResourceGroupId	String	rg-bp67acfmxazb4ph****	The ID of the resource group.
NatGatewayId	String	ngw-bp1047e2d4z7kf2ki****	The ID of the NAT gateway.
BusinessStatus	String	Normal	The status of the NAT gateway. Valid values: • **Normal**: The NAT gateway works as expected. • **FinancialLocked**: The NAT gateway is locked due to overdue payments.
Name	String	abc****	The name of the NAT gateway.
ForwardTable	Object		The information about DNAT entries.
ForwardTableId	String	ftb-uf6gj3mhsg94qsqst****	The ID of the DNAT table.
ForwardEntryCount	Integer	1	The number of DNAT entries.
SnatTable	Object		The information about the SNAT entries.
SnatEntryCount	Integer	1	The number of SNAT entries.
SnatTableId	String	stb-SnatTableIds****	The ID of the SNAT table.
FullNatTable	Object		The information about the list of FULLNAT entries.
FullNatEntryCount	Long	1	The number of FULLNAT entries.
FullNatTableId	String	fulltb-gw88z7hhlv43rmb26****	The ID of the FULLNAT table.
BillingConfig	Object		The billing information.

Parameter	Type	Example	Description
InternetChargeType	String	PayBySpec	The metering method of the NAT gateway. Valid values: • **PayBySpec**: pay-by-specification • **PayByLcu**: pay-by-actual-usage
AutoPay	String	false	Indicates whether automatic payment is enabled. Valid values: • **false**: Automatic payment is disabled. After an order is generated, you must go to the Order Center to complete the payment. • **true**: Automatic payment is enabled. Payments are automatically completed. If **InstanceChargeType** is set to **PrePaid**, this parameter is returned. If **InstanceChargeType** is set to **PostPaid**, this parameter is not returned.
Spec	String	Small	The specification of the Internet NAT gateway. Valid values: • **Small**: small • **Middle**: medium • **Large**: large
InstanceChargeType	String	PostPaid	The billing method of the NAT gateway. The value is set to **PostPaid**, which indicates the pay-as-you-go billing method.
PrivateInfo	Object		The information about the private network.
MaxBandwidth	Integer	5120	The maximum bandwidth value. Unit: Mbit/s.
VswitchId	String	vsw-bp1s2laxhdf9ayjbo***	The ID of the vSwitch to which the NAT gateway belongs.
PrivateIpAddress	String	192.168.XX.XX	The private IP address.
IzNo	String	cn-qingdao-b	The zone where the NAT gateway is deployed.
EniInstanceId	String	10	The ID of the elastic network interface (ENI).
DeletionProtectionInfo	Object		The information about the deletion protection feature.
Enabled	Boolean	true	Indicates whether the deletion protection feature is enabled. Valid values: • **true**: yes • **false**: no
IpList	Array of IpList		The elastic IP addresses (EIPs) that are associated with the NAT gateway.

Parameter	Type	Example	Description
UsingStatus	String	idle	Indicates whether the EIP is specified in a DNAT or SNAT entry. Valid values: • **idle**: The EIP is not specified in an SNAT entry or a DNAT entry. • **UsedBySnatTable**: The EIP is specified in an SNAT entry. • **UsedByForwardTable**: The EIP is specified in a DNAT entry.
IpAddress	String	116.33.XX.XX	The IP address of the EIP.
AllocationId	String	eip-bp13e9i2qst4g6jzi****	The ID of the EIP.
PrivateLinkEnabled	Boolean	true	Indicates whether the NAT gateway supports PrivateLink. Valid values: • **true**: yes • **false**: no
PrivateLinkMode	String	FullNat	The mode that is used by PrivateLink. Valid values: • **FullNat**: the FULLNAT mode • **Geneve**: the GENEVE mode

Examples

Sample requests

```
http(s)://[Endpoint]/?RegionId=cn-qingdao
&NatGatewayId=ngw-bp1b0lic8uz4r6vf2****
&Action=GetNatGatewayAttribute
&Common request parameters
```

Sample responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<GetNatGatewayAttributeResponse>
  <VpcId>vpc-bp15zckdt37pq72z****</VpcId>
  <CreationTime>2017-06-08T12:20:20Z</CreationTime>
  <Status>Available</Status>
  <NatType>Enhanced</NatType>
  <NetworkType>internet</NetworkType>
  <RegionId>cn-qingdao</RegionId>
  <EcsMetricEnabled>true</EcsMetricEnabled>
  <RequestId>4EC47282-1B74-4534-BD0E-403F3EE64CAF</RequestId>
  <Description>NAT</Description>
  <ExpiredTime>2017-08-26T16:00Z</ExpiredTime>
  <ResourceGroupId>rg-bp67acfmxazb4ph****</ResourceGroupId>
  <NatGatewayId>ngw-bp1047e2d4z7kf2ki****</NatGatewayId>
  <BusinessStatus>Normal</BusinessStatus>
  <Name>abc****</Name>
  <ForwardTable>
    <ForwardTableId>ftb-uf6gj3mhsg94qsqst****</ForwardTableId>
    <ForwardEntryCount>1</ForwardEntryCount>
  </ForwardTable>
  <SnatTable>
    <SnatEntryCount>1</SnatEntryCount>
    <SnatTableId>stb-SnatTableIds****</SnatTableId>
  </SnatTable>
  <FullNatTable>
    <FullNatEntryCount>1</FullNatEntryCount>
    <FullNatTableId>fulltb-gw88z7hhlv43rmb26****</FullNatTableId>
  </FullNatTable>
  <BillingConfig>
    <InternetChargeType>PayBySpec</InternetChargeType>
    <AutoPay>false</AutoPay>
    <Spec>Small</Spec>
    <InstanceChargeType>PostPaid</InstanceChargeType>
  </BillingConfig>
  <PrivateInfo>
    <MaxBandwidth>5120</MaxBandwidth>
    <VswitchId>vsw-bp1s2laxhdf9ayjbo***</VswitchId>
    <PrivateIpAddress>192.168.XX.XX</PrivateIpAddress>
    <IzNo>cn-qingdao-b</IzNo>
    <EniInstanceId>10</EniInstanceId>
  </PrivateInfo>
  <DeletionProtectionInfo>
    <Enabled>true</Enabled>
  </DeletionProtectionInfo>
  <IpList>
    <UsingStatus>idle</UsingStatus>
    <IpAddress>116.33.XX.XX</IpAddress>
    <AllocationId>eip-bp13e9i2qst4g6jzi****</AllocationId>
  </IpList>
  <PrivateLinkEnabled>true</PrivateLinkEnabled>
  <PrivateLinkMode>FullNat</PrivateLinkMode>
</GetNatGatewayAttributeResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
 "VpcId" : "vpc-bp15zckdt37pq72z****",
 "CreationTime" : "2017-06-08T12:20:20Z",
 "Status" : "Available",
 "NatType" : "Enhanced",
 "NetworkType" : "internet",
 "RegionId" : "cn-qingdao",
 "EcsMetricEnabled" : true,
 "RequestId" : "4EC47282-1B74-4534-BD0E-403F3EE64CAF",
 "Description" : "NAT",
 "ExpiredTime" : "2017-08-26T16:00Z",
 "ResourceGroupId" : "rg-bp67acfmxazb4ph****",
 "NatGatewayId" : "ngw-bp1047e2d4z7kf2ki****",
 "BusinessStatus" : "Normal",
 "Name" : "abc****",
 "ForwardTable" : {
  "ForwardTableId" : "ftb-uf6gj3mhsg94qsqst****",
  "ForwardEntryCount" : 1
 },
 "SnatTable" : {
  "SnatEntryCount" : 1,
  "SnatTableId" : "stb-SnatTableIds****"
 },
 "FullNatTable" : {
  "FullNatEntryCount" : 1,
  "FullNatTableId" : "fulltb-gw88z7hhlv43rmb26****"
 },
 "BillingConfig" : {
  "InternetChargeType" : "PayBySpec",
  "AutoPay" : "false",
  "Spec" : "Small",
  "InstanceChargeType" : "PostPaid"
 },
 "PrivateInfo" : {
  "MaxBandwidth" : 5120,
  "VswitchId" : "vsw-bp1s2laxhdf9ayjbo***",
  "PrivateIpAddress" : "192.168.XX.XX",
  "IzNo" : "cn-qingdao-b",
  "EniInstanceId" : "10"
 },
 "DeletionProtectionInfo" : {
  "Enabled" : true
 },
 "IpList" : [ {
  "UsingStatus" : "idle",
  "IpAddress" : "116.33.XX.XX",
  "AllocationId" : "eip-bp13e9i2qst4g6jzi****"
 } ],
 "PrivateLinkEnabled" : true,
 "PrivateLinkMode" : "FullNat"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

18.9. DeleteNatGateway

Deletes a specified Internet NAT gateway.

Description

DeleteNatGateway is an asynchronous operation. After you make a request, the ID of the request is returned but the specified Internet NAT gateway is not deleted. The system deletes the NAT gateway in the background. You can call the DescribeNatGateways to query the status of a NAT gateway:

- If a NAT gateway is in the **Modifying** state, the NAT gateway is being upgraded. In this case, you can only perform query operations.
- If no NAT gateway is returned in the response, the NAT gateway is deleted.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteNatGateway	The operation that you want to perform. Set the value to **DeleteNatGateway**.
NatGatewayId	String	Yes	ngw-bp1uewa15k4iy5770****	The ID of the Internet NAT gateway that you want to delete.
RegionId	String	Yes	cn-hangzhou	The region ID of the Internet NAT gateway. You can call the DescribeRegions operation to query the most recent region list.

Force	Boolean	No	false	Specifies whether to forcibly delete the Internet NAT gateway. Valid values:
				• **true**: yes If you set the value to **true**:
				  ○ If the Internet NAT gateway has SNAT entries, the system automatically deletes them.
				  ○ If the Internet NAT gateway has DNAT entries, the system automatically deletes them.
				  ○ If the Internet NAT gateway is associated with an elastic IP address (EIP), the system automatically disassociates it from the NAT gateway.
				  ○ If the Internet NAT gateway is associated with a NAT bandwidth plan, the system automatically disassociates the NAT bandwidth plan.
				• **false**(default): no If you set the value to **false**:
				  ○ If the Internet NAT gateway is associated with a NAT bandwidth plan, disassociate the NAT bandwidth plan first.
				  ○ If the Internet NAT gateway has SNAT entries, delete them first.
				  ○ If the Internet NAT gateway has DNAT entries, delete them first.
				  ○ If the Internet NAT gateway is associated with an EIP, disassociate the EIP from the NAT gateway first.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DeleteNatGateway
&NatGatewayId=ngw-bp1uewa15k4iy5770****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteNatGatewayResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</DeleteNatGatewayResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.
404	InvalidNatGatewayId.NotFound	The specified NatGatewayId does not exist in our records.	The error message returned because the specified NAT gateway ID does not exist. Check whether the NAT gateway ID is valid.
400	DependencyViolation.BandwidthPackages	There are BandwidthPackages on specified NatGateway not deleted.	The error message returned because one or more NAT service plans are associated with the NAT gateway. Disassociate all NAT service plans from the NAT gateway and try again.

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

18.10. CreateForwardEntry

Adds a DNAT entry to a DNAT table.

Description

Each DNAT entry consists of the following parameters: **ExternalIp**, **ExternalPort**, **IpProtocol**, **InternalIp**, and **InternalPort**. After you add a DNAT entry, the NAT gateway forwards packets of the specified protocol from **ExternalIp:ExternalPort** to **InternalIp:InternalPort** and sends responses back through the same route.

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

- CreateForwardEntry is an asynchronous operation. After you make a request, a DNAT entry ID is returned but the specified DNAT entry is not added. The system adds the entry in the background. You can call the DescribeForwardTableEntries operation to query the state of the DNAT entry.
  - When the DNAT entry is in the **Pending** state, the system is adding the DNAT entry. You can only query the status of the DNAT entry, and cannot perform other operations.
  - When the DNAT entry is in the **Available** state, the DNAT entry is added.
- All combinations of **ExternalIp**, **ExternalPort**, and **IpProtocol** used in DNAT entries must be unique. You cannot distribute requests to more than one Elastic Compute Service (ECS) instance if these requests are initiated from the same source IP address, received on the same port, and use the same protocol.
- The combinations of **IpProtocol**, **InternalIp**, and **InternalPort** must be unique.
- If one or more DNAT entries in the DNAT table are in the **Pending** or **Modifying** state, you cannot add DNAT entries to the DNAT table.

- You can add at most 100 DNAT entries to a DNAT table.
- If an IP address that has IP mapping enabled is specified in the DNAT entry, the IP address cannot be used by another DNAT or SNAT entry.

Debugging

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

Request parameters

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

ExternalIp	String	Yes	116.28.XX.XX	• The public IP address that is accessible over the Internet when you configure a DNAT entry for an Internet NAT gateway. The public IP address must meet the following conditions:
				  ○ If you purchased a NAT service plan before November 3, 2017, you must set the **ExternalIp** parameter to a public IP address in the NAT service plan.
				  ○ If you did not purchase a NAT service plan before November 3, 2017, you must set the **ExternalIp** parameter to an elastic IP address (EIP) associated with the NAT service plan.
				• The NAT IP address that is accessed by external networks when you configure a DNAT entry for a VPC NAT gateway.

ExternalPort	String	Yes	8080	• The external port that is used to forward traffic when you configure a DNAT entry for an Internet NAT gateway. Valid values: **1** to **65535**. • The port that is accessed by external networks when you configure a DNAT entry for a VPC NAT gateway. Valid values: **1** to **65535**.
ForwardTableId	String	Yes	ftb-bp1mbjubq34hlcqpa****	The ID of the DNAT table.

InternalIp	String	Yes	192.168.XX.XX	• The private IP address of the ECS instance that needs to communicate with the Internet when you configure a DNAT entry for an Internet NAT gateway. The private IP address must meet the following requirements:
				  ○ It must belong to the CIDR block of the VPC where the NAT gateway is deployed.
				  ○ The DNAT entry takes effect only if the private IP address is assigned to an ECS instance and the ECS instance is not associated with an EIP.
				• The private IP address that uses DNAT when you add a DNAT entry to a VPC NAT gateway.

InternalPort	String	Yes	80	• The external port that is used to forward traffic when you configure a DNAT entry for an Internet NAT gateway. Valid values: **1** to **65535**. • The destination ECS instance port to be mapped when you configure a DNAT entry for a VPC NAT gateway.

Parameter	Type	Required	Example	Description
IpProtocol	String	Yes	TCP	The protocol. Valid values: • **TCP**: The NAT gateway forwards TCP packets. • **UDP**: The NAT gateway forwards UDP packets. • **Any**: The NAT gateway forwards packets of all protocols. If you set **IpProtocol** to **Any**, you must also set **ExternalPort** and **InternalPort** to **Any** to implement DNAT IP mapping.
RegionId	String	Yes	cn-hangzhou	The region ID of the NAT gateway. You can call the DescribeRegions operation to query the most recent region list.
ForwardEntryName	String	No	ForwardEntry-1	The name of the DNAT entry. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with `http://` or `https://`.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe6****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. **ClientToken** can contain only ASCII characters. It cannot exceed 64 characters in length.
PortBreak	Boolean	No	false	Specifies whether to remove limits on the port range. Valid values: • **true**: yes • **false** (default): no **Note** If an SNAT entry and a DNAT entry use the same public IP address, and you want to specify a port number greater than 1024, set **Portbreak** to **true**.

Response parameters

Parameter	Type	Example	Description
ForwardEntryId	String	fwd-119smw5tkasdf****	The ID of the DNAT entry.
RequestId	String	A4AEE536-A97A-40EB-9EBE-53A6948A6928	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateForwardEntry
&ExternalIp=116.28.XX.XX
&ExternalPort=8080
&ForwardTableId=ftb-bp1mbjubq34hlcqpa****
&InternalIp=192.168.XX.XX
&InternalPort=80
&IpProtocol=TCP
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateForwardEntryResponse>
 <RequestId>A4AEE536-A97A-40EB-9EBE-53A6948A6928</RequestId>
 <ForwardEntryId>fwd-119smw5tkasdf****</ForwardEntryId>
</CreateForwardEntryResponse>
```

`JSON` format

```
{
  "RequestId": "A4AEE536-A97A-40EB-9EBE-53A6948A6928",
  "ForwardEntryId": "fwd-119smw5tkasdf****"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.
400	InvalidExternalIp.Malformed	The specified ExternalIp is not a valid IP address.	The error message returned because the specified public IP address is invalid.
400	InvalidInternalIp.Malformed	The specified InternalIp is not a valid IP address.	The error message returned because the specified destination private IP address is invalid.
400	InvalidExternalPort.Malformed	The specified ExternalPort is not a valid port.	The error message returned because the specified public port is invalid.
400	InvalidInternalPort.Malformed	The specified InternalPort is not a valid port.	The error message returned because the specified private port is invalid.
400	Forbidden.DestnationIpOutOfVpcCIDR	The specified Internal Ip is Out of VPC CIDR.	The error message returned because the specified private IP address does not fall within the CIDR block of the VPC. Enter a private IP address that falls within the CIDR block of the VPC.
400	InvalidProtocal.ValueNotSupported	The specified IpProtocol does not support.	The error message returned because the specified protocol is not supported.
400	IncorretForwardEntryStatus	Some Forward entry status blocked this operation..	The error message returned because you are not authorized to perform the specified operation. The error message returned because one or more DNAT entries in the DNAT table are in the Pending or Modifying state.
404	InvalidForwardTableId.NotFound	Specified forward table does not exist.	The error message returned because the specified DNAT table does not exist. Check the parameter and try again.
404	InvalidExternalIp.NotFound	Specified External Ip address does not found on the VRouter	The error message returned because the specified public IP address does not exist.
400	Forbidden.ExternalIp.UsedInSnatTable	The specified ExternalIp is already used in SnatTable	The error message returned because the specified public IP address is already used by an SNAT entry. Select a different IP address or delete the SNAT entry.
400	Forbindden	The specified Instance already bind eip	The error message returned because the ECS instance is associated with an EIP. Disassociate the EIP from the ECS instance before you create forwarding rules.

HttpCode	Error code	Error message	Description
400	Forbidden.InternalIpOutOfVpcCIDR	The specified Internal Ip is Out of VPC CIDR.	The error message returned because the private IP address does not fall within the CIDR block of the VPC.
400	Invalid.natgwNotExist	The specified natgateway not exist.	The error message returned because the specified NAT gateway does not exist.
400	InvalidIp.NotInNatgw	The specified Ip not belong to natgateway.	The error message returned because the specified IP address is not associated with the NAT gateway.
400	MissingParameter	Missing mandatory parameter	The error message returned because required parameters are not set. Check whether you have set all the required parameters before you call this operation.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an unknown error occurred.
400	InvalidParameter.Name.Malformed	The specified Name is not valid.	The error message returned because the specified name format is invalid.

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

18.11. DescribeForwardTableEntries

Queries DNAT entries.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeForwardTableEntries	The operation that you want to perform. Set the value to **DescribeForwardTableEntries**.
ForwardTableId	String	Yes	ftb-bp1mbjubq34hlcqpa****	The ID of the DNAT table.
RegionId	String	Yes	cn-hangzhou	The region ID of the NAT gateway. You can call the DescribeRegions operation to query the most recent region list.
ForwardEntryId	String	No	fwd-8vbn3bc8roygjp0gy****	The ID of the DNAT entry.
ExternalIp	String	No	116.28.XX.XX	• When you query DNAT entries of Internet NAT gateways, this parameter specifies the EIPs that are accessible over the Internet. • When you query DNAT entries of VPC NAT gateways, this parameter specifies the NAT IP addresses that are accessed by external networks.

Parameter	Type	Required	Example	Description
ExternalPort	String	No	8080	• The external port that is used to forward traffic when you query DNAT entries of Internet NAT gateways. Valid values: **1** to **65535**. • The port that is accessed by external networks when you query DNAT entries of VPC NAT gateways. Valid values: **1** to **65535**.
InternalIp	String	No	192.168.XX.XX	• The private IP address of the ECS instance that uses DNAT entries to communicate with the Internet when you query DNAT entries of Internet NAT gateways. • The private IP address that uses DNAT entries when you query DNAT entries of VPC NAT gateways.
InternalPort	String	No	80	• The internal port that is used to forward traffic when you query DNAT entries of Internet NAT gateways. Valid values: **1** to **65535**. • The port of the destination ECS instance to be mapped when you query DNAT entries of VPC NAT gateways. Valid values: **1** to **65535**.
IpProtocol	String	No	TCP	The protocol. Valid values: • **TCP**: The NAT gateway forwards TCP packets. • **UDP**: The NAT gateway forwards UDP packets. • **Any**: The NAT gateway forwards packets of all protocols.
ForwardEntryName	String	No	ForwardEntry-1	The name of the DNAT entry. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with `http://` or `https://`.
PageNumber	Integer	No	1	The number of the page to return. Default value: **1**.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: **50**. Default value: **10**.

Response parameters

Parameter	Type	Example	Description
ForwardTableEntries	Array of ForwardTableEntry		The details of DNAT entries.
ForwardTableEntry			
ExternalIp	String	139.79.XX.XX	• When you query DNAT entries of Internet NAT gateways, this parameter indicates the EIPs that are accessible over the Internet. • When you query DNAT entries of VPC NAT gateways, this parameter indicates the NAT IP addresses that are accessed by external networks.

Parameter	Type	Example	Description
ExternalPort	String	80	• The external port that is used to forward traffic when you query DNAT entries of Internet NAT gateways. Valid values: **1** to **65535**. • The port that is accessed by external networks when you query DNAT entries of VPC NAT gateways. Valid values: **1** to **65535**.
ForwardEntryId	String	fwd-119smw5tk****	The ID of the DNAT entry.
ForwardEntryName	String	ForwardEntry-1	The name of the DNAT entry.
ForwardTableId	String	ftb-11tc6xgmv****	The ID of the DNAT table to which the DNAT entry belongs.
InternalIp	String	192.168.XX.XX	• The private IP address of the ECS instance that uses DNAT entries to communicate with the Internet when you query DNAT entries of Internet NAT gateways. • The private IP address that uses DNAT entries when you query DNAT entries of VPC NAT gateways.
InternalPort	String	25	• The internal port that is used to forward traffic when you query DNAT entries of Internet NAT gateways. Valid values: **1** to **65535**. • The port of the destination ECS instance to be mapped when you query DNAT entries of VPC NAT gateways. Valid values: **1** to **65535**.
IpProtocol	String	TCP	The protocol. Valid values: • **TCP**: The NAT gateway forwards TCP packets. • **UDP**: The NAT gateway forwards UDP packets. • **Any**: The NAT gateway forwards packets of all protocols.
Status	String	Available	The status of the DNAT entry. Valid values: • **Pending**: being created or modified • **Available**: available • **Deleting**: being deleted
TotalCount	Integer	5	The total number of entries returned.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	A6C4A8B1-7561-4509-949C-20DEB40D71E6	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DescribeForwardTableEntries
&ForwardTableId=ftb-bp1mbjubq34hlcqpa****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeForwardTableEntriesResponse>
 <TotalCount>5</TotalCount>
 <PageSize>10</PageSize>
 <RequestId>A6C4A8B1-7561-4509-949C-20DEB40D71E6</RequestId>
 <PageNumber>1</PageNumber>
 <ForwardTableEntries>
    <ForwardTableEntry>
       <Status>Available</Status>
       <ExternalPort>80</ExternalPort>
       <ExternalIp>139.79.XX.XX</ExternalIp>
       <ForwardEntryId>fwd-119smw5tk****</ForwardEntryId>
       <IpProtocol>TCP</IpProtocol>
       <InternalPort>25</InternalPort>
       <ForwardEntryName>ForwardEntry-1</ForwardEntryName>
       <InternalIp>192.168.XX.XX</InternalIp>
       <ForwardTableId>ftb-11tc6xgmv****</ForwardTableId>
    </ForwardTableEntry>
 </ForwardTableEntries>
</DescribeForwardTableEntriesResponse>
```

`JSON` format

```
{
  "TotalCount": 5,
  "PageSize": 10,
  "RequestId": "A6C4A8B1-7561-4509-949C-20DEB40D71E6",
  "PageNumber": 1,
  "ForwardTableEntries": {
    "ForwardTableEntry": [
    {   "Status": "Available",
      "ExternalPort": 80,
      "ExternalIp": "139.79.XX.XX",
      "ForwardEntryId": "fwd-119smw5tk****",
      "IpProtocol": "TCP",
      "InternalPort": 25,
      "ForwardEntryName": "ForwardEntry-1",
      "InternalIp": "192.168.XX.XX",
      "ForwardTableId": "ftb-11tc6xgmv****"
    }
   ]
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.
400	IncorretForwardEntryStatus	Some Forward entry status blocked this operation..	The error message returned because you are not authorized to perform the specified operation. The error message returned because one or more DNAT entries in the DNAT table are in the Pending or Modifying state.
404	InvalidForwardTableId.NotFound	Specified forwardTableId does not exist	The error message returned because the specified DNAT table does not exist. Check the parameter and try again.

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

18.12. ModifyForwardEntry

Modifies a specified DNAT entry.

Description

ModifyForwardEntry is an asynchronous operation. After you make a request, the request ID is returned but the specified DNAT entry is not modified. The system modifies the DNAT entry in the background. You can call the DescribeNatGateways operation to query the status of the DNAT entry. The DNAT entry may be in the one of the following states:

- **Pending**: indicates that the system is modifying the DNAT entry. You can only query the DNAT entry, but cannot perform other operations.
- **Available**: indicates that the DNAT entry is modified.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyForwardEntry	The operation that you want to perform. Set the value to **ModifyForwardEntry**.
ForwardEntryId	String	Yes	fwd-8vbn3bc8roygjp0gy****	The ID of the DNAT entry.
ForwardTableId	String	Yes	ftb-8vbx8xu2lqj9qb334****	The ID of the DNAT table to which the DNAT entry belongs.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the NAT gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.
ExternalIp	String	No	116.85.XX.XX	• When you modify DNAT entries of Internet NAT gateways, this parameter specifies the EIPs that are used to access the Internet. • When you modify DNAT entries of VPC NAT gateways, this parameter specifies the NAT IP addresses that are accessed by external networks.
ExternalPort	String	No	80	• The external port that is used to forward traffic when you modify DNAT entries of Internet NAT gateways. Valid values: **1** to **65535**. • The port that is accessed by external networks when you modify DNAT entries of VPC NAT gateways. Valid values: **1** to **65535**.
InternalIp	String	No	10.0.0.78	• The private IP address of the ECS instance that uses DNAT entries to communicate with the Internet when you modify DNAT entries of Internet NAT gateways. • The private IP address that uses DNAT entries when you modify DNAT entries of VPC NAT gateways.
InternalPort	String	No	80	• The internal port that is used to forward traffic when you modify DNAT entries of Internet NAT gateways. Valid values: **1** to **65535**. • The port of the destination ECS instance to be mapped when you query DNAT entries of VPC NAT gateways. Valid values: **1** to **65535**.

Parameter	Type	Required	Example	Description
IpProtocol	String	No	TCP	The protocol. Valid values: • **TCP**: The NAT gateway forwards TCP packets. • **UDP**: The NAT gateway forwards UDP packets. • **Any**: The NAT gateway forwards packets of all protocols.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2315DEB7-5E92-423A-91F7-4C1EC9AD97C3	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=ModifyForwardEntry
&ForwardEntryId=fwd-8vbn3bc8roygjp0gy****
&ForwardTableId=ftb-8vbx8xu2lqj9qb334****
&RegionId= cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyForwardEntryResponse>
    <RequestId>2315DEB7-5E92-423A-91F7-4C1EC9AD97C3</RequestId>
</ModifyForwardEntryResponse>
```

`JSON` format

```
{
  "RequestId": "2315DEB7-5E92-423A-91F7-4C1EC9AD97C3"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.
400	InvalidExternalIp.Malformed	The specified ExternalIp is not a valid IP address.	The error message returned because the specified public IP address is invalid.
400	InvalidInternalIp.Malformed	The specified InternalIp is not a valid IP address.	The error message returned because the specified private IP address is invalid.
400	InvalidExternalPort.Malformed	The specified ExternalPort is not a valid port.	The error message returned because the specified public port is invalid.
400	InvalidInternalPort.Malformed	The specified InternalPort is not a valid port.	The error message returned because the specified private port is invalid.
400	Forbidden.DestnationIpOutOfVpcCIDR	The specified Destination Ip is Out of VPC CIDR.	The error message returned because the specified private IP address does not fall within the CIDR block of the virtual private cloud (VPC). Enter a private IP address that falls within the CIDR block of the VPC.

HttpCode	Error code	Error message	Description
400	InvalidProtocal.ValueNotSupported	The specified IpProtocol does not support.	The error message returned because the specified protocol is not supported.
400	IncorretForwardEntryStatus	Some Forward entry status blocked this operation..	The error message returned because you are not authorized to perform the specified operation. The error message returned because one or more DNAT entries in the DNAT table are in the Pending or Modifying state.
400	QuotaExceeded	Forward entry quota exceeded in this route table.	The error message returned because the number of custom route entries in the same route table cannot exceed 200. Go to the Quota Management page to request a quota increase.
404	InvalidForwardEntryId.NotFound	Specified forward entry ID does not exist	The error message returned because the specified DNAT entry does not exist.
404	InvalidExternalIp.NotFound	Specified External Ip address does not found on the VRouter	The error message returned because the specified public IP address does not exist.
404	InvalidForwardTableId.NotFound	Specified forward table does not exist.	The error message returned because the specified DNAT table does not exist. Check the parameter and try again.
400	Forbidden.ExternalIp.UsedInSnatTable	The specified ExternalIp is already used in SnatTable	The error message returned because the specified public IP address is already used by an SNAT entry. Select a different IP address or delete the SNAT entry.
400	Forbidden.Already.Bounded	The specified instance already bounded	The error message returned because the specified instance is associated with another DNAT entry.

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

18.13. DeleteForwardEntry

Deletes a DNAT entry.

Description

DeleteForwardEntry is an asynchronous operation. After you make a request, the ID of the request is returned but the specified DNAT entry is not deleted. The system deletes the entry in the background. You can call the DescribeNatGateways operation to query the status of the DNAT entry. The DNAT entry may be in the one of the following states:

- If the DNAT entry is in the **Deleting** state, the system is deleting the DNAT entry. In this case, you can only query the status of the DNAT entry, and cannot perform other operations.
- If no DNAT entry is returned in the response, the DNAT entry is deleted.

If a DNAT table has DNAT entries in the **Pending** state, you cannot delete the DNAT entries.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteForwardEntry	The operation that you want to perform. Set the value to **DeleteForwardEntry**.
ForwardEntryId	String	Yes	fwd-8vbn3bc8roygjp0gy****	The ID of the DNAT entry to be deleted.

Parameter	Type	Required	Example	Description
ForwardTableId	String	Yes	ftb-8vbx8xu2lqj9qb334****	The ID of the DNAT table to which the DNAT entry belongs.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the NAT gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DeleteForwardEntry
&ForwardEntryId=fwd-8vbn3bc8roygjp0gy****
&ForwardTableId=ftb-8vbx8xu2lqj9qb334****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteForwardEntryResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</DeleteForwardEntryResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.
400	IncorretForwardEntryStatus	Some Forward entry status blocked this operation..	The error message returned because you are not authorized to perform the specified operation. The error message returned because one or more DNAT entries in the DNAT table are in the Pending or Modifying state.
404	InvalidForwardEntryId.NotFound	Specified forward entry ID does not exist	The error message returned because the specified DNAT entry does not exist.
404	InvalidForwardTableId.NotFound	Specified forward table does not exist.	The error message returned because the specified DNAT table does not exist. Check the parameter and try again.
400	IncorretForwardEntryStatus	The Specified forwardEntry is not exist	The error message returned because the specified DNAT entry does not exist.

HttpCode	Error code	Error message	Description
400	MissingParameter	Missing mandatory parameter	The error message returned because required parameters are not set. Check whether you have set all the required parameters before you call this operation.

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

18.14. CreateSnatEntry

Adds a Source Network Address Translation (SNAT) entry to an SNAT table.

Description

You can call this operation to add SNAT entries to Internet NAT gateways and virtual private cloud (VPC) NAT gateways. In this topic, a NAT gateway refers to both gateway types.

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

- CreateSnatEntry is an asynchronous operation. After you make a request, an SNAT entry ID is returned but the specified SNAT entry is not added. The system adds the entry in the background. You can call the DescribeSnatTableEntries operation to query the status of the SNAT entry.
  - When the SNAT entry is in the **Pending** state, the system is adding the SNAT entry. You can only query the status of the SNAT entry, and cannot perform other operations.
  - When the SNAT entry is in the **Available** state, the SNAT entry is added.
- The vSwitch and Elastic Compute Service (ECS) instance specified in the SNAT entry must be created in the virtual private cloud (VPC) where the NAT gateway is deployed.
- Each vSwitch or ECS instance can be specified in only one SNAT entry.
- If a high-availability virtual IP address (HAVIP) exists in the vSwitch, you cannot create SNAT entries.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateSnatEntry	The operation that you want to perform. Set the value to **CreateSnatEntry**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the NAT gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
SnatIp	String	Yes	47.98.XX.XX	• The elastic IP addresses (EIPs) in the SNAT entry when you add an SNAT entry to an Internet NAT gateway. Separate EIPs with commas (,). **Note** If you select multiple EIPs to create an SNAT address pool, connections are hashed to these EIPs. Network traffic may not be evenly distributed to the EIPs because the amount of traffic passes through each connection varies. We recommend that you associate these EIPs with the same EIP bandwidth plan to prevent service interruptions due to the bandwidth limit of an individual EIP. • When you add an SNAT entry to a VPC NAT gateway, this parameter specifies the NAT IP address in the SNAT entry.
SnatTableId	String	Yes	stb-bp190wu8io1vgev****	The ID of the SNAT table.
SourceVSwitchId	String	No	vsw-bp1nhx2s9ui5o****	The ID of the vSwitch. • When you add an SNAT entry to an Internet NAT gateway, this parameter specifies that Elastic Compute Service (ECS) instances in the vSwitch can use the SNAT entry to access the Internet. If you select multiple EIPs to create an SNAT address pool, connections are hashed to these EIPs. Network traffic may not be evenly distributed to the EIPs because the amount of traffic passes through each connection varies. We recommend that you associate these EIPs with the same EIP bandwidth plan to prevent service interruptions due to the bandwidth limit of an individual EIP. • When you add an SNAT entry to a VPC NAT gateway, this parameter specifies that ECS instances in the vSwitch can use the SNAT entry to access external networks.

Parameter	Type	Required	Example	Description
SourceCIDR	String	No	10.1.1.0/24	You can specify the CIDR block of a VPC, a vSwitch, or an ECS instance or enter a custom CIDR block. You can specify an SNAT entry in the following ways: • You can specify the CIDR block of the VPC where the NAT gateway is deployed. Then, all ECS instances in the VPC can access the Internet or external networks by using SNAT. • You can specify the CIDR block of a vSwitch, for example, 192.168.1.0/24. Then, the ECS instances in the vSwitch can access the Internet or external networks by using SNAT. • You can specify the IP address of an ECS instance, for example, 192.168.1.1/32. Then, the ECS instance can access the Internet or external networks by using SNAT. • You can specify a custom CIDR block. Then, all ECS instances within the specified CIDR block can access the Internet or external networks by using SNAT. When you add an SNAT entry to an Internet NAT gateway, if **SnatIp** is set to an EIP, the ECS instance uses the specified EIP to access the Internet. If **SnatIp** is set to multiple EIPs, the ECS instance randomly selects an EIP specified in the **SnatIp** parameter to access the Internet. You cannot set this parameter and **SourceVSwtichId** at the same time. If the **SourceVSwitchId** parameter is set, you cannot set the **SourceCIDR** parameter. If the **SourceCIDR** parameter is set, you cannot set the **SourceVSwitchId** parameter.
SnatEntryName	String	No	SnatEntry-1	The name of the SNAT entry. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with `http://` or `https://`.
ClientToken	String	No	02fb3da4-130e-11e9-8e44****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
SnatEntryId	String	snat-kmd6nv8fy****	The ID of the SNAT entry.
RequestId	String	2315DEB7-5E92-423A-91F7-4C1EC9AD97C3	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateSnatEntry
&RegionId=cn-hangzhou
&SnatIp=47.XX.XX.98
&SnatTableId=stb-bp190wu8io1vgev****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateSnatEntryResponse>
    <RequestId>2315DEB7-5E92-423A-91F7-4C1EC9AD97C3</RequestId>
    <SnatEntryId>snat-119smw5tkx****</SnatEntryId>
</CreateSnatEntryResponse>
```

`JSON` format

```
{
  "SnatEntryId": "snat-kmd6nv8fyx****",
  "RequestId": "2315DEB7-5E92-423A-91F7-4C1EC9AD97C3"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	Forbidden.SourceVSwitchId.IncludeHaVip	There is some HaVips under specified VSwitch	The error message returned because the specified vSwitch is associated with HAVIPs.
400	InvalidSnatIp.Malformed	The specified SnatIp is not a valid IP address.	The error message returned because the specified EIP is invalid.
400	SNAT_IP_POOL_COUNT_TOO_MANY	The Snat pool ip too many.	The error message returned because the number of IP addresses in the SNAT IP address pool has reached the upper limit.
400	Forbidden.SnatEntryCountLimited	SNAT entry in the specified SNAT table reach it?s limit.	The error message returned because the number of SNAT entries has reached the upper limit.
400	NOT_ALLOW_USE_SOURCECIDR	The User not in nat_scope_unlimited white list. Cannot use SourceCidr param.	The error message returned because the specified private IP address does not fall within the CIDR block of the VPC.
400	INVALID_PARAMETER	The parameter invalid.	The error message returned because the specified parameter value is invalid.
400	Forbidden.SourceVSwitchId.Duplicated	The specified SourceCIDRis duplicated.	The error message returned because an SNAT entry is already created for the specified vSwitch.
400	Forbidden.IpUsedInForwardTable	The specified SnatIp already used in forward table	The error message returned because the specified EIP is already used by a DNAT entry. Select another EIP or delete the DNAT rule that uses the specified EIP.
400	Forbindden	The specified Instance already bind eip	The error message returned because the ECS instance is associated with an EIP. Disassociate the EIP from the ECS instance before you create forwarding rules.
400	OperationUnsupported.CidrConflict	The specified CIDR block conflicts with an existing SNAT entry.	The error message returned because the specified CIDR block conflicts with those in existing SNAT entries.
400	InvalidParameter.Name.Malformed	The specified Name is not valid.	The error message returned because the specified name format is invalid.

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.
404	InvalidSnatTableId.NotFound	Specified SNAT table does not exist.	The error message returned because the specified SNAT table does not exist. Check whether the ID of the SNAT table is valid.
404	InvalidVSwitchId.NotFound	The specified virtual switch does not exists.	The error message returned because the specified vSwitch does not exist. Check whether the specified ID is valid.
404	InvalidSnatIp.NotFound	Specified SnatIp does not found on the NAT Gateway	The error message returned because the specified EIP is not found on the NAT gateway.

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

18.15. DescribeSnatTableEntries

Queries SNAT entries.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSnatTableEntries	The operation that you want to perform. Set the value to **DescribeSnatTableEntries**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the NAT gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.
SnatTableId	String	Yes	stb-8vbczigrhop8x5u3t****	The ID of the SNAT table.
SnatEntryId	String	No	snat-8vbae8uqh7rjpk7d2****	The ID of the SNAT entry.
SourceVSwitchId	String	No	vsw-3xbjkhjshjdf****	The ID of the vSwitch. • When you query SNAT entries of Internet NAT gateways, this parameter specifies that Elastic Compute Service (ECS) instances in the vSwitch can use SNAT entries to access the Internet. • When you query SNAT entries of virtual private cloud (VPC) NAT gateways, this parameter specifies that ECS instances in the vSwitch can use SNAT entries to access external networks.
SourceCIDR	String	No	116.22.XX.XX/24	The source CIDR block of the SNAT entry.
SnatIp	String	No	116.22.XX.XX	• When you query SNAT entries of Internet NAT gateways, this parameter specifies the EIP in an SNAT entry. • When you query SNAT entries of VPC NAT gateways, this parameter specifies the NAT IP address in an SNAT entry.

Parameter	Type	Required	Example	Description
SnatEntryName	String	No	SnatEntry-1	The name of the SNAT entry. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with `http://` or `https://`.
PageNumber	Integer	No	1	The number of the page returned. Default value: **1**.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: **50**. Default value: **10**.

Response parameters

Parameter	Type	Example	Description
SnatTableEntries	Array of SnatTableEntry		Details of SNAT entries.
SnatTableEntry			
SnatEntryId	String	snat-kmd6nv8fy****	The ID of the SNAT entry.
SnatEntryName	String	SnatEntry-1	The name of the SNAT entry.
SnatIp	String	116.22.XX.XX	• When you query SNAT entries of Internet NAT gateways, this parameter indicates the EIP in an SNAT entry. • When you query SNAT entries of VPC NAT gateways, this parameter indicates the NAT IP address in an SNAT entry.
SnatTableId	String	stb-gz3r3odawdgffde****	The ID of the SNAT table to which the SNAT entry belongs.
SourceCIDR	String	116.22.XX.XX/24	The source CIDR block of the SNAT entry.
SourceVSwitchId	String	vsw-3xbdsffvfgdfds****	• When you query SNAT entries of Internet NAT gateways, this parameter indicates the ID of the vSwitch that uses SNAT to access the Internet. • When you query SNAT entries of VPC NAT gateways, this parameter indicates the ID of the vSwitch that uses SNAT to access external networks.
Status	String	Pending	The status of the SNAT entry. Valid values: • **Pending**: being created or modified • **Available**: available • **Deleting**: being deleted
TotalCount	Integer	1	The total number of entries returned.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	5	The number of entries returned per page.
RequestId	String	6D7E89B1-1C5B-412B-8585-4908E222EED5	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeSnatTableEntries
&RegionId=cn-hangzhou
&SnatTableId=stb-8vbczigrhop8x5u3t****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeSnatTableEntriesResponse>
 <TotalCount>1</TotalCount>
 <PageSize>5</PageSize>
 <RequestId>6D7E89B1-1C5B-412B-8585-4908E222EED5</RequestId>
 <PageNumber>1</PageNumber>
 <SnatTableEntries>
    <SnatTableEntry>
       <Status>Pending</Status>
       <SourceVSwitchId>vsw-3xbdsffvfgdfds****</SourceVSwitchId>
       <SnatEntryName>SnatEntry-1</SnatEntryName>
       <SourceCIDR>116.22.XX.XX/24</SourceCIDR>
       <SnatEntryId>snat-kmd6nv8fy****</SnatEntryId>
       <SnatIp>116.22.XX.XX</SnatIp>
       <SnatTableId>stb-gz3r3odawdgffde****</SnatTableId>
    </SnatTableEntry>
 </SnatTableEntries>
</DescribeSnatTableEntriesResponse>
```

`JSON` format

```
{
  "TotalCount": 1,
  "PageSize": 5,
  "RequestId": "6D7E89B1-1C5B-412B-8585-4908E222EED5",
  "PageNumber": 1,
  "SnatTableEntries": {
    "SnatTableEntry": [
      {
      "Status": "Pending",
      "SourceVSwitchId": "vsw-3xbdsffvfgdfds****",
      "SnatEntryName": "SnatEntry-1",
      "SourceCIDR": "116.22.XX.XX/24",
      "SnatEntryId": "snat-kmd6nv8fy****",
      "SnatIp": "116.22.XX.XX",
      "SnatTableId": "stb-gz3r3odawdgffde****"
      }
    ]
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.
404	InvalidSnatTableId.NotFound	Specified SNAT table does not exist.	The error message returned because the specified SNAT table does not exist. Check whether the ID of the SNAT table is valid.

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

18.16. ModifySnatEntry

Modifies a specified Source Network Address Translation (SNAT) entry.

Description

ModifySnatEntry is an asynchronous operation. After you make a request, the ID of the request is returned but the specified SNAT entry is not modified. The system modifies the entry in the background. You can call the DescribeNatGateways operation to query the status of the SNAT entry:

- **Pending**: indicates that the system is modifying the SNAT entry. You can only query the status of the SNAT entry, but cannot perform other operations.
- **Available**: indicates that the DNAT entry is modified.

> **Note** **Pending**: indicates that you cannot modify the SNAT entry in the SNAT table.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySnatEntry	The operation that you want to perform. Set the value to **ModifySnatEntry**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the NAT gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.
SnatEntryId	String	Yes	snat-bp1vcgcf8tm0plqcg****	The ID of the SNAT entry that you want to modify.
SnatTableId	String	Yes	stb-8vbczigrhop8x5u3t****	The ID of the SNAT table to which the SNAT entry belongs.
SnatIp	String	No	47.98.XX.XX	• The elastic IP addresses (EIPs) in the SNAT entry when you modify an SNAT entry of an Internet NAT gateway. Separate EIPs with commas (,). If you select multiple EIPs to create an SNAT address pool, connections are hashed to these EIPs. Network traffic may not be evenly distributed to the EIPs because the amount of traffic passes through each connection varies. We recommend that you associate these EIPs with the same EIP bandwidth plan to prevent service interruptions due to the bandwidth limit of an individual EIP. • When you modify an SNAT entry of a VPC NAT gateway, this parameter specifies the NAT IP address in the SNAT entry.
SnatEntryName	String	No	SnatEntry-1	The name of the SNAT entry. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with `http://` or `https://`.

Parameter	Type	Required	Example	Description
ClientToken	String	No	02fb3da4-130e-11e9-8e44-001****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2315DEB7-5E92-423A-91F7-4C1EC9AD97C3	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifySnatEntry
&RegionId=cn-hangzhou
&SnatEntryId=snat-bp1vcgcf8tm0plqcg****
&SnatTableId=stb-8vbczigrhop8x5u3t****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifySnatEntryResponse>
    <RequestId>2315DEB7-5E92-423A-91F7-4C1EC9AD97C3</RequestId>
</ModifySnatEntryResponse>
```

`JSON` format

```
{
  "RequestId": "2315DEB7-5E92-423A-91F7-4C1EC9AD97C3"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidSnatIp.Malformed	The specified SnatIp is not a valid IP address.	The error message returned because the specified EIP is invalid.
400	Forbidden.SourceVSwitchId.Duplicated	The specified SourceCIDRis duplicated.	The error message returned because an SNAT entry is already created for the specified vSwitch.
400	Forbidden.IpUsedInForwardTable	The specified SnatIp already used in forward table	The error message returned because the specified EIP is already used by a DNAT entry. Select another EIP or delete the DNAT rule that uses the specified EIP.
400	InvalidParameter.Name.Malformed	The specified Name is not valid.	The error message returned because the specified name format is invalid.
400	InvalidSnatEntryId.NotFound	Specified SNAT entry does not exist.	The error message returned because the specified SNAT entry does not exist. Check whether the SNAT entry is valid.
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

HttpCode	Error code	Error message	Description
404	InvalidSnatTableId.NotFound	Specified SNAT table does not exist.	The error message returned because the specified SNAT table does not exist. Check whether the ID of the SNAT table is valid.
404	InvalidSnatIp.NotFound	Specified SnatIp does not found on the NAT Gateway	The error message returned because the specified EIP is not found on the NAT gateway.

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

18.17. DeleteSnatEntry

Deletes a specified Source Network Address Translation (SNAT) entry.

Description

DeleteSnatEntry is an asynchronous operation. After you make a request, the ID of the request is returned but the specified SNAT entry is not deleted. The system deletes the SNAT entry in the background. You can call the DescribeNatGateways operation to query the state of the SNAT entry.

- If the SNAT entry is in the **Deleting** state, the system is deleting the SNAT entry. In this case, you can only query the status of the SNAT entry, and cannot perform other operations.
- If no SNAT entry is returned in the response, the SNAT entry is deleted.

If an SNAT table contains SNAT entries in the **Pending** state, you cannot delete any SNAT entries in the SNAT table.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteSnatEntry	The operation that you want to perform. Set the value to **DeleteSnatEntry**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the NAT gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.
SnatEntryId	String	Yes	snat-bp1vcgcf8tm0plqcg****	The ID of the SNAT entry that you want to delete.
SnatTableId	String	Yes	stb-bp190wu8io1vgev80*****	The ID of the SNAT table to which the SNAT entry belongs.
ClientToken	String	No	5A2CFF0E-5718-45B5-9D4D-70B3FF3898	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` can contain only ASCII characters and cannot exceed 64 characters in length. **Note** If you do not set this parameter, the system automatically uses the request ID as the client token. The ID of each request may be unique.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteSnatEntry
&RegionId=cn-hangzhou
&SnatEntryId=snat-bp1vcgcf8tm0plqcg****
&SnatTableId=stb-bp190wu8io1vgev80****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteSnatEntryResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</DeleteSnatEntryResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	IncorretSnatEntryStatus	Some Snat entry status blocked this operation..	The error message returned because you are not authorized to perform the specified operation. The error message returned because one or more SNAT entries in the SNAT table are in the Pending or Modifying state.
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.
404	InvalidSnatEntryId.NotFound	Specified Snat entry ID does not exist	The error message returned because the specified SNAT entry does not exist. Check whether the SNAT entry is valid.
404	InvalidSnatTableId.NotFound	Specified SNAT table does not exist.	The error message returned because the specified SNAT table does not exist. Check whether the ID of the SNAT table is valid.
404	InvalidSnatEntryId.NotFound	Specified SNAT entry does not exist.	The error message returned because the specified SNAT entry does not exist. Check whether the SNAT entry is valid.

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

18.18. ConvertBandwidthPackage

Converts a NAT bandwidth package to an Internet Shared Bandwidth instance.

API description

Before you convert a NAT bandwidth package to an Internet Shared Bandwidth instance, make sure you are aware of the following:

- The conversion does not incur any additional fees.
- The conversion does not affect the SNAT or DNAT entries of the NAT Gateway, and has no impact on the running services. However, we recommend that you perform the conversion during off-peak hours.

- After the conversion, the public IP address in the NAT bandwidth package is converted to an EIP. The peak bandwidth and billing method of the Internet Shared Bandwidth instance are consistent with those of the original NAT bandwidth package.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	ConvertBandwidthPackage	The name of this action. Value: **ConvertBandwidthPackage**.
BandwidthPackageId	String	Yes	bwp-bp1xea10o8qxw4f****	The ID of the NAT bandwidth package.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the NAT Gateway belongs. To query the region ID, call DescribeRegions.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that guarantees the idempotence of the request. The value of this parameter is generated by the client and is unique among different requests. The **ClientToken** value is 1 to 64 ASCII characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example value	Description
ConvertInstanceId	String	cbwp-s6lmotmkkf567b****	The ID of the Internet Shared Bandwidth instance after the conversion.
RequestId	String	0C2EE7A8-74D4-4081-8236-CEBDE3BBCF50	The ID of the request.

Examples

Request example

```
http(s)://[Endpoint]/? Action=ConvertBandwidthPackage
&BandwidthPackageId=bwp-bp1xea10o8qxw4f****
&RegionId=cn-hangzhou
&<CommonParameters>
```

Response example

`XML` format

```
<ConvertBandwidthPackageResponse>
  <RequestId>0C2EE7A8-74D4-4081-8236-CEBDE3BBCF50</RequestId>
  <ConvertInstanceId>cbwp-s6lmotmkkf567b****</ConvertInstanceId>
</ConvertBandwidthPackageResponse>
```

`JSON` format

```
{
 "RequestId":"0C2EE7A8-74D4-4081-8236-CEBDE3BBCF50",
 "ConvertInstanceId":"cbwp-s6lmotmkkf567b****"
}
```

Errors

HTTP status code	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The request failed to be processed due to unknown errors.

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

18.19. EnableNatGatewayEcsMetric

Enables the traffic monitoring feature for NAT gateways.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	EnableNatGatewayEcsMetric	The operation that you want to perform. Set the value to **EnableNatGatewayEcsMetric**.
NatGatewayId	String	Yes	ngw-2vc53wynunp35lw1y****	The ID of the NAT gateway for which you want to enable the traffic monitoring feature.
RegionId	String	Yes	cn-chengdu	The ID of the region where the NAT gateway is deployed. You can call the DescribeRegions operation to query region IDs.
DryRun	Boolean	No	false	Specifies whether to precheck only this request. Valid values: **true**: The validity of the request is checked but the traffic monitoring feature is not enabled. The system checks whether your AccessKey pair is valid, whether the Resource Access Management (RAM) user is authorized, and whether the required parameters are specified. If the request fails the precheck, the corresponding error code is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. **false** (default): The validity of the request is checked. If the request passes the precheck, a 2XX HTTP status code is returned and the traffic monitoring feature is enabled.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=EnableNatGatewayEcsMetric
&NatGatewayId=ngw-2vc53wynunp35lw1y****
&RegionId=cn-chengdu
&<Common request parameters>
```

Sample success responses

`XML` format

```
<EnableNatGatewayEcsMetricResponse>
    <RequestId>5AF873FB-6669-4AD5-A4DA-478D535C8F0D</RequestId>
</EnableNatGatewayEcsMetricResponse>
```

`JSON` format

```
{
 "RequestId": "5AF873FB-6669-4AD5-A4DA-478D535C8F0D"
}
```

Error codes

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

18.20. ListNatGatewayEcsMetric

View the traffic monitoring data of a NAT gateway.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListNatGatewayEcsMetric	The operation that you want to perform. Set the value to **ListNatGatewayEcsMetric**.
NatGatewayId	String	Yes	ngw-2vc53wynunp35lw1y****	The ID of the NAT gateway whose traffic monitoring data you want to view. **Note** You can query only a single NAT gateway.
RegionId	String	Yes	cn-chengdu	The ID of the region to which the NAT gateway belongs. You can call the DescribeRegions operation to query the region ID.
TimePoint	Long	Yes	1602653760	The timestamp of the traffic monitoring data that is accurate to the minute. For example, to view the traffic monitoring data from 17:22:00 on 2020-07-13 to 17:23:00 on 2020-07-13, specify the timestamp at 17:22:00 on 2020-07-13.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to precheck only the current request. Valid values: **true**: sends a precheck request and does not view the traffic monitoring data. The system checks whether your AccessKey pair is valid, RAM user is authorized, and required parameter values are specified. If the request fails to meet the requirements in the check items, an error message is returned. If the request passes the precheck, the `DryRunOperation` error message is returned. **false** (default): checks the API request. After the request passes the check, the 2XX HTTP status code is returned, and service resources are automatically added to the endpoint service.
OrderKey	String	No	ActiveSessionNum	The field by which traffic monitoring data is sorted. Default value: ActiveSessionNum.
OrderType	String	No	desc	The sorting rule of traffic monitoring data. Valid values: • **desc** (default): The data is sorted in descending order. • **asc**: The data is sorted in ascending order.
PrivateIpAddress	String	No	192.168.0.12	The IP address of the ECS instance whose traffic monitoring data you want to view.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The query token. Set this parameter to the NextToken value that is returned in the last API call. If no subsequent request is sent, you do not need to set this parameter.
MaxResults	String	No	20	The number of entries to return on each page. Valid values:**10** to **20**. Default value: **20**.

Response parameters

Parameter	Type	Example	Description
MaxResults	Integer	1	The number of entries to return on each page.
MetricDataList	Array of MetricData		The list of traffic monitoring data.
ActiveSessionNum	Long	6	The number of concurrent connections per minute. Unit: connections
NatGatewayId	String	ngw-2vc53wynunp35lw1y****	The ID of the NAT gateway whose traffic monitoring data you want to view.
NewSessionRate	Long	0	The new session rate. Unit: sessions/s
PrivateIpAddress	String	192.168.0.12	The IP address of the ECS instance whose traffic monitoring data you want to view.

Parameter	Type	Example	Description
RxBps	Long	125	Outbound bandwidth. Unit: bit/s.
RxPps	Long	2	Outbound data packets transferred per second.
Timestamp	Long	1602653760	The timestamp of the traffic monitoring data that is accurate to the minute.
TxBps	Long	125	Inbound bandwidth. Unit: bit/s.
TxPps	Long	2	Inbound data packet. Unit: count/s.
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token that is required for the next query. If the NextToken parameter is empty, no subsequent query will be sent.
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=ListNatGatewayEcsMetric
&NatGatewayId=ngw-2vc53wynunp35lw1y****
&RegionId=cn-chengdu
&TimePoint=1602653760
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ListNatGatewayEcsMetricResponse>
 <RequestId>F3C9E92A-0BAA-4444-ABD9-4E41BADBBD3E</RequestId>
 <NextToken></NextToken>
 <MetricDataList>
     <PrivateIpAddress>192.168.0.48</PrivateIpAddress>
     <RxBps>1178</RxBps>
     <TxBps>45593</TxBps>
     <RxPps>2</RxPps>
     <TxPps>4</TxPps>
     <ActiveSessionNum>6</ActiveSessionNum>
     <NewSessionRate>0</NewSessionRate>
     <NatGatewayId>ngw-2vc53wynunp35lw1y****</NatGatewayId>
     <Timestamp>1602653760</Timestamp>
 </MetricDataList>
 <MaxResults>1</MaxResults>
</ListNatGatewayEcsMetricResponse>
```

`JSON` format

```
{
 "RequestId": "F3C9E92A-0BAA-4444-ABD9-4E41BADBBD3E",
 "NextToken": "",
 "MetricDataList": [
  {
   "PrivateIpAddress": "192.168.0.48",
   "RxBps": 1178,
   "TxBps": 45593,
   "RxPps": 2,
   "TxPps": 4,
   "ActiveSessionNum": 6,
   "NewSessionRate": 0,
   "NatGatewayId": "ngw-2vc53wynunp35lw1y****",
   "Timestamp": 1602653760
  }
 ],
 "MaxResults": 1
}
```

Error codes

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

18.21. DisableNatGatewayEcsMetric

Disables ECS traffic monitoring for a NAT gateway.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DisableNatGatewayEcsMetric	The operation that you want to perform. Set the value to **DisableNatGatewayEcsMetric**.
NatGatewayId	String	Yes	ngw-2vc53wynunp35lw1y****	The ID of the NAT gateway for which you want to disable Elastic Compute Service (ECS) traffic monitoring.
RegionId	String	Yes	cn-chengdu	The ID of the region where the NAT gateway is deployed. You can call the DescribeRegions operation to query region IDs.
DryRun	Boolean	No	false	Specifies whether to precheck this request only. Valid values: **true**: The validity of the request is checked but ECS traffic monitoring is not disabled. Check items include whether your AccessKey pair is valid, whether Resource Access Management (RAM) users are authorized, and whether the required parameters are set. If the request fails the precheck, the corresponding error code is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. **false** (default): The validity of the request is checked. If the request passes the precheck, a 2XX HTTP status code is returned and ECS traffic monitoring is disabled.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DisableNatGatewayEcsMetric
&NatGatewayId=ngw-2vc53wynunp35lw1y****
&RegionId=cn-chengdu
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DisableNatGatewayEcsMetricResponse>
    <RequestId>5AF873FB-6669-4AD5-A4DA-478D535C8F0D</RequestId>
</DisableNatGatewayEcsMetricResponse>
```

`JSON` format

```
{
  "RequestId": "5AF873FB-6669-4AD5-A4DA-478D535C8F0D"
}
```

Error codes

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

18.22. CreateNatIpCidr

Creates a NAT CIDR block.

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	eu-central-1	The region ID of the NAT gateway to which the NAT CIDR block to be created belongs. You can call the DescribeRegions operation to query the most recent region list.
NatIpCidrName	String	Yes	newcidr	The name of the NAT CIDR block. The name must be 2 to 128 characters in length and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter. It must start with a letter but cannot start with `http://` or `https://`.

Parameter	Type	Required	Example	Description
NatIpCidrDescription	String	Yes	mycidr	The description of the NAT CIDR block. The description must be 2 to 256 characters in length. It must start with a letter but cannot start with `http://` or `https://`.
NatGatewayId	String	Yes	ngw-gw8v16wgvtq26vh59****	The ID of the Virtual Private Cloud (VPC) NAT gateway where you want to create the NAT CIDR block.
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: sends the precheck request. The NAT CIDR block is not created. The system checks whether the AccessKey pair is valid, whether the RAM user is authorized, and whether the required parameters are specified. If the request fails the precheck, the corresponding error message is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the API request. This is the default value. If the request passes the precheck, a 2XX HTTP status code is returned and the NAT CIDR block is created.
ClientToken	String	No	5A2CFF0E-5718-45B5-9D4D-70B3FF3898	The client token that is used to ensure the idempotency. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` can contain only ASCII characters. It cannot exceed 64 characters in length. **Note** If you do not set this parameter, the system automatically uses the request ID as the client token. The ID of each request may be unique.
NatIpCidr	String	No	172.16.0.0/24	The NAT CIDR block to be created. The CIDR block must meet the following conditions: • It must be 10.0.0.0/8, 172.16.0.0/12, 192.168.0.0/16, or one of their subnets. • The subnet mask must be 16 to 32 bits in lengths. • To use a public CIDR block as the NAT CIDR block, the VPC to which the VPC NAT gateway belongs must be authorized to use public CIDR blocks. For more information, see Create a VPC NAT gateway.

Response parameters

Parameter	Type	Example	Description
NatIpCidrId	String	vpcnatcidr-gw8lhqtvdn4qnea****	The ID of the NAT CIDR block.

Parameter	Type	Example	Description
RequestId	String	7021BEB1-210F-48A9-AB82-BE9A9110BB89	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateNatIpCidr
&RegionId=eu-central-1
&NatIpCidrName=newcidr
&NatIpCidrDescription=mycidr
&NatGatewayId=ngw-gw8v16wgvtq26vh59****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateNatIpCidrResponse>
 <RequestId>7021BEB1-210F-48A9-AB82-BE9A9110BB89</RequestId>
 <NatIpCidrId>vpcnatcidr-gw8lhqtvdn4qnea****</NatIpCidrId>
</CreateNatIpCidrResponse>
```

`JSON` format

```
{
  "RequestId": "7021BEB1-210F-48A9-AB82-BE9A9110BB89",
  "NatIpCidrId": "vpcnatcidr-gw8lhqtvdn4qnea****"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

18.23. DeleteNatIpCidr

Deletes a NAT CIDR block.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteNatIpCidr	The operation that you want to perform. Set the value to **DeleteNatIpCidr**.
RegionId	String	Yes	eu-central-1	The region ID of the NAT gateway to which the NAT CIDR block to be deleted belongs. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
NatGatewayId	String	Yes	ngw-gw8v16wgvtq26vh59****	The ID of the NAT gateway to which the NAT CIDR block to be deleted belongs.
NatIpCidr	String	Yes	172.16.0.0/24	The NAT CIDR block to be deleted. • Before you delete a NAT CIDR block, you must delete all NAT IP addresses of the CIDR block. • The default NAT CIDR block cannot be deleted.
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: sends the precheck request. The NAT CIDR block is not deleted. The system checks whether the AccessKey pair is valid, whether the RAM user is authorized, and whether the required parameters are specified. If the request fails the precheck, the corresponding error message is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the API request. This is the default value. If the request passes the precheck, a 2XX HTTP status code is returned and the NAT CIDR block is deleted.
ClientToken	String	No	5A2CFF0E-5718-45B5-9D4D-70B3FF3898	The client token that is used to ensure the idempotency. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` can contain only ASCII characters. It cannot exceed 64 characters in length. **Note** If you do not specify this parameter, the system automatically uses the request ID as the client token. The ID of each request may be unique.

Response parameters

Parameter	Type	Example	Description
RequestId	String	7021BEB1-210F-48A9-AB82-BE9A9110BB89	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteNatIpCidr
&RegionId=eu-central-1
&NatGatewayId=ngw-gw8v16wgvtq26vh59****
&NatIpCidr=172.16.0.0/24
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteNatIpCidrResponse>
 <RequestId>7021BEB1-210F-48A9-AB82-BE9A9110BB89</RequestId>
</DeleteNatIpCidrResponse>
```

`JSON` format

```
{
  "RequestId": "7021BEB1-210F-48A9-AB82-BE9A9110BB89"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

18.24. ModifyNatIpCidrAttribute

Modifies the name and description of a NAT CIDR block.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyNatIpCidrAttribute	The operation that you want to perform. Set the value to **ModifyNatIpCidrAttribute**.
RegionId	String	Yes	eu-central-1	The region ID of the NAT gateway to which the NAT CIDR block belongs. You can call the DescribeRegions operation to query the most recent region list.
NatIpCidr	String	Yes	172.16.0.0/24	The NAT CIDR block whose name and description you want to modify.
NatGatewayId	String	Yes	ngw-gw8v16wgvtq26vh59****	The ID of the Virtual Private Cloud (VPC) NAT gateway to which the NAT CIDR block belongs.
NatIpCidrName	String	Yes	newname	The new name of the NAT CIDR block.
NatIpCidrDescription	String	No	newtest	The new description of the NAT CIDR block.
ClientToken	String	No	5A2CFF0E-5718-45B5-9D4D-70B3FF3898	The client token that is used to ensure the idempotency. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` can contain only ASCII characters. It cannot exceed 64 characters in length. **Note** If you do not set this parameter, the system automatically uses the request ID as the client token. The ID of each request may be unique.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: sends the precheck request. Information about NAT CIDR blocks is not modified. The system checks whether the AccessKey pair is valid, whether the RAM user is authorized, and whether the required parameters are specified. If the request fails the precheck, the corresponding error message is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the API request. This is the default value. If the request passes the precheck, a 2XX HTTP status code is returned and information about the CIDR block is modified.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyNatIpCidrAttribute
&RegionId=eu-central-1
&NatIpCidr=172.16.0.0/24
&NatGatewayId=ngw-gw8v16wgvtq26vh59****
&NatIpCidrName=newname
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyNatIpCidrAttributeResponse>
 <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</ModifyNatIpCidrAttributeResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

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

18.25. ListNatIpCidrs

Queries a CIDR block of a specified NAT gateway.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListNatIpCidrs	The operation that you want to perform. Set the value to **ListNatIpCidrs**.
RegionId	String	Yes	eu-central-1	The ID of the region where the NAT gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.
NatGatewayId	String	Yes	ngw-gw8v16wgvtq26vh59****	The ID of the Virtual Private Cloud (VPC) NAT gateway that you want to query.
NatIpCidr	String	Yes	172.16.0.0/24	The CIDR block of the NAT gateway that you want to query.
DryRun	Boolean	No	false	Specifies whether to precheck only this request. Valid values: • **true**: sends a precheck request. The CIDR blocks of the NAT gateway are not queried. The system checks whether your AccessKey pair is valid, whether the Resource Access Management (RAM) user is authorized, and whether required parameters are set. If the request fails the precheck, the corresponding error message is returned. If the request passes the precheck, the DryRunOperation error message is returned. • **false**: sends a regular request. After the request passes the precheck, 2xx HTTP status code is returned and the CIDR blocks of the NAT gateway are queried. This is the default value.
ClientToken	String	No	5A2CFF0E-5718-45B5-9D4D-70B3FF3898	The client token that is used to ensure the idempotency of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` can contain only ASCII characters and cannot exceed 64 characters in length. **Note** If you do not specify this parameter, the system automatically uses the request ID as the client token. The ID of each request may be unique.
NatIpCidrStatus	String	No	Available	The status of the CIDR block that you want to query. If the value is **Available**, the CIDR block is available.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query. If you do not set **NextToken**, all results are returned.
MaxResults	String	No	20	The number of entries to return on each page. Valid values: **10** to **100**. Default value: **20**.
NatIpCidrName.N	RepeatList	No	test	The name of the CIDR block that you want to query. Valid values of **N**: **1** to **20**.

Parameter	Type	Required	Example	Description
NatIpCidrs.N	RepeatList	No	172.16.0.0/24	The CIDR block of the NAT gateway that you want to query. Valid values of **N**: **1** to **20**.

Response parameters

Parameter	Type	Example	Description
NatIpCidrs	Array of NatIpCidr		The CIDR blocks of the NAT gateway.
CreationTime	String	2021-06-28T20:50Z	The time when the CIDR block was created.
IsDefault	Boolean	true	Indicates whether the CIDR block is the default CIDR block of the NAT gateway. Valid values: • **true**: The CIDR block is the default CIDR block of the NAT gateway. • **false**: The CIDR block is not the default CIDR block of the NAT gateway.
NatGatewayId	String	ngw-gw8v16wgvtq26vh59****	The ID of the VPC NAT gateway.
NatIpCidr	String	172.16.0.0/24	The CIDR block of the NAT gateway.
NatIpCidrDescription	String	default	The description of the CIDR block of the NAT gateway.
NatIpCidrId	String	vpcnatcidr-gw8ov42ei6xh1jys2****	The instance ID of the CIDR block of the NAT gateway.
NatIpCidrName	String	default	The name of the CIDR block of the NAT gateway.
NatIpCidrStatus	String	Available	The status of the CIDR block of the NAT gateway. If the value is **Available**, the CIDR block is available.
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query. If you do not set **NextToken**, all results are returned.
RequestId	String	7479A224-4A28-4895-9604-11F48BCE6A88	The ID of the request.
TotalCount	String	1	The number of CIDR blocks that are returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListNatIpCidrs
&RegionId=eu-central-1
&NatGatewayId=ngw-gw8v16wgvtq26vh59****
&NatIpCidr=172.16.0.0/24
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ListNatIpCidrsResponse>
 <TotalCount>1</TotalCount>
 <RequestId>7479A224-4A28-4895-9604-11F48BCE6A88</RequestId>
 <NextToken>caeba0bbb2be03f84eb48b699f0a4883</NextToken>
 <NatIpCidrs>
    <IsDefault>true</IsDefault>
    <NatIpCidr>172.16.0.0/24</NatIpCidr>
    <NatIpCidrDescription>default</NatIpCidrDescription>
    <NatIpCidrId>vpcnatcidr-gw8ov42ei6xh1jys2****</NatIpCidrId>
    <CreationTime>2021-06-28T20:50Z</CreationTime>
    <NatIpCidrName>default</NatIpCidrName>
    <NatGatewayId>ngw-gw8v16wgvtq26vh59****</NatGatewayId>
    <NatIpCidrStatus>Available</NatIpCidrStatus>
 </NatIpCidrs>
</ListNatIpCidrsResponse>
```

`JSON` format

```
{
  "TotalCount": 1,
  "RequestId": "7479A224-4A28-4895-9604-11F48BCE6A88",
  "NextToken": "caeba0bbb2be03f84eb48b699f0a4883",
  "NatIpCidrs": {
    "IsDefault": true,
    "NatIpCidr": "172.16.0.0/24",
    "NatIpCidrDescription": "default",
    "NatIpCidrId": "vpcnatcidr-gw8ov42ei6xh1jys2****",
    "CreationTime": "2021-06-28T20:50Z",
    "NatIpCidrName": "default",
    "NatGatewayId": "ngw-gw8v16wgvtq26vh59****",
    "NatIpCidrStatus": "Available"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

18.26. CreateNatIp

Creates a NAT IP address.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateNatIp	The operation that you want to perform. Set the value to **CreateNatIp**.
RegionId	String	Yes	eu-central-1	The region ID of the NAT gateway to which the NAT IP address that you want to create belongs. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
NatIpName	String	Yes	newnatip	The name of the NAT IP address. The name must be 2 to 128 characters in length, and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter. It cannot start with `http://` or `https://`.
NatIpDescription	String	Yes	test	The description of the NAT IP address. The description must be 2 to 256 characters in length. It must start with a letter or Chinese character but cannot start with `http://` or `https://`.
NatGatewayId	String	Yes	ngw-gw8v16wgvtq26vh59****	The ID of the Virtual Private Cloud (VPC) NAT gateway for which you want to create the NAT IP address.
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: sends the precheck request. The NAT IP address is not created. The system checks whether your AccessKey pair is valid, whether the RAM user is authorized, and whether the required parameters are set. If the request fails the precheck, the corresponding error message is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false** (default): sends the request. If the request passes the precheck, a 2xx HTTP status code is returned and the NAT IP address is created.
ClientToken	String	No	5A2CFF0E-5718-45B5-9D4D-70B3FF3898	The client token that is used to ensure the idempotency. You can use the client to generate the value, but you must make sure that it is unique among different requests. The `ClientToken` can contain only ASCII characters. It cannot exceed 64 characters in length. **Note** If you do not specify this parameter, the system automatically uses the request ID as the client token. The ID of each request may be unique.
NatIpCidr	String	No	192.168.0.0/24	The CIDR block to which the NAT IP address belongs.
NatIpCidrId	String	No	vpcnatip-gw8y7q3cpk3fggs87****	The ID of the CIDR block to which the NAT IP address belongs.
NatIp	String	No	192.168.0.34	The NAT IP address that you want to create. If you do not specify an IP address, the system selects a random IP address from the specified CIDR block.

Response parameters

Parameter	Type	Example	Description
NatIp	String	192.168.0.34	The NAT IP address that is created.
NatIpId	String	vpcnatip-gw8y7q3cpk3fggs8****	The ID of the NAT IP address.
RequestId	String	E9AD97A0-5338-43F8-8A80-5E274CCBA11B	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateNatIp
&RegionId=eu-central-1
&NatIpName=newnatip
&NatIpDescription=test
&NatGatewayId=ngw-gw8v16wgvtq26vh59****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateNatIpResponse>
 <NatIp>192.168.0.34</NatIp>
 <NatIpId>vpcnatip-gw8y7q3cpk3fggs8****</NatIpId>
 <RequestId>E9AD97A0-5338-43F8-8A80-5E274CCBA11B</RequestId>
</CreateNatIpResponse>
```

`JSON` format

```
{
  "NatIp": "192.168.0.34",
  "NatIpId": "vpcnatip-gw8y7q3cpk3fggs8****",
  "RequestId": "E9AD97A0-5338-43F8-8A80-5E274CCBA11B"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

18.27. ModifyNatIpAttribute

Modifies the name and description of a NAT IP address.

Debugging

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

Request parameters

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

Parameter	Type	Required	Example	Description
RegionId	String	Yes	eu-central-1	The region ID of the NAT gateway to which the NAT IP address that you want to modify belongs. You can call the DescribeRegions operation to query the most recent region list.
NatIpId	String	Yes	vpcnatip-gw8e1n11f44wpg****	The ID of the NAT IP address that you want to modify.
NatIpName	String	Yes	newname	The name of the NAT IP address that you want to modify. The name must be 2 to 128 characters in length, and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter. It cannot start with `http://` or `https://`.
NatIpDescription	String	Yes	test	The description of the NAT IP address that you want to modify. The description must be 2 to 256 characters in length. It must start with a letter but cannot start with `http://` or `https://`.
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: sends the precheck request. Information about the NAT IP address is not modified. The system checks whether your AccessKey pair is valid, whether the RAM user is authorized, and whether the required parameters are set. If the request fails the precheck, the corresponding error message is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false** (default): sends the request. If the request passes the precheck, a 2xx HTTP status code is returned and information about the NAT IP address is modified.
ClientToken	String	No	5A2CFF0E-5718-45B5-9D4D-70B3FF3898	The client token that is used to ensure the idempotency. You can use the client to generate the value, but you must make sure that it is unique among different requests. The `ClientToken` can contain only ASCII characters. It cannot exceed 64 characters in length. **Note** If you do not specify this parameter, the system automatically uses the request ID as the client token. The ID of each request may be unique.

Response parameters

Parameter	Type	Example	Description
RequestId	String	6CC9456C-2E29-452A-9180-B6926E51B5CA	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyNatIpAttribute
&RegionId=eu-central-1
&NatIpId=vpcnatip-gw8e1n11f44wpg****
&NatIpName=newname
&NatIpDescription=test
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyNatIpAttributeResponse>
 <RequestId>6CC9456C-2E29-452A-9180-B6926E51B5CA</RequestId>
</ModifyNatIpAttributeResponse>
```

`JSON` format

```
{
  "RequestId": "6CC9456C-2E29-452A-9180-B6926E51B5CA"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

18.28. DeleteNatIp

Deletes a NAT IP address.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteNatIp	The operation that you want to perform. Set the value to **DeleteNatIp**.
NatIpId	String	Yes	vpcnatip-gw8y7q3cpk3fggs87*** *	The ID of the NAT IP address that you want to delete.
RegionId	String	Yes	eu-central-1	The region ID of the NAT gateway to which the NAT IP address that you want to delete belongs. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: sends the precheck request. The NAT IP address is not deleted. The system checks whether your AccessKey pair is valid, whether the RAM user is authorized, and whether the required parameters are set. If the request fails the precheck, the corresponding error message is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false** (default): sends the request. If the request passes the precheck, a 2xx HTTP status code is returned and the NAT IP address is deleted.
ClientToken	String	No	5A2CFF0E-5718-45B5-9D4D-70B3FF3898	The client token that is used to ensure the idempotency. You can use the client to generate the value, but you must make sure that it is unique among different requests. The `ClientToken` can contain only ASCII characters. It cannot exceed 64 characters in length. **Note** If you do not specify this parameter, the system automatically uses the request ID as the client token. The ID of each request may be unique.

Response parameters

Parameter	Type	Example	Description
RequestId	String	E9AD97A0-5338-43F8-8A80-5E274CCBA11B	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteNatIp
&NatIpId=vpcnatip-gw8y7q3cpk3fggs87****
&RegionId=eu-central-1
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteNatIpResponse>
 <RequestId>E9AD97A0-5338-43F8-8A80-5E274CCBA11B</RequestId>
</DeleteNatIpResponse>
```

`JSON` format

```
{
  "RequestId": "E9AD97A0-5338-43F8-8A80-5E274CCBA11B"
}
```

Error codes

HttpCode	Error code	Error message	Description

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

18.29. ListNatIps

Queries NAT IP addresses.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListNatIps	The operation that you want to perform. Set the value to **ListNatIps**.
NatGatewayId	String	Yes	ngw-gw8v16wgvtq26vh59****	The ID of the NAT gateway to which the NAT IP address belongs.
NatIpCidr	String	Yes	192.168.0.0/24	The CIDR block to which the NAT IP address belongs.
RegionId	String	Yes	eu-central-1	The ID of the region where the NAT gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: sends the precheck request. NAT IP addresses are not queried. The system checks whether the AccessKey pair is valid, whether the RAM user is authorized, and whether the required parameters are specified. If the request fails the precheck, the corresponding error message is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the API request. This is the default value. If the request passes the precheck, a 2XX HTTP status code is returned and NAT IP addresses are queried.
ClientToken	String	No	5A2CFF0E-5718-45B5-9D4D-70B3FF3898	The client token that is used to ensure the idempotency. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` can contain only ASCII characters. It cannot exceed 64 characters in length. **Note** If you do not set this parameter, the system automatically uses the request ID as the client token. The ID of each request may be unique.

Parameter	Type	Required	Example	Description
NatIpStatus	String	No	Available	The status of the NAT IP address. Valid values: • **Available**: available • **Deleting**: being deleted • **Creating**: being created
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query. If **NextToken** is not set, all results are returned.
MaxResults	String	No	20	The number of entries to return on each page. Valid values: **10** to **100**. Default value: **20**.
NatIpName.N	RepeatList	No	test	The name of the NAT IP address. Valid values of **N**: **1** to **20**.
NatIpIds.N	RepeatList	No	vpcnatip-gw8a863sut1zijxh0****	The ID of the NAT IP address. Valid values of **N**: **1** to **20**.

Response parameters

Parameter	Type	Example	Description
NatIps	Array of NatIp		The list of NAT IP addresses.
IsDefault	Boolean	true	Indicates whether the NAT IP address is the default one. Valid values: • **true**: yes • **false**: no
NatGatewayId	String	ngw-gw8v16wgvtq26vh59****	The ID of the Virtual Private Cloud (VPC) NAT gateway to which the NAT IP address belongs.
NatIp	String	192.168.0.126	The NAT IP address that is queried.
NatIpCidr	String	192.168.0.0/24	The CIDR block to which the NAT IP address belongs.
NatIpDescription	String	default	The description of the NAT IP address.
NatIpId	String	vpcnatip-gw8a863sut1zijxh0****	The ID of the NAT IP address.
NatIpName	String	default	The name of the NAT IP address.
NatIpStatus	String	Available	The status of the NAT IP address. Valid values: • **Available**: available • **Deleted**: deleted • **Deleting**: being deleted • **Creating**: being created • **Associated**: associated with an SNAT or DNAT entry • **Associating**: being associated with an SNAT or DNAT entry

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token used to start the next query. If **NextToken** is not set, all results are returned.
RequestId	String	7E78CEEA-BF8F-44D1-9DCD-D9141135B71E	The ID of the request.
TotalCount	String	7	The number of NAT IP addresses that are returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListNatIps
&NatGatewayId=ngw-gw8v16wgvtq26vh59****
&NatIpCidr=192.168.0.0/24
&RegionId=eu-central-1
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ListNatIpResponse>
 <TotalCount>7</TotalCount>
 <RequestId>7E78CEEA-BF8F-44D1-9DCD-D9141135B71E</RequestId>
 <NextToken>caeba0bbb2be03f84eb48b699f0a4883</NextToken>
 <NatIps>
    <NatIp>192.168.0.126</NatIp>
    <IsDefault>true</IsDefault>
    <NatIpId>vpcnatip-gw8a863sut1zijxh0****</NatIpId>
    <NatIpCidr>192.168.0.0/24</NatIpCidr>
    <NatIpName>default</NatIpName>
    <NatIpDescription>default</NatIpDescription>
    <NatIpStatus>Available</NatIpStatus>
    <NatGatewayId>ngw-gw8v16wgvtq26vh59****</NatGatewayId>
 </NatIps>
</ListNatIpResponse>
```

`JSON` format

```
{
  "TotalCount": 7,
  "RequestId": "7E78CEEA-BF8F-44D1-9DCD-D9141135B71E",
  "NextToken": "caeba0bbb2be03f84eb48b699f0a4883",
  "NatIps": {
    "NatIp": "192.168.0.126",
    "IsDefault": true,
    "NatIpId": "vpcnatip-gw8a863sut1zijxh0****",
    "NatIpCidr": "192.168.0.0/24",
    "NatIpName": "default",
    "NatIpDescription": "default",
    "NatIpStatus": "Available",
    "NatGatewayId": "ngw-gw8v16wgvtq26vh59****"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

19.EIP bandwidth plan

19.1. CreateCommonBandwidthPackage

Creates an elastic IP address (EIP) bandwidth plan.

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 parameter

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateCommonBandwidthPackage	The operation that you want to perform. Set the value to: **CreateCommonBandwidthPackage**.
Bandwidth	Integer	Yes	5	The maximum bandwidth of the EIP bandwidth plan. Valid values: **1** to **1000**. Unit: Mbit/s.
RegionId	String	Yes	cn-hangzhou	The region ID of the EIP bandwidth plan. You can call the DescribeRegions operation to query the most recent region list.
Zone	String	No	cn-hangzhou-a	The zone where you want to create the EIP bandwidth plan. You can leave this parameter empty.
ISP	String	No	BGP	The line type. Valid values: • **BGP**: BGP (Multi-ISP) lines • **BGP_PRO**: BGP (Multi-ISP) Pro lines **Note** • BGP (Multi-ISP) lines are supported in all regions. BGP (Multi-ISP) Pro lines are supported only in China (Hong Kong). • If your account is included in the BGP (single line) whitelist, you can set this parameter to **ChinaTelecom**, **ChinaUnicom**, or **ChinaMobile**. If your workloads are deployed in China East 1 Finance,you must set this parameter to **BGP_FinanceCloud**.

Parameter	Type	Required	Example	Description
Name	String	No	test123	The name of the EIP bandwidth plan. The name must be 2 to 128 characters in length and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter but cannot start with `http://` or `https://`.
Description	String	No	abc	The description of the EIP bandwidth plan. The description must be 2 to 256 characters in length. It must start with a letter but cannot start with `http://` or `https://`.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-001****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.
ResourceGroupId	String	No	rg-acfmxazdjdhd****	The ID of the resource group to which the EIP bandwidth plan belongs.
Ratio	Integer	No	20	The minimum bandwidth guaranteed in percentage. If this value is set to **20**, 20% of the total bandwidth is guaranteed. **Note** This parameter is only available for EIP bandwidth plans that are purchased on the Alibaba Cloud China site.
InternetChargeType	String	No	Alibaba Cloud China site: PayByBandwidth. Alibaba Cloud International site: PayByTraffic	The billing method of the EIP bandwidth plan. Set the value to **PayByTraffic**.

Response parameters

Parameter	Type	Example	Description
BandwidthPackageId	String	cbwp-bp1vevu8h3ieh****	The ID of the EIP bandwidth plan.
RequestId	String	FF39F653-033E-4CD9-9EDF-3CCA5A71FBC3	The ID of the request.
ResourceGroupId	String	rg-acfmxazdjdhd****	The ID of the resource group to which the EIP bandwidth plan belongs.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateCommonBandwidthPackage
&Bandwidth=5
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateCommonBandwidthPackageResponse>
    <BandwidthPackageId>cbwp-bp1vevu8h3iehdfradfra****</BandwidthPackageId>
    <ResourceGroupId>rg-acfmxazdjdhd****</ResourceGroupId>
    <RequestId>FF39F653-033E-4CD9-9EDF-3CCA5A71FBC3</RequestId>
</CreateCommonBandwidthPackageResponse>
```

`JSON` format

```
{"ResourceGroupId":"rg-acfmxazdjdhd****","RequestId":"FF39F653-033E-4CD9-9EDF-3CCA5A71FBC3","BandwidthPackageId":"cbwp-bp1vevu8h3ieh****"}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.
404	InvalidVpcId.NotFound	Specified value of VpcId is not found in our record.	The error message returned because the specified virtual private cloud (VPC) does not exist. Check whether the specified VPC is valid.
400	MissingParameter	Miss mandatory parameter.	The error message returned because one or more required parameters are not set. Check whether you have set all the required parameters before you call this operation.
404	InvalidZoneId.NotFound	Specified value of ZoneId is not exists.	The error message returned because the specified zone ID does not exist.
400	InvalidParameter.Name.Malformed	The specified Name is not valid.	The error message returned because the specified name is invalid. Enter the name in the correct format.
400	InvalidParameter.Description.Malformed	The specified Description is not valid.	The error message returned because the specified description is invalid.
400	InvalidResourceGroupId	The specified ResourceGroupId does not exist.	The error message returned because the specified resource group ID does not exist.

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

19.2. DescribeCommonBandwidthPackages

Queries EIP bandwidth plan instances in a region.

Debug

Use OpenAPI Explorer to perform debug operations and generate SDK code examples.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DescribeCommonBandwidthPackages	The name of this action. Value: **DescribeCommonBandwidthPackages**
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the EIP bandwidth plan instance belongs. To query the region ID, call DescribeRegions.

Parameter	Type	Required?	Example value	Description
BandwidthPackageId	String	No	cbwp-2ze2ic1xd2qeqk145pn4u	Optional. The ID of the EIP bandwidth plan instance.
IncludeReservationData	Boolean	No	false	Optional. Indicates whether to return orders that have not taken effect. Default value: **false**
Name	String	No	test123	Optional. The name of the EIP bandwidth plan instance.
PageNumber	Integer	No	1	Optional. The page number. Default value: 1
PageSize	Integer	No	10	Optional. The number of entries per page in the case of a paged query result. Maximum value: 50. Default value: 10.
ResourceGroupId	String	No	rg-acfmxazb4ph6aiy	Optional. The ID of the resource group.

Response parameters

Parameter	Type	Example value	Description
CommonBandwidthPackages			The details of the EIP bandwidth plan instance.
BandwidthPackageId	String	cbwp-bp1t3sm1ffzmshdkixabo	The ID of the EIP bandwidth plan instance.
Name	String	abc	The name of the EIP bandwidth plan instance.
Description	String	none	The description of the EIP bandwidth plan instance.
Bandwidth	String	20	The peak bandwidth of the EIP bandwidth plan instance.
InternetChargeType	String	PayByBandwidth	The billing method of the EIP bandwidth plan instance. • **PayBy95**: billed by using the 95th percentile method • **PayByBandwidth**: billed according to the bandwidth consumed
Ratio	Integer	100	The minimum consumption ratio of the EIP bandwidth plan instance.
RegionId	String	cn-hangzhou	The ID of the region to which the EIP bandwidth plan instance belongs.
CreationTime	String	2017-06-28T06:39:20Z	The time when the EIP bandwidth plan instance was created.
InstanceChargeType	String	PostPaid	The billing method of the EIP bandwidth plan instance.
BusinessStatus	String	Available	The status of the EIP bandwidth plan instance.

Parameter	Type	Example value	Description
PublicIpAddresses			The details of the public IP addresses added to the EIP bandwidth plan instance.
IpAddress	String	116.62.129.250	The public IP address.
AllocationId	String	eip-bp13e9i2qst4g6jzi35tc	The ID of the instance associated with the public IP address.
ExpiredTime	String	2019-01-15T03:08:37Z	The time when the EIP bandwidth plan instance expires.
HasReservationData	String	false	Indicates whether orders that have not taken effect exist. • false: No orders that have not taken effect exist. • true: Orders that have not taken effect exist.
ISP	String	BGP	The service provider. Generally, BGP lines are used.
ReservationActiveTime	String	2018-08-30T16:00Z	The time when the renewal takes effect.
ReservationBandwidth	String	10	The bandwidth value after the configuration change.
ReservationInternetChargeType	String	PayByBandwidth	The billing method after the configuration change.
ReservationOrderType	String	RENEWCHANGE	The type of the configuration change. • RENEWCHANGE: Indicates a renewal. • TEMP_UPGRADE: Indicates a temporary upgrade. • UPGRADE: Indicates a configuration upgrade.
ResourceGroupId	String	rg-acfmxazb4ph6aiy	The ID of the resource group.
Status	String	Available	The status of the EIP bandwidth plan instance.
TotalCount	Integer	1	The total number of entries.
PageNumber	Integer	1	The current page number.
PageSize	Integer	10	The number of entries per page.
RequestId	String	20E6FD1C-7321-4DAD-BDFD-EC8769E4AA33	The ID of the request.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=DescribeCommonBandwidthPackages
&RegionId=cn-hangzhou
&<CommonParameters>
```

Response example

`XML` format

```
<DescribeCommonBandwidthPackagesResponse>
    <PageNumber>1</PageNumber>
    <TotalCount>1</TotalCount>
    <PageSize>10</PageSize>
    <RequestId>20E6FD1C-7321-4DAD-BDFD-EC8769E4AA33</RequestId>
    <CommonBandwidthPackages>
        <CommonBandwidthPackage>
            <Description></Description>
            <BandwidthPackageId>cbwp-bp1t3sm1ffzmshdkixabo</BandwidthPackageId>
            <ZoneId>cn-hangzhou-d</ZoneId>
            <InternetChargeType>PayByBandwidth</InternetChargeType>
            <Name>abc</Name>
            <CreationTime>2017-06-28T06:39:20Z</CreationTime>
            <Status>Available</Status>
            <BandwidthPackageId>cbwp-bp1vevu8h3ieh5xkcdhdy</BandwidthPackageId>
            <BusinessStatus>Normal</BusinessStatus>
            <RegionId>cn-hangzhou</RegionId>
            <Ratio>100</Ratio>
            <InstanceChargeType>PostPaid</InstanceChargeType>
            <PublicIpAddresses>
                <PublicIpAddresse>
                    <IpAddress>116.62.129.250</IpAddress>
                    <AllocationId>eip-bp13e9i2qst4g6jzi35tc</AllocationId>
                </PublicIpAddresse>
            </PublicIpAddresses>
            <Bandwidth>20</Bandwidth>
        </CommonBandwidthPackage>
    </CommonBandwidthPackages>
</DescribeCommonBandwidthPackagesResponse>
```


`JSON` format


```
{
 "DescribeCommonBandwidthPackagesResponse":{
  "PageNumber":"1",
  "TotalCount":"1",
  "PageSize":"10",
  "RequestId":"20E6FD1C-7321-4DAD-BDFD-EC8769E4AA33",
  "CommonBandwidthPackages":{
   "CommonBandwidthPackage":{
    "CreationTime":"2017-06-28T06:39:20Z",
    "Name":"abc",
    "Status":"Available",
    "BandwidthPackageId":"cbwp-bp1vevu8h3ieh5xkcdhdy",
    "BusinessStatus":"Normal",
    "Ratio":"100",
    "RegionId":"cn-hangzhou",
    "ZoneId":"cn-hangzhou-d",
    "InstanceChargeType":"PostPaid",
    "InternetChargeType":"PayByBandwidth",
    "PublicIpAddresses":{
     "PublicIpAddresse":{
      "IpAddress":"116.62.129.250",
      "AllocationId":"eip-bp13e9i2qst4g6jzi35tc"
     }
    },
    "Bandwidth":"20"
   }
  }
 }
}
```


Errors

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The specified region ID does not exist.

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

19.3. ModifyCommonBandwidthPackageAttribute

You can call this operation to modify the name and description of an EIP bandwidth plan.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyCommonBandwidthPackageAttribute	The operation that you want to perform. Set the value to: Yes **ModifyCommonBandwidthPackageAttribute**
BandwidthPackageId	String		cbwp-2ze2ic1xd2qeqk145pn4u	The ID of the EIP bandwidth plan.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the EIP bandwidth plan belongs. You can call the DescribeRegions operation to query region IDs.
Description	String	No	Description	The description of the EIP bandwidth plan. The description must be 2 to 256 characters in length. It must start with a letter but cannot start with `http://` or `https://`.
Name	String	No	test123	The name of the EIP bandwidth plan. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter but cannot start with `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
RequestId	String	B450CAD8-50BC-4506-ADA7-35C6CE63E96B	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?BandwidthPackageId=cbwp-2ze2ic1xd2qeqk145pn4u
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyCommonBandwidthPackageAttributeResponse>
    <RequestId>B450CAD8-50BC-4506-ADA7-35C6CE63E96B</RequestId>
</ModifyCommonBandwidthPackageAttributeResponse>
```

`JSON` format

```
{
 "RequestId":"B450CAD8-50BC-4506-ADA7-35C6CE63E96B6"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.
404	InvalidBandwidthPackageId.NotFound	The specified bandwidthPackageId does not exist in our records.	The error message returned because the specified EIP bandwidth plan does not exist.
400	InvalidParameter.Name.Malformed	The specified Name is not valid.	The error message returned because the specified name is invalid.
400	InvalidParameter.Description.Malformed	The specified Description is not valid.	The error message returned because the specified description is invalid.

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

19.4. AddCommonBandwidthPackageIp

Adds an elastic IP address (EIP) to an EIP bandwidth plan.

Description

Take note of the following limits before you call this operation:

- Only pay-as-you-go EIPs can be added.
- The EIPs and the EIP bandwidth plan must be deployed in the same region.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AddCommonBandwidthPackageIp	The operation that you want to perform. Set the value to **AddCommonBandwidthPackageIp**.
BandwidthPackageId	String	Yes	cbwp-2ze2ic1xd2qeqasdf****	The ID of the EIP bandwidth plan.
IpInstanceId	String	Yes	eip-2zeerraiwb7uqwed****	The ID of the EIP. You can call the DescribeEipAddressesoperation to query the ID of the EIP.
RegionId	String	Yes	cn-hangzhou	The region where the EIP bandwidth plan is deployed. You can call the DescribeRegions operation to query region IDs.

Parameter	Type	Required	Example	Description

Response parameters

Parameter	Type	Example	Description
RequestId	String	01FDDD49-C4B7-4D2A-A8E5-A93915C450A6	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=AddCommonBandwidthPackageIp
&BandwidthPackageId=cbwp-2ze2ic1xd2qeqasdf****
&IpInstanceId=eip-2zeerraiwb7uqwed****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AddCommonBandwidthPackageIpResponse>
    <RequestId>01FDDD49-C4B7-4D2A-A8E5-A93915C450A6</RequestId>
</AddCommonBandwidthPackageIpResponse>
```

`JSON` format

```
{
 "RequestId":"01FDDD49-C4B7-4D2A-A8E5-A93915C450A6"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified RegionId parameter does not exist. Check whether the region ID is valid.
404	InvalidBandwidthPackageId.NotFound	The specified bandwidthPackageId does not exist in our records.	The error message returned because the EIP bandwidth plan does not exist.

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

19.5. DeleteCommonBandwidthPackage

You can call this operation to delete an EIP bandwidth plan.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteCommonBandwidthPackage	The operation that you want to perform. Set the value to **DeleteCommonBandwidthPackage**.
BandwidthPackageId	String	Yes	cbwp-2ze2ic1xd2qeqk145pn4u	The ID of the EIP bandwidth plan.
RegionId	String	Yes	cn-hangzhou	The region to which the EIP bandwidth plan belongs. You can call the DescribeRegions operation to query region IDs.
Force	String	No	false	Indicates whether to forcibly delete the EIP bandwidth plan. Valid values: • **False** (default): deletes the EIP bandwidth plan only if it is not associated with EIPs. • **True**: disassociates all EIPs from the EIP bandwidth plan and deletes the EIP bandwidth plan.

Response parameters

Parameter	Type	Example	Description
RequestId	String	B400EF57-60E3-4D61-B8FB-7FA8F72DF5A6	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DeleteCommonBandwidthPackage
&BandwidthPackageId=cbwp-2ze2ic1xd2qeqk145pn4u
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteCommonBandwidthPackageResponse>
    <RequestId>B400EF57-60E3-4D61-B8FB-7FA8F72DF5A6</RequestId>
</DeleteCommonBandwidthPackageResponse>
```

`JSON` format

```
{
 "RequestId":"B400EF57-60E3-4D61-B8FB-7FA8F72DF5A6"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

19.6. ModifyCommonBandwidthPackageSpec

Modifies the maximum bandwidth of an EIP bandwidth plan.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyCommonBandwidthPackageSpec	The operation that you want to perform. Set the value to **ModifyCommonBandwidthPackageSpec**.
Bandwidth	String	Yes	100	The maximum bandwidth of the EIP bandwidth plan. Unit: Mbit/s.
BandwidthPackageId	String	Yes	cbwp-2ze2ic1xd2qeqk145****	The ID of the EIP bandwidth plan.
RegionId	String	Yes	cn-hangzhou	The region to which the EIP bandwidth plan belongs. You can call the DescribeRegions operation to query region IDs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	7F129000-F929-4AF5-BE8D-BAE434C795306	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=ModifyCommonBandwidthPackageSpec
&Bandwidth=100
&BandwidthPackageId=cbwp-2ze2ic1xd2qeqk145****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyCommonBandwidthPackageSpecResponse>
    <RequestId>7F129000-F929-4AF5-BE8D-BAE434C79530</RequestId>
</ModifyCommonBandwidthPackageSpecResponse>
```

`JSON` format

```
{
 "RequestId":"7F129000-F929-4AF5-BE8D-BAE434C795306"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist. Check whether the region ID is valid.

HttpCode	Error code	Error message	Description
404	InvalidBandwidth.ValueNot Supported	The specified value of Bandwidth not supported.	The specified maximum bandwidth value is invalid.
404	BandwidthPackage.FinancialLocked	The specified BandwidthPackage has been Financail Lock.	The specified EIP bandwidth plan is locked due to an overdue payment.

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

19.7. RemoveCommonBandwidthPackageIp

You can call this operation to disassociate an elastic IP address (EIP) from an EIP bandwidth plan.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RemoveCommonBandwidthPackageIp	The operation that you want to perform. Set the value to **RemoveCommonBandwidthPackageIp**.
BandwidthPackageId	String	Yes	cbwp-2ze2ic1xd2qeqk145pn4u	The ID of the EIP bandwidth plan.
IpInstanceId	String	Yes	eip-2zeerraiwb7uj6i0d0fo3	The ID of the EIP. You can call the DescribeEipAddresses operation to query the ID of the EIP.
RegionId	String	Yes	cn-hangzhou	The region to which the EIP bandwidth plan belongs. You can call the DescribeRegions operation to query region IDs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0876DAB2-6A86-479B-96BC-C5A2458568D2	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=RemoveCommonBandwidthPackageIp
&BandwidthPackageId=cbwp-2ze2ic1xd2qeqk145pn4u
&IpInstanceId=eip-2zeerraiwb7uj6i0d0fo3
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RemoveCommonBandwidthPackageIpResponse>
    <RequestId>0876DAB2-6A86-479B-96BC-C5A2458568D2</RequestId>
</RemoveCommonBandwidthPackageIpResponse>
```

`JSON` format

```
{
 "RequestId":"0876DAB2-6A86-479B-96BC-C5A2458568D2"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.
404	InvalidBandwidthPackageId.NotFound	The specified bandwidthPackageId does not exist in our records.	The error message returned because the EIP bandwidth plan does not exist.

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

19.8. CancelCommonBandwidthPackageIpBandwidth

You can call this operation to remove the bandwidth limit for an elastic IP address (EIP) that is associated with an EIP bandwidth plan.

After you remove the bandwidth limit, the maximum bandwidth of the EIP equals that of the EIP bandwidth plan.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CancelCommonBandwidthPackageIpBandwidth	The operation that you want to perform. Set the value to **CancelCommonBandwidthPackageIpBandwidth**.
BandwidthPackageId	String	Yes	cbwp-bp13d0m4e2qv8xxxxxxxx	The ID of the EIP bandwidth plan.
EipId	String	Yes	eip-2zewysoansu0sxxxxxxxx	The ID of the EIP that is associated with the EIP bandwidth plan.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the EIP bandwidth plan belongs. To query region IDs, call the DescribeRegions operation.

Response parameters

Parameter	Type	Example	Description
RequestId	String	63D187BF-A30A-4DD6-B68D-FF182C96D8A2	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=CancelCommonBandwidthPackageIpBandwidth
&BandwidthPackageId=cbwp-bp13d0m4e2qv8xxxxxxxx
&EipId=eip-2zewysoansu0sxxxxxxxx
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CancelCommonBandwidthPackageIpBandwidth>
  <RequestId>63D187BF-A30A-4DD6-B68D-FF182C96D8A2</RequestId>
</CancelCommonBandwidthPackageIpBandwidth>
```

`JSON` format

```
{
 "RequestId":"63D187BF-A30A-4DD6-B68D-FF182C96D8A2"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

19.9. ModifyCommonBandwidthPackageIpBandwidth

Configures the bandwidth limit for an Elastic IP address that is added to an EIP bandwidth plan instance.

API description

You can make this call to allocate the maximum available bandwidth of each Elastic IP address added to an EIP bandwidth plan instance. By doing so, you can avoid the bandwidth of the EIP bandwidth plan from being occupied by an Elastic IP address.

For example, if two Elastic IP addresses are added to an EIP bandwidth plan of 800 Mbit/s, you can set the bandwidth limit of the first Elastic IP address to 500 Mbit/s, and set the bandwidth limit of the other Elastic IP address to 400 Mbit/s. After the configuration is complete, the available bandwidth of the first Elastic IP address does not exceed 500 Mbit/s, and the available bandwidth of the second Elastic IP address does not exceed 400 Mbit/s.

Note the following before making this call: This action only takes effect when the Elastic IP address is associated with an Elastic Compute Service (ECS) instance, and does not take effect when the Elastic IP address is associated with a Server Load Balancer (SLB), NAT Gateway, secondary Elastic Network Interface (ENI), or a High-Availability Virtual IP Address (HaVip).

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	ModifyCommonBandwidthPackageIpBandwidth	The name of this action. Value: **ModifyCommonBandwidthPackageIpBandwidth**.
Bandwidth	String	Yes	500	The maximum available bandwidth that can be allocated. Unit: Mbit/s.
BandwidthPackageId	String	Yes	cbwp-2zep6hw5d6y8exscd****	The ID of the EIP bandwidth plan instance.
EipId	String	Yes	eip-2zewysoansu0svfbg****	The ID of the Elastic IP address added to the EIP bandwidth plan instance.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the EIP bandwidth plan instance belongs. To query the region ID, call DescribeRegions.

Parameter	Type	Required?	Example value	Description

Response parameters

Parameter	Type	Example value	Description
RequestId	String	63D187BF-A30A-4DD6-B68D-FF182C96D8A2	The ID of the request.

Examples

Request example

```
http(s)://vpc.aliyuncs.com/? Action=ModifyCommonBandwidthPackageIpBandwidth
&Bandwidth=500
&BandwidthPackageId=cbwp-2zep6hw5d6y8exscd****
&EipId=eip-2zewysoansu0svfbg****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Response example

`XML` format

```
<ModifyCommonBandwidthPackageIpBandwidth>
    <RequestId>63D187BF-A30A-4DD6-B68D-FF182C96D8A2</RequestId>
</ModifyCommonBandwidthPackageIpBandwidth>
```

`JSON` format

```
{
  "RequestId": "63D187BF-A30A-4DD6-B68D-FF182C96D8A2"
}
```

Errors

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The specified RegionId does not exist.

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

20.Elastic IP Address (EIP)

20.1. AllocateEipAddress

Applies for an elastic IP address (EIP).

Description

Before you call this operation, make sure that you understand the billing methods and pricing of EIPs. For more information, see Billing.

After you call this operation, the system randomly allocates an EIP that is in the **Available** state in the specified region. EIPs support only the following transport layer protocols: Internet Control Message Protocol (ICMP), Transmission Control Protocol (TCP), and User Datagram Protocol (UDP). Internet Group Management Protocol (IGMP) and Stream Control Transmission Protocol (SCTP) are not supported.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AllocateEipAddress	The operation that you want to perform. Set the value to **AllocateEipAddress**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where you want to apply for an EIP. You can call the DescribeRegions operation to query the most recent region list.
Bandwidth	String	No	5	The maximum bandwidth value of the EIP. Valid values: • **1** to **200**: uses the pay-by-data-transfer metering method. Unit: Mbit/s. • **1** to **500**: uses the pay-by-bandwidth metering method. Unit: Mbit/s. Default value: **5**.
Period	Integer	No	1	The subscription duration of the EIP. When **PricingCycle** is set to **Month**, set **Period** to a value from **1** to **9**. When **PricingCycle** is set to **Year**, set **Period** to a value from **1** to **5**. This parameter is required when **InstanceChargeType** is set to **PrePaid**. This parameter is optional when **InstanceChargeType** is set to **PostPaid**.

Parameter	Type	Required	Example	Description
ISP	String	No	BGP	The line type. You can set this parameter only when you create a pay-as-you-go EIP. Valid values: • **BGP**: BGP (Multi-ISP) lines. Up to 89 high-quality BGP lines are available worldwide. Direct connections with multiple Internet service providers (ISPs), including China Telecom, China Unicom, China Mobile, China Tietong Telecom, China Netcom, CERNET, China Broadcast Network, Dr. Peng Group, and Founder, can be established in all regions in mainland China. • **BGP_PRO**: BGP (Multi-ISP) Pro lines. BGP (Multi-ISP) Pro lines optimize data transmission to mainland China and improve connection quality for international services. Compared with BGP (Multi-ISP), when BGP (Multi-ISP) Pro lines provide services to users in mainland China (excluding data centers), cross-border connections are established by using mainland China ISP services. This reduces network latency. BGP (Multi-ISP) lines are supported in all regions. BGP (Multi-ISP) Pro lines are supported only in the China (Hong Kong) region. **Note** If your Alibaba Cloud account is included in the BGP (single line) whitelist, you can set the Isp parameter to **ChinaTelecom**, **ChinaUnicom**, or **ChinaMobile**. If your workloads are deployed in China East 1 Finance, this parameter is required and you must set the value to **BGP_FinanceCloud**.
ActivityId	Long	No	123456	The promotion code. Ignore this parameter.
Netmode	String	No	public	The network type. Valid value: **public** (default): Internet
AutoPay	Boolean	No	false	Specifies whether to enable automatic payment. Valid values: • **false**: disables automatic payment. After an order is generated, you must go to Order Center to complete the payment. • **true**: enables automatic payment. The system automatically pays for the orders. This parameter is required when **InstanceChargeType** is set to **PrePaid**. This parameter is optional when **InstanceChargeType** is set to **PostPaid**.

Parameter	Type	Required	Example	Description
PricingCycle	String	No	Month	The billing cycle of the subscription EIP. Valid values: • **Month** (default): The EIP is billed on a monthly basis. • **Year**: The EIP is billed on an annual basis. This parameter is required when **InstanceChargeType** is set to **PrePaid**. This parameter is optional when **InstanceChargeType** is set to **PostPaid**.
InstanceChargeType	String	No	PostPaid	The billing method of the EIP. Valid values: • **PrePaid**: subscription • **PostPaid**: pay-as-you-go. This is the default value. When **InstanceChargeType** is set to **PrePaid**, set **InternetChargeType** to **PayByBandwidth**. When **InstanceChargeType** is set to **PostPaid**, set **InternetChargeType** to **PayByBandwidth** or **PayByTraffic**.
InternetChargeType	String	No	PayByTraffic	The metering method of the EIP. Valid values: • **PayByBandwidth** (default): pay-by-bandwidth • **PayByTraffic**: pay-by-data-transfer When **InstanceChargeType** is set to **PrePaid**, you must set **InternetChargeType** to **PayByBandwidth**. When **InstanceChargeType** is set to **PostPaid**, set **InternetChargeType** to **PayByBandwidth** or **PayByTraffic**.
ResourceGroupId	String	No	rg-acfmxazffggds****	The ID of the resource group.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The **ClientToken** value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Name	String	No	EIP1	The name of the EIP. The name must be 1 to 128 characters in length, and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter but cannot start with `http://` or `https://`. **Note** This parameter is not available when you create a subscription EIP.

Parameter	Type	Required	Example	Description
Description	String	No	test	The description of the EIP. The description must be 2 to 256 characters in length. It must start with a letter but cannot start with `http://` or `https://`. **Note** This parameter is not available when you create a subscription EIP.

Response parameters

Parameter	Type	Example	Description
EipAddress	String	12.01.XX.XX	The allocated EIP.
AllocationId	String	eip-25877c70gddh****	The ID of the EIP.
OrderId	Long	10	The order number. This parameter is returned only when **InstanceChargeType** is set to **PrePaid**.
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The ID of the request.
ResourceGroupId	String	rg-acfmxazfdgdg****	The ID of the resource group.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=AllocateEipAddress
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AllocateEipAddressResponse>
  <ResourceGroupId>rg-acfmxazfdgdg****</ResourceGroupId>
  <RequestId>4EC47282-1B74-4534-BD0E-403F3EE64CAF</RequestId>
  <AllocationId>eip-25877c70gddh****</AllocationId>
  <EipAddress>12.01.XX.XX</EipAddress>
  <OrderId>10</OrderId>
</AllocateEipAddressResponse>
```

`JSON` format

```
{
  "ResourceGroupId": "rg-acfmxazfdgdg****",
  "RequestId": "4EC47282-1B74-4534-BD0E-403F3EE64CAF",
  "AllocationId": "eip-25877c70gddh****",
  "EipAddress": "12.01.XX.XX",
  "OrderId": 10
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidParameter	Specified value of "Bandwidth" is not valid.	The error message returned because the specified bandwidth value is invalid.
400	InsufficientBalance	Your account does not have enough balance.	The error message returned because the balance in your account is insufficient. Top up your account and try again.
400	QuotaExceeded.Eip	Elastic IP address quota exceeded.	The error message returned because the number of EIPs has reached the upper limit. To request a quota increase, submit a ticket. We recommend that you use NAT gateways.
400	ReserveIpFail	Reserve eip failed.	The error message returned because the system failed to reserve the EIP.
400	InvalidRegion.NotSupport	The specified region does not support.	The error message returned because the specified region does not support this operation.
400	InvalidResourceGroupId	The specified ResourceGroupId does not exist.	The error message returned because the specified resource group ID does not exist.
400	ORDER.QUANTITY_INVALID	User quota has exceeded the limit.	The error message returned because the number of EIPs that you have created has reached the upper limit. Go to the Quota Management page to request a quota increase.
403	Forbbiden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. Apply for permissions and try again.
409	OperationConflict	Request was denied due to conflict with a previos request.	The error message returned because a request conflict occurs. Try again later or submit a ticket.

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

20.2. AllocateEipAddressPro

Requests a specified elastic IP address (EIP).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	No	AllocateEipAddressPro	The operation that you want to perform. Set the value to **AllocateEipAddressPro**.
RegionId	String	Yes	cn-hangzhou	The region ID of the EIP that you want to request. You can call the DescribeRegions operation to query the most recent region list.
IpAddress	String	No	192.0.XX.XX	The IP address of the EIP that you want to query. You can set one of the **IpAddress** and **InstanceId** parameters. If neither is set, the system randomly allocates an EIP.

Parameter	Type	Required	Example	Description
InstanceId	String	No	eip-25877c70gddh****	The ID of the EIP that you want to request. You can set one of the **IpAddress** and **InstanceId** parameters. If neither is set, the system randomly allocates an EIP.
Bandwidth	String	No	5	The maximum bandwidth value for the EIP. Unit: Mbit/s. • When **InstanceChargeType** is set to **PostPaid** and **InternetChargeType** is set to **PayByBandwidth**, valid values for **Bandwidth** are **1** to **500**. • When **InstanceChargeType** is set to **PostPaid** and **InternetChargeType** is set to **PayByTraffic**, valid values for **Bandwidth** are **1** to **200**. • When **InstanceChargeType** is set to **PrePaid**, valid values for **Bandwidth** are **1** to **1000**. Default value: **5**. Unit: Mbit/s.
Period	Integer	No	1	The subscription duration. • When **PricingCycle** is set to **Month**, valid values for **Period** are **1 to 9**. • When **PricingCycle** is set to **Year**, valid values for **Period** are **1 to 3**. When **InstanceChargeType** is set to **PrePaid**, this parameter is required. When **InstanceChargeType** is set to **PostPaid**, ignore this parameter.
ISP	String	No	BGP	The line type. Default value: **BGP**. • If you are allowed to use BGP (Single-ISP), valid values are **ChinaTelecom**, **ChinaUnicom**, and **ChinaMobile**. • If your services are deployed in China East 1 Finance, this parameter is required and you must set the value to **BGP_FinanceCloud**.
Netmode	String	No	public	The network type. Set the value to **public**, which specifies the Internet.
AutoPay	Boolean	No	true	Specifies whether to enable automatic payment. Valid values: • **false**: disables automatic payment. After an order is generated, you must go to Order Center to complete the payment. • **true**: enables automatic payment. Payments are automatically completed. When **InstanceChargeType** is set to **PrePaid**, this parameter is required. When **InstanceChargeType** is set to **PostPaid**, this parameter is not required.

Parameter	Type	Required	Example	Description
PricingCycle	String	No	Month	The billing cycle of the subscription EIP. Valid values: • **Month**: on a monthly basis. This is the default value. • **Year**: on an annual basis. When **InstanceChargeType** is set to **PrePaid**, this parameter is required. When **InstanceChargeType** is set to **PostPaid**, this parameter is not required.
InstanceChargeType	String	No	PostPaid	The billing method of the EIP that you want to request. Valid values: • **PrePaid**: subscription • **PostPaid**: pay-as-you-go. This is the default value. When **InstanceChargeType** is set to **PrePaid**, you must set **InternetChargeType** to **PayByBandwidth**. When **InstanceChargeType** is set to **PostPaid**, you must set **InternetChargeType** to **PayByBandwidth** or **PayByTraffic**.
InternetChargeType	String	No	PayByBandwidth	The metering method of the EIP that you want to request. Valid values: • **PayByBandwidth** (default): pay-by-bandwidth. • **PayByTraffic**: pay-by-data-transfer. When **InstanceChargeType** is set to **PrePaid**, you must set **InternetChargeType** to **PayByBandwidth**. When **InstanceChargeType** is set to **PostPaid**, you must set **InternetChargeType** to **PayByBandwidth** or **PayByTraffic**.
ResourceGroupId	String	No	rg-resourcegroup****	The ID of the resource group.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe6****	The client Token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length. **Note** If you do not set this parameter, the system automatically uses **RequestId** as **ClientToken**. **RequestId** may be different for each API request.

Response parameters

Parameter	Type	Example	Description
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The ID of the request.
OrderId	Long	20190000	The ID of the order.

Parameter	Type	Example	Description
ResourceGroupId	String	rg-resourcegroup****	The ID of the resource group.
EipAddress	String	192.0.XX.XX	The IP address of the EIP that is queried.
AllocationId	String	eip-25877c70gddh****	The ID of the EIP.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=AllocateEipAddressPro
&RegionId=cn-hangzhou
&IpAddress=192.0.XX.XX
&InstanceId=eip-25877c70gddh****
&Bandwidth=5
&Period=1
&ISP=BGP
&Netmode=public
&AutoPay=true
&PricingCycle=Month
&InstanceChargeType=PostPaid
&InternetChargeType=PayByBandwidth
&ResourceGroupId=rg-resourcegroup****
&ClientToken=0c593ea1-3bea-11e9-b96b-88e9fe6****
&Common request parameters
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<AllocateEipAddressProResponse>
  <RequestId>4EC47282-1B74-4534-BD0E-403F3EE64CAF</RequestId>
  <OrderId>20190000</OrderId>
  <ResourceGroupId>rg-resourcegroup****</ResourceGroupId>
  <EipAddress>192.0.XX.XX</EipAddress>
  <AllocationId>eip-25877c70gddh****</AllocationId>
</AllocateEipAddressProResponse>
```

`JSON` format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
 "RequestId" : "4EC47282-1B74-4534-BD0E-403F3EE64CAF",
 "OrderId" : 20190000,
 "ResourceGroupId" : "rg-resourcegroup****",
 "EipAddress" : "192.0.XX.XX",
 "AllocationId" : "eip-25877c70gddh****"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidParameter	Specified value of "Bandwidth" is not valid.	The error message returned because the specified bandwidth value is invalid.
400	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Top up your account and try again.

HttpCode	Error code	Error message	Description
400	QuotaExceeded.Eip	Elastic IP address quota exceeded.	The error message returned because the number of EIPs has reached the upper limit. We recommend that you use NAT gateways if you want to use more EIPs.
400	ReserveIpFail	Reserve eip failed.	The error message returned because the system failed to reserve the specified EIP.
400	InvalidRegion.NotSupport	The specified region does not support.	The error message returned because the specified region does not support this operation.
400	InvalidResourceGroupId	The specified ResourceGroupId does not exist.	The error message returned because the specified resource group ID is invalid.
400	OperationFailed.AllocateUnfamiliarIp	The operation failed because only IP addresses used within the last seven days can be allocated.	The error message returned because you can call this operation to request EIPs that were used within the last seven days.
403	Forbbiden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. Apply for the permissions and try again.

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

20.3. AssociateEipAddress

Associates an elastic IP address (EIP) with an instance in the same region.

Descriptions

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

- You can associate an EIP with an Elastic Compute Service (ECS) instance, a Server Load Balancer (SLB) instance, a secondary elastic network interface (ENI), or a NAT gateway. These cloud resources must be deployed in virtual private clouds (VPCs). In addition, the cloud resources and the EIP must belong to the same region.
- To associate an EIP with a NAT gateway, make sure that your Alibaba Cloud account does not have a NAT bandwidth plan purchased before November 3, 2017.

  If your Alibaba Cloud account has a NAT bandwidth plan purchased before November 3, 2017 and you want to associate an EIP with a NAT gateway, perform the steps in Why am I unable to associate an EIP in the NAT Gateway console?.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AssociateEipAddress	The operation that you want to perform. Set the value to **AssociateEipAddress**.
AllocationId	String	Yes	eip-2zeerraiwb7ujsxdc****	The ID of the EIP that you want to associate with an instance.
InstanceId	String	Yes	i-2zebb08phyczzawe****	The ID of the instance with which you want to associate the EIP. NAT gateways, SLB instances, ECS instances, secondary ENIs, and high-availability virtual IP addresses (HAVIPs) are supported.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the EIP belongs.
InstanceType	String	No	EcsInstance	The type of instance with which you want to associate the EIP. Valid values: • **Nat**: a NAT gateway. • **SlbInstance**: an SLB instance. • **EcsInstance** (default): an ECS instance in a VPC. • **NetworkInterface**: a secondary ENI. • **HaVip** an HAVIP.
InstanceRegionId	String	No	cn-hangzhou	The ID of the region where the instance to be associated with the EIP is deployed. **Note** This parameter is required only when the EIP is associated with a shared-bandwidth Global Accelerator (GA) instance.
PrivateIpAddress	String	No	192.1.XX.XX	An IP address in the CIDR block of the vSwitch. If you do not set this parameter, the system allocates a private IP address based on the VPC ID and vSwitch ID.
Mode	String	No	NAT	The association mode. Valid values: • **NAT** (default): the standard NAT mode • **MULTI_BINDED**: multi-EIP to ENI mode • **BINDED**: cut-through mode This parameter is required only when **InstanceType** is set to **NetworkInterface**.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe63****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. `Client Token` can contain only ASCII characters. It cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=AssociateEipAddress
&AllocationId=eip-2zeerraiwb7ujsxdc****
&InstanceId=i-2zebb08phyczzawe****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AssociateEipAddressResponse>
  <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</AssociateEipAddressResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidAssociation.Duplicated	Specified instance already is associated.	The error message returned because an EIP or a GA instance is already associated with the specified instance. You must disassociate the EIP or GA instance from the specified instance before you can perform the operation.
400	OperationDenied	Specified instance is not in VPC.	The error message returned because the specified instance does not exist in the VPC.
400	InvalidParameter.Mismatch	Specified elastic IP address and ECS instance are not in the same region.	The error message returned because the specified EIP and ECS instance do not belong to the same region.
400	IncorrectEipStatus	Current elastic IP status does not support this operation	The error message returned because the status of the EIP does not support the operation.
404	InvalidInstanId.NotFound	Specified instance does not exist.	The error message returned because the specified instance does not exist. Check whether the ID is valid.
400	IncorrectInstanceStatus	Current instance status does not support this operation.	The error message returned because the instance is in a state that does not support the operation.
400	InvalidInstanceType.ValueNotSupported	The specified value of InstanceType is not supported.	The error message returned because InstanceType is set to an invalid value.
400	IncorrectHaVipStatus	HaVip can be operated by this action only when it's status is Available or InUse.	The error message returned because the state of the HAVIP does not support the operation. You can perform the operation only when the HAVIP is in the Available or InUse state.
400	InvalidParameter	The specified parameter is not valid.	The error message returned because the parameter is set to an invalid value.
400	OperationDenied	Eip of default vpc not allow this operation	The error message returned because the operation is not supported by EIPs in the default VPC.
400	Forbbiden	The eip instance owener error	The error message returned because you are unauthorized to perform the operation on the EIP.
400	InvalidBindingStatus	The eip binding status invalid.	The error message returned because the EIP is in an invalid state.
400	BIND_INSTANCE_HAVE_PORTMAP_OR_BIND_EIP	The instance may have portMap or already bind eip.	The error message returned because a port forwarding rule is configured for the ECS instance. Delete the port forwarding rule and try again.

HttpCode	Error code	Error message	Description
400	BIND_INSTANCE_OWENER_ERROR	Cannot operate the eip.	The error message returned because you are unauthorized to manage the specified EIP.
404	InvalidAllocationId.NotFound	Specified allocation ID is not found	The error message returned because the specified EIP does not exist. Check whether the value of the parameter is valid.
400	InvalidParams.NotFound	instance not found	The error message returned because the specified instance does not exist.
503	ServiceUnavailable	The request has failed due to a temporary failure of the server.	The error message returned because the request failed due to a temporary malfunction of the server.
400	OperationDenied.CloudBoxResourceExist	The operation is not allowed because there are resources related to the cloud box in VPC.	The error message returned because the VPC contains cloud box-related resources and the operation is not allowed.
400	OperationDenied.CloudBoxVSwitchExist	The operation is not allowed because a cloud box type vSwitch exists in VPC.	The error message returned because the VPC contains a vSwitch of the cloud box type and the operation is not allowed.

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

20.4. AllocateEipSegmentAddress

Applies for contiguous elastic IP addresses (EIPs).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AllocateEipSegmentAddress	The operation that you want to perform. Set the value to **AllocateEipSegmentAddress**.
EipMask	String	Yes	28	The subnet mask length for the contiguous EIPs. Valid values: • **28**: applies for 16 contiguous EIPs. • **27**: applies for 32 contiguous EIPs. • **26**: applies for 64 contiguous EIPs. • **25**: applies for 128 contiguous EIPs. • **24**: applies for 256 contiguous EIPs. **Note** The number of contiguous EIPs allocated by the system may be less than the requested number because one, three, or four EIPs may be reserved.
RegionId	String	Yes	cn-hangzhou	The region ID of the contiguous EIPs. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
ClientToken	String	No	02fb3da4-130e-11e9-8e44-001****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.
Bandwidth	String	No	5	The bandwidth limit of the EIPs. Valid values: • **1** to **200** if the metering method is pay-by-data-transfer. Unit: Mbit/s. • **1** to **500** if the metering method is pay-by-bandwidth. Unit: Mbit/s. Default value: **5**.
Netmode	String	No	public	The network type. Valid values: • **public** (default): the Internet. After contiguous EIPs are associated with cloud resources, the cloud resources can access the Internet by using the EIPs. • **hybrid**: a hybrid cloud. After contiguous EIPs are associated with cloud resources, the cloud resources can access the hybrid cloud by using the EIPs. **Note** This network type is available only to users who are included in the whitelist. To use this network type, contact your customer business manager.
InternetChargeType	String	No	PayByBandwidth	The metering method of the contiguous EIPs. Valid values: • **PayByBandwidth** (default): pay-by-bandwidth. • **PayByTraffic**: pay-by-data-transfer. **Note** If the **Netmode** parameter is set to **hybrid**, you can set **InternetChargeType** only to **PayByBandwidth**.
ResourceGroupId	String	No	rg-bp67acfmxazb4ph****	The ID of the resource group to which the contiguous EIPs belong.

Response parameters

Parameter	Type	Example	Description
EipSegmentInstanceId	String	eipsg-2zett8ba055tbsxme****	The ID of the contiguous EIP group.
OrderId	Long	20190000	The ID of the order.
RequestId	String	F7A6301A-64BA-41EC-8284-8F4838C15D1F	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=AllocateEipSegmentAddress
&EipMask=28
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AllocateEipSegmentAddressResponse>
    <RequestId>F7A6301A-64BA-41EC-8284-8F4838C15D1F</RequestId>
    <EipSegmentInstanceId>eipsg-2zett8ba055tbsxme****</EipSegmentInstanceId>
    <OrderId>20190000</OrderId>
</AllocateEipSegmentAddressResponse>
```

`JSON` format

```
{
  "RequestId":"F7A6301A-64BA-41EC-8284-8F4838C15D1F",
  "EipSegmentInstanceId":"eipsg-2zett8ba055tbsxme****",
  "OrderId":"20190000"
}
```

Error codes

HttpCode	Error code	Error message	Description
403	Forbbiden	User not authorized to operate on the specified resource.	The error message returned because you are unauthorized to perform the operation on the specified resource. Apply for the required permissions and try again.
400	QuotaExceeded.Eip	Elastic IP address quota exceeded	The error message returned because the number of EIPs has reached the quota. Submit a ticket to request a quota increase. We recommend that you use NAT gateways.
400	InvalidParameter	Specified value of "InternetChargeType" is not valid	The error message returned because InternetChargeType is set to an invalid value.
400	InvalidParameter	Specified value of "Bandwidth" is not valid.	The error message returned because the specified bandwidth value is invalid.
400	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Top up your account and try again.
400	QuotaExceeded.Eip	Elastic IP address quota exceeded.	The error message returned because the number of EIPs has reached the quota. Submit a ticket to request a quota increase. We recommend that you use NAT gateways.
400	ReserveIpFail	Reserve eip failed.	The error message returned because the system failed to reserve the specified EIP.
400	InvalidRegion.NotSupport	The specified region does not support.	The error message returned because the specified region does not support this operation.
400	InvalidResourceGroupId	The specified ResourceGroupId does not exist.	The error message returned because the specified resource group ID does not exist.
409	OperationConflict	Request was denied due to conflict with a previos request.	The error message returned because a request conflict occurred. Try again later or submit a ticket to report the problem.

HttpCode	Error code	Error message	Description
400	ORDER.QUANTITY_INVALID	User quota has exceeded the limit.	The error message returned because the number of EIPs that you own has reached the upper limit. Go to the Quota Management page and request a quota increase.

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

20.5. DescribeEipSegment

You can call this operation to query a contiguous Elastic IP address group.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeEipSegment	The operation that you want to perform. Set the value to **DescribeEipSegment**.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the contiguous Elastic IP address group belongs. You can call the DescribeRegions operation to query the region ID.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-001sdfg	The client token that is used to ensure the idempotence of the request. You can use the client to generate a token, but you must ensure that the token is unique among different requests. The token must be a maximum of 64 characters in length and can contain only ASCII characters.
SegmentInstanceId	String	No	eipsg-2zett8ba055tbsxme****	The ID of the instance to query. The contiguous Elastic IP address group is associated with the instance.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: **1**.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to **50**. Default value: **10**.

Response parameters

Parameter	Type	Example	Description
EipSegments	Array		The details about the contiguous Elastic IP address group.
EipSegment			

Parameter	Type	Example	Description
CreationTime	String	2020-03-06T12:30:07Z	The time when the contiguous Elastic IP address group was created. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
Description	String	MyEipSegment	The description of the contiguous Elastic IP address group.
InstanceId	String	eipsg-2zett8ba055tbsxme****	The ID of the instance with which the contiguous Elastic IP address group is associated.
IpCount	String	28	The number of IP addresses contained in the contiguous Elastic IP address group.
Name	String	MyEipSegment	The name of the contiguous Elastic IP address group.
RegionId	String	cn-hangzhou	The ID of the region to which the contiguous Elastic IP address group belongs.
Segment	String	161.xx.xx.32/28	The CIDR block and mask of the contiguous Elastic IP address group.
Status	String	Allocated	The status of the contiguous Elastic IP address group. Valid values: • **Allocating**: The contiguous Elastic IP address group is being allocated. • **Allocated**: The contiguous Elastic IP address group is allocated. • **Releasing**: The contiguous Elastic IP address group is being released. • **Released**: The contiguous Elastic IP address group is released.
PageNumber	Integer	2	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	F7A6301A-64BA-41EC-8284-8F4838C15D1F	The ID of the request.
TotalCount	Integer	1	The total number of entries returned.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=DescribeEipSegment
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeEipSegmentResponse>
 <EipSegments>
    <EipSegment>
       <Status>Allocated</Status>
       <Description></Description>
       <IpCount>16</IpCount>
       <InstanceId>eipsg-t4nr90yik5oy38xdy****</InstanceId>
       <CreationTime>2020-03-06T12:30:07Z</CreationTime>
       <RegionId>ap-southeast-1</RegionId>
       <Segment>161.xx.xx.32/28</Segment>
       <Name></Name>
    </EipSegment>
 </EipSegments>
 <TotalCount>1</TotalCount>
 <PageSize>50</PageSize>
 <RequestId>A4862138-CCF6-4A24-BDE4-39055DFEFB92</RequestId>
 <PageNumber>1</PageNumber>
</DescribeEipSegmentResponse>
```

`JSON` format

```
{
  "EipSegments": {
    "EipSegment": [
      {
        "Status": "Allocated",
        "Description": "",
        "IpCount": 16,
        "InstanceId": "eipsg-t4nr90yik5oy38xdy****",
        "CreationTime": "2020-03-06T12:30:07Z",
        "RegionId": "ap-southeast-1",
        "Segment": "161.xx.xx.32/28",
        "Name": ""
      }
    ]
  },
  "TotalCount": 1,
  "PageSize": 50,
  "RequestId": "A4862138-CCF6-4A24-BDE4-39055DFEFB92",
  "PageNumber": 1
}
```

Error codes

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

20.6. ReleaseEipSegmentAddress

You can call this operation to release contiguous Elastic IP addresses.

Description

You can call this operation to release all Elastic IP addresses from a contiguous Elastic IP address group.

Debugging

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

Request parameters

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

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the contiguous Elastic IP addresses belong. You can call the DescribeRegions operation to query the region ID.
SegmentInstanceId	String	Yes	eipsg-2zett8ba055tbsxme****	The ID of the instance for which Elastic IP addresses are to release from a contiguous Elastic IP address group. After this parameter is set, the system releases all Elastic IP addresses from the contiguous Elastic IP address group.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-001sdfg	The client token that is used to ensure the idempotence of the request. You can use the client to generate a token, but you must ensure that the token is unique among different requests. The token must be a maximum of 64 characters in length and can contain only ASCII characters.

Response parameters

Parameter	Type	Example	Description
RequestId	String	F7A6301A-64BA-41EC-8284-8F4838C15D1F	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=ReleaseEipSegmentAddress
&RegionId=cn-hangzhou
&SegmentInstanceId=eipsg-2zett8ba055tbsxme****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ReleaseEipSegmentAddressResponse>
    <RequestId>F7A6301A-64BA-41EC-8284-8F4838C15D1F</RequestId>
</ReleaseEipSegmentAddressResponse>
```

`JSON` format

```
{
  "RequestId":"F7A6301A-64BA-41EC-8284-8F4838C15D1F"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	IncorrectEipStatus	Current elastic IP status does not support this operation.	The error message returned because this operation cannot be performed while the specified contiguous Elastic IP addresses are in the current state.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because unknown errors occur.

HTTP status code	Error code	Error message	Description
404	Forbidden.RegionNotFound	Specified region is not found during access authentication.	The error message returned because the specified region does not exist.
400	Forbidden.ChargeTypeIsPrepaid	It's forbidden to release a prepaid EIP	The error message returned because the subscription contiguous Elastic IP addresses cannot be released.
400	Forbidden	The eip instance owner error	The error message returned because you are not authorized to perform this operation on the contiguous Elastic IP addresses.
400	TaskConflict.AssociateGlobalAccelerationInstance	Operate too frequent.	The error message returned because too many requests are sent.

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

20.7. ModifyEipAddressAttribute

Modifies the name, description, and bandwidth limit of a pay-as-you-go elastic IP address (EIP). You cannot call this operation to modify the name, description, or bandwidth limit of a subscription EIP.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyEipAddressAttribute	The operation that you want to perform. Set the value to **ModifyEipAddressAttribute**.
AllocationId	String	Yes	eip-2zeerraiwb7uj6i0d****	The ID of the pay-as-you-go EIP.
Bandwidth	String	No	100	The new bandwidth limit of the EIP. Valid values: • **1** to **200** if the metering method is pay-by-data-transfer. Unit: Mbit/s. • **1** to **500** if the metering method is pay-by-bandwidth. Unit: Mbit/s.
RegionId	String	Yes	cn-hangzhou	The region ID of the EIP.
Name	String	No	Test123	The new name of the EIP. The name must be 1 to 128 characters in length, and can contain digits, periods (.), underscores (_), and hyphens (-). The name must start with a letter but cannot start with `http://` or `https://`.
Description	String	No	abc	The new description for the EIP. The description must be 2 to 256 characters in length. It must start with a letter, but cannot start with `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyEipAddressAttribute
&AllocationId=eip-2zeerraiwb7uj6i0d****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyEipAddressAttributeResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</ModifyEipAddressAttributeResponse>
```

`JSON` format

```
null
```

Error codes

HttpCode	Error code	Error message	Description
400	InsufficientBalance.Eip	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Top up your account and try again.
404	InvalidAllocationId.NotFound	Specified allocation ID is not found	The error message returned because the specified EIP does not exist. Check whether the specified value is valid.
400	InvalidParameter	Specified value of "Bandwidth" is not supported.	The error message returned because the specified bandwidth value is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an unknown error occurred.
400	IncorrectEipStatus	Current elastic IP status does not support this operation.	The error message returned because you cannot perform the operation when the specified EIP is in the current state.
404	InvalidAllocationId.NotFound	Specified allocation ID is not found..	The error message returned because the specified EIP does not exist. Check whether the value of the parameter is valid.
400	InvalidParameter	The parameter is invalid.	The error message returned because the parameter is set to an invalid value.
404	Forbidden.RegionNotFound	Specified region is not found during access authentication.	The error message returned because the specified region does not exist. Check whether the specified region ID is valid.

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

20.8. DescribeEipAddresses

Queries elastic IP addresses (EIPs) created in a specific region.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeEipAddresses	The operation that you want to perform. Set the value to **DescribeEipAddresses**.
RegionId	String	Yes	cn-hangzhou	The region ID of the EIP. You can call the DescribeRegions operation to query the most recent region list.
IncludeReservationData	Boolean	No	true	Specifies whether to return data of orders that have not taken effect. Valid values: • **false**: does not return orders that have not taken effect This is the default value. • **true**: Data of orders that have not taken effect is returned.
Status	String	No	Available	The state of the EIP. Valid values: • **Associating**: The EIP is being associated with an instance. • **Unassociating**: The EIP is being disassociated from an instance. • **InUse**: The EIP is associated with an instance. • **Available**: The EIP is available.
EipAddress	String	No	116.XX.XX.28	The IP address of the EIP that you want to query. You can enter the IP addresses of up to 50 EIPs. Separate multiple IP addresses with commas (,). **Note** If both the **EipAddress** and **AllocationId** parameters are set, you can enter the IP addresses of 50 EIPs in **EipAddress**, and enter the IDs of the 50 EIPs in **AllocationId**.
AllocationId	String	No	eip-2zeerraiwb7ujxscd****	The ID of the EIP that you want to query. You can enter IDs of up to 50 EIPs. Separate multiple IDs with commas (,). **Note** If both the **EipAddress** and **AllocationId** parameters are set, you can enter the IDs of up to 50 EIPs in **AllocationId, and enter the IP addresses of 50 EIPs in,EipAddress**.
SegmentInstanceId	String	No	eipsg-t4nr90yik5oy38xdy****	The IDs of contiguous EIPs.
ResourceGroupId	String	No	rg-acfmxazb4pcdvf****	The ID of the resource group to which the EIPs belongs.
PageNumber	Integer	No	10	The number of the page to return, default value: **1**.

Parameter	Type	Required	Example	Description
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: **100**. Default value: **10**.
ISP	String	No	BGP	The type of lines. Valid values: • **BGP**: BGP (Multi-ISP) lines. Up to 89 high-quality BGP lines are available worldwide. Direct connections with multiple Internet service providers (ISPs), including China Telecom, China Unicom, China Mobile, China Tietong Telecom, China Netcom, CERNET, China Broadcast Network, Dr. Peng Group, and Founder, can be established in all regions in mainland China. • **BGP_PRO**: BGP (Multi-ISP) Pro lines. BGP (Multi-ISP) Pro lines optimize data transmission to China and improve connection quality for international services. Compared with BGP (Multi-ISP), when BGP (Multi-ISP) Pro lines provide services to users in mainland China (excluding data centers), cross-border connections are established by using mainland China ISP services. This reduces network latency. BGP (Multi-ISP) lines are supported in all regions. BGP (Multi-ISP) Pro lines are supported only in the China (Hong Kong) region. **Note** If your account is included in the BGP (single line) whitelist, you can set the ISP parameter to **ChinaTelecom**, **ChinaUnicom**, or **ChinaMobile**. If your workloads are deployed in China East 1 Finance, this parameter is required and you must set the value to **BGP_FinanceCloud**.
Filter.1.Key	String	No	CreationStartTime	The filter key used to query resources. Set the value to **CreationStartTime** (the start time when resources are created).
Filter.2.Key	String	No	CreationEndTime	The filter key used to query resources. Set the value to **CreationEndTime** (the end time when resources are created).
Filter.1.Value	String	No	2018-01-22T09:12Z	The filter value used to query resources. Specify the time in the ISO 8601 standard in YYYY-MM-ddTHH:mmZ format. The time must be in UTC.
Filter.2.Value	String	No	2018-01-22T09:15Z	The filter value used to query resources. Specify the time in the ISO 8601 standard in YYYY-MM-ddTHH:mmZ format. The time must be in UTC.
LockReason	String	No	financial	The reason why the EIP is locked. Valid values: • **financial**: The Elastic IP address is locked due to overdue payments. • **security**: The Elastic IP address is locked for security reasons.

Parameter	Type	Required	Example	Description
AssociatedInstanceType	String	No	EcsInstance	The type of the cloud resource with which you want to associate the EIP. Valid values: • **EcsInstance**: an Elastic Compute Service instance in a Virtual Private Cloud. This is the default value. • **SlbInstance**: an Server Load Balancer instance in a VPC. • **Nat**: a NAT gateway. • **HaVip**: a high-availability virtual IP address (HAVIP). • **NetworkInterface**: a secondary elastic network interface (ENI). You can associate only one EIP with each ECS instance, SLB instance, or HAVIP. You can associate multiple EIPs with each NAT gateway. The number of EIPs that you can associate with a secondary ENI depends on the EIP mode. For more information, see EIP overview.
AssociatedInstanceId	String	No	i-2zebb08phyccdvf****	The ID of the instance.
ChargeType	String	No	PostPaid	The billing method of the EIP. Set the value to: Set the value to: **PostPaid**: pay-as-you-go.
DryRun	Boolean	No	false	Specifies whether to precheck only this request. Valid values: • **true**: prechecks the API request. Resources are not queried. The system checks whether the AccessKey pair is valid, whether the RAM user is authorized, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the DryRunOperation error code is returned. • **false**: The request is checked. This is the default value. If the request passes the precheck, a 2xx HTTP status code is returned and the resource is queried.
EipName	String	No	EIP-01	The name of the EIP. The name must be 1 to 128 characters in length, and can contain letters, digits, underscores (_), and hyphens (-). The name must start with a letter.

Response parameters

Parameter	Type	Example	Description
EipAddresses	Array of EipAddress		The details about the EIP.
EipAddress			
AllocationId	String	eip-2zeerraiwb7ujcdvf****	The ID of the EIP.

Parameter	Type	Example	Description
AllocationTime	String	2019-04-23T01:37:38Z	The time when the EIP was created.
AvailableRegions	List	cn-hangzhou	The ID of the region to which the EIP belongs.
Bandwidth	String	5	The bandwidth limit of the EIP. Unit: Mbit/s.
BandwidthPackageBandwidth	String	50	The bandwidth limit of the EIP bandwidth plan with which the EIP is associated.
BandwidthPackageId	String	cbwp-bp1ego3i4j07ccdvf****	The ID of the-EIP bandwidth plan.
BandwidthPackageType	String	CommonBandwidthPackage	The type of the bandwidth.plan Only **CommonBandwidthPackage** (EIP Bandwidth Plan) is returned.
BusinessStatus	String	Normal	The state of the EIP. Valid values: • **Normal**: normal. • **FinancialLocked**: locked.
ChargeType	String	PostPaid	The billing method of the EIP. Valid values: • **PrePaid**: subscription • **PostPaid**: pay-as-you-go
DeletionProtection	Boolean	true	Indicates whether deletion protection is enabled. Valid values: • **true**: enabled. • **false**: disabled.
Descritpion	String	abc	The description of the EIP.
EipBandwidth	String	101	The bandwidth of the EIP when it is not associated with an EIP bandwidth plan.
ExpiredTime	String	2019-04-29T02:00Z	The expiration date. The time follows the ISO 8601 standard and is displayed in UTC. Format: YYYY-MM-ddTHH:mmZ.
HDMonitorStatus	String	false	Indicates whether fine-grained monitoring is enabled for the EIP. Valid values: • **false**: disabled. • **true**: enabled.
HasReservationData	String	false	Indicates whether renewal data is included. This parameter returns **true** only when the parameter **IncludeReservationData** is set to **true**, and some orders have not taken effect.
ISP	String	BGP	ISP
InstanceId	String	i-bp15zckdt37cdvf****	The ID of the instance with which the EIP is associated.

Parameter	Type	Example	Description
InstanceRegionId	String	cn-hangzhou	The region ID of the associated resource.
InstanceType	String	EcsInstance	The type of the instance associated with the EIP. • **EcsInstance**: an ECS instance in a VPC • **SlbInstance**: an SLB instance in a VPC • **Nat**: a NAT gateway. • **HaVip**: a high-availability virtual IP address. • **NetworkInterface**: a secondary ENI.
InternetChargeType	String	PayByBandwidth	The metering method of the EIP. Valid values: • **PayByBandwidth** • **PayByTraffic**
IpAddress	String	116.XX.XX.28	The IP address of the EIP.
Name	String	test	The name of the EIP.
Netmode	String	public	The type of the network.
OperationLocks	Array of LockReason		The details about the locked EIP.
LockReason			
LockReason	String	financial	The reason why the EIP is locked. Valid values: • **financial**: The EIP is locked due to overdue payments. • **security**: The EIP is locked for security reasons.
RegionId	String	cn-hangzhou	The ID of the region to which the EIP belongs.
ReservationActiveTime	String	2019-03-11T16:00:00Z	The time when the renewal takes effect.
ReservationBandwidth	String	12	The bandwidth after the renewal takes effect.
ReservationInternetChargeType	String	PayByBandwidth	The metering method of the renewal. Valid values: • **PayByBandwidth** • **PayByTraffic**
ReservationOrderType	String	RENEWCHANGE	The type of the renewal order. Valid values: • **RENEWCHANGE**: upgrade or downgrade • **TEMP_UPGRADE**: temporary upgrade • **UPGRADE**: upgrade.
ResourceGroupId	String	rg-acfmxazcdxs****	The ID of the resource group to which the EIP belongs.
SecondLimited	Boolean	false	Indicates whether level-2 throttling is configured. • **true**: yes • **false**: no

Parameter	Type	Example	Description
SegmentInstanceId	String	eipsg-t4nr90yik5oy38xd****	The IDs of the contiguous EIPs. This value is returned only when contiguous EIPs are specified.
ServiceManaged	Integer	0	Indicates whether the resource is created by the service account. Valid values: • **0**: no • **1**: yes
Status	String	Associating	The status of the Elastic IP address. • **Associating**: The EIP is being associated with an instance. • **Unassociating**: The EIP is being disassociated from an instance. • **InUse**: The EIP is associated with an instance. • **Available**: The EIP is available.
TotalCount	Integer	10	The total number of entries returned.
PageNumber	Integer	10	The number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The ID of the request.

Samples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeEipAddresses
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeEipAddressesResponse>
 <TotalCount>10</TotalCount>
 <PageSize>10</PageSize>
 <RequestId>4EC47282-1B74-4534-BD0E-403F3EE64CAF</RequestId>
 <EipAddresses>
    <EipAddress>
       <HDMonitorStatus>false</HDMonitorStatus>
       <ServiceManaged>0</ServiceManaged>
       <ResourceGroupId>rg-acfmxazcdxs****</ResourceGroupId>
       <AllocationId>eip-2zeerraiwb7ujcdvf****</AllocationId>
       <SecondLimited>false</SecondLimited>
       <BusinessStatus>Normal</BusinessStatus>
       <Name>test</Name>
       <SegmentInstanceId>eipsg-t4nr90yik5oy38xd****</SegmentInstanceId>
       <ReservationOrderType>RENEWCHANGE</ReservationOrderType>
       <InstanceRegionId> cn-hangzhou</InstanceRegionId>
       <ExpiredTime>2019-04-29T02:00Z</ExpiredTime>
       <Bandwidth>5</Bandwidth>
       <BandwidthPackageId>cbwp-bp1ego3i4j07ccdvf****</BandwidthPackageId>
       <ReservationActiveTime>2019-03-11T16:00:00Z</ReservationActiveTime>
       <InstanceType>EcsInstance</InstanceType>
       <ReservationBandwidth>12</ReservationBandwidth>
       <Status>Associating</Status>
       <InstanceId>i-bp15zckdt37cdvf****</InstanceId>
       <ISP>BGP</ISP>
       <HasReservationData>false</HasReservationData>
       <DeletionProtection>true</DeletionProtection>
       <BandwidthPackageType>CommonBandwidthPackage</BandwidthPackageType>
       <BandwidthPackageBandwidth>50</BandwidthPackageBandwidth>
       <ReservationInternetChargeType>PayByBandwidth</ReservationInternetChargeType>
       <InternetChargeType>PayByBandwidth</InternetChargeType>
       <AllocationTime>2019-04-23T01:37:38Z</AllocationTime>
       <Descritpion>abc</Descritpion>
       <EipBandwidth>101</EipBandwidth>
       <Netmode>public</Netmode>
       <ChargeType>PostPaid</ChargeType>
       <IpAddress>116.XX.XX.28</IpAddress>
       <RegionId>cn-hangzhou</RegionId>
       <OperationLocks>
          <LockReason>
             <LockReason>financial</LockReason>
          </LockReason>
       </OperationLocks>
       <AvailableRegions>
          <AvailableRegion>cn-hangzhou</AvailableRegion>
       </AvailableRegions>
    </EipAddress>
 </EipAddresses>
 <PageNumber>10</PageNumber>
</DescribeEipAddressesResponse>
```


`JSON` format

```
{
  "TotalCount": 10,
  "PageSize": 10,
  "RequestId": "4EC47282-1B74-4534-BD0E-403F3EE64CAF",
  "EipAddresses": {
    "EipAddress": {
      "HDMonitorStatus": false,
      "ServiceManaged": 0,
      "ResourceGroupId": "rg-acfmxazcdxs****",
      "AllocationId": "eip-2zeerraiwb7ujcdvf****",
      "SecondLimited": false,
      "BusinessStatus": "Normal",
      "Name": "test",
      "SegmentInstanceId": "eipsg-t4nr90yik5oy38xd****",
      "ReservationOrderType": "RENEWCHANGE",
      "InstanceRegionId": "cn-hangzhou",
      "ExpiredTime": "2019-04-29T02:00Z",
      "Bandwidth": 5,
      "BandwidthPackageId": "cbwp-bp1ego3i4j07ccdvf****",
      "ReservationActiveTime": "2019-03-11T16:00:00Z",
      "InstanceType": "EcsInstance",
      "ReservationBandwidth": 12,
      "Status": "Associating",
      "InstanceId": "i-bp15zckdt37cdvf****",
      "ISP": "BGP",
      "HasReservationData": false,
      "DeletionProtection": true,
      "BandwidthPackageType": "CommonBandwidthPackage",
      "BandwidthPackageBandwidth": 50,
      "ReservationInternetChargeType": "PayByBandwidth",
      "InternetChargeType": "PayByBandwidth",
      "AllocationTime": "2019-04-23T01:37:38Z",
      "Descritpion": "abc",
      "EipBandwidth": 101,
      "Netmode": "public",
      "ChargeType": "PostPaid",
      "IpAddress": "116.XX.XX.28",
      "RegionId": "cn-hangzhou",
      "OperationLocks": {
        "LockReason": {
          "LockReason": "financial"
        }
      },
      "AvailableRegions": {
        "AvailableRegion": "cn-hangzhou"
      }
    }
  },
  "PageNumber": 10
}
```


Error codes

HttpCode	Error codes	Error message	Description
404	Forbidden.RegionNotFound	Specified region is not found during access authentication.	The error message returned because the specified region does not exist. Check whether the region is correct.
404	InvalidLockReason.NotFound	The specified LockReason is not found	The error message returned because the reason why the EIP is locked is unknown.
400	InvalidIAssociatedInstanceType.ValueNotSupported	The specified value of AssociatedInstanceType is not supported.	The error message returned because AssociatedInstanceType is set to an invalid value. Check whether the value is valid.

HttpCode	Error codes	Error message	Description
400	InvalidChargeType.ValueNotSupported	The specified ChargeType is not supported.	The error message returned because the specified billing method is not supported. Select a supported billing method.
400	InvalidResourceGroupId	The specified ResourceGroupId does not exist.	The error message returned because the specified resource group ID is invalid.
400	OperationUnsupported.ResourceGroupId	ResourceGroup is not supported in this region.	The error message returned because the resource group feature is not enabled.

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

20.9. UnassociateEipAddress

Disassociates an elastic IP address (EIP) from a cloud resource.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UnassociateEipAddress	The operation that you want to perform. Set the value to **UnassociateEipAddress**.
AllocationId	String	Yes	eip-2zeerraiwb7uj6i0d****	The ID of the EIP that you want to disassociate. You can call the DescribeRegions operation to query region IDs.
Force	Boolean	No	false	Specifies whether to disassociate the EIP from a NAT gateway if a DNAT or SNAT entry is added to the NAT gateway. Valid values: • **false** (default): does not disassociate the EIP from a NAT gateway if a DNAT or SNAT entry is added to the NAT gateway. • **true**: disassociates the EIP from a NAT gateway if a DNAT or SNAT entry is added to the NAT gateway.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the EIP that you want to disassociate belongs.
InstanceId	String	No	i-hp3akk9irtd69jad****	The ID of the cloud resource from which you want to disassociate the EIP.

Parameter	Type	Required	Example	Description
InstanceType	String	No	EcsInstance	The type of the cloud resource from which you want to disassociate the EIP. Valid values: • **EcsInstance** (default): an Elastic Compute Service (ECS) instance that is deployed in a virtual private cloud (VPC) • **SlbInstance**: a Server Load Balancer (SLB) instance that is deployed in a VPC • **NetworkInterface**: a secondary elastic network interface (ENI) that is deployed in a VPC • **Nat**: a NAT gateway • **HaVip** a high-availability virtual IP address (HAVIP)
PrivateIpAddress	String	No	192.XX.XX.2	The private IP address of the ECS instance or the secondary ENI from which you want to disassociate the EIP.
ClientToken	String	No	02fb3da4-130e-11****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. `ClientToken` can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
&<Common request parameters>
```

Sample success responses

`XML` format

```
<UnassociateEipAddressResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</UnassociateEipAddressResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidAllocationId.NotFound	Specified allocation ID is not found	The error message returned because the specified EIP does not exist. Check whether the specified value of the parameter is valid.

HttpCode	Error code	Error message	Description
400	IncorrectEipStatus	Current elastic IP status does not support this operation.	The error message returned because the state of the EIP does not support this operation.
400	InvalidInstanceId.NotFound	Specified instance does not exist.	The error message returned because the specified instance does not exist. Check whether the specified instance is valid.
400	IncorrectInstanceStatus	The current status of instance does not support this operation.	The error message returned because the state of the instance does not support this operation.
400	InvalidInstanceType.ValueNotSupported	The specified value of InstanceType is not supported.	The error message returned because the specified value of the InstanceType parameter is invalid.
400	IncorrectHaVipStatus	This operation is denied because satus of the specified HaVip is neither Available nor InUse.	The error message returned because you cannot perform the operation when the specified HAVIP is in the Available or InUse state.
400	OperationDenied	Eip of default vpc not allow this operation	The error message returned because you cannot perform the operation when the EIP is associated with a cloud resource in the default VPC.
404	Forbidden.RegionNotFound	Specified region is not found during access authentication.	The error message returned because the specified region ID does not exist. Check whether the specified region ID is valid.
400	InvalidParameter	The specified parameter is not valid.	The error message returned because the specified value of the parameter is invalid.
400	Forbbiden	The eip instance owener error	The error message returned because you are not authorized to perform this operation on the EIP. Check whether you have permissions to call this operation.
400	InvalidBindingStatus	The eip binding status invalid.	The error message returned because the EIP is in an invalid state.

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

20.10. ReleaseEipAddress

Releases a specific elastic IP address (EIP).

Description

Before you release an EIP, make sure that the EIP meets the following requirements:

- You can release only an EIP that is in the **Available** state.
- You can release only pay-as-you-go EIPs. You cannot release subscription EIPs.

Debugging

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

Request parameters

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

Parameter	Type	Required	Example	Description
AllocationId	String	Yes	eip-2zeerraiwb7uj6i0d****	The ID of the EIP that you want to release.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the EIP that you want to release belongs. You can call the DescribeRegions operation to query region IDs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	748C38F6-9A3D-482E-83FB-DB6C39C68AEA	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=ReleaseEipAddress
&AllocationId=eip-2zeerraiwb7uj6i0d****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ReleaseEipAddressResponse>
    <RequestId>748C38F6-9A3D-482E-83FB-DB6C39C68AEA</RequestId>
</ReleaseEipAddressResponse>
```

`JSON` format

```
{
  "RequestId": "748C38F6-9A3D-482E-83FB-DB6C39C68AEA"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidAllocationId.NotFound	Specified allocation ID is not found	The error message returned because the specified EIP does not exist. Check whether the specified value of the parameter is valid.
400	IncorrectEipStatus	Current elastic IP status does not support this operation.	The error message returned because the specified state of the EIP does not support this operation.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because unknown errors have occurred.
404	Forbidden.RegionNotFound	Specified region is not found during access authentication.	The error message returned because the specified region ID does not exist. Check whether the specified region ID is valid.
400	Forbidden.ChargeTypeIsPrepaid	It's forbidden to release a prepaid EIP	The error message returned because you cannot release subscription EIPs.
400	Forbbiden	The eip instance owener error	The error message returned because you are not authorized to perform this operation on the EIP. Check whether you have permissions to call this operation.

HttpCode	Error code	Error message	Description
400	TaskConflict.AssociateGlobalAccelerationInstance	Operate too frequent.	The error message returned because too many requests are sent.

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

20.11. DescribeEipMonitorData

Queries the monitoring data of an elastic IP address (EIP). You can query monitoring data within the last 30 days and specify up to 400 data points in each request.

Description

To improve user experience in querying monitoring data, we recommend that you call the DescribeMetricList API operation provided by CloudMonitor to query EIP monitoring data. For more information, see DescribeMetricList and EIP monitoring data.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeEipMonitorData	The operation that you want to perform. Set the value to **DescribeEipMonitorData**.
AllocationId	String	Yes	eip-2zeerraiwb7uj6idcfv****	The ID of the EIP.
EndTime	String	Yes	2020-01-05T03:05:10Z	The end of the time range to query. The time must be in UTC. Specify the time in the ISO 8601 standard in `YYYY-MM-DDThh:mm:ssZ` format. For example, `2013-01-10T12:00:00Z` specifies 20:00:00 on January 10, 2013 (UTC+8). If the value of seconds (ss) is not 00, the end time is automatically rounded up to the next minute.
StartTime	String	Yes	2020-01-05T01:05:05Z	The beginning of the time range to query. The time must be in UTC. Specify the time in the ISO 8601 standard in `YYYY-MM-DDThh:mm:ssZ` format. For example, `2013-01-10T12:00:00Z` specifies 20:00:00 on January 10, 2013 (UTC+8). If the value of seconds (ss) is not 00, the start time is automatically rounded up to the next minute.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the EIP belongs.
Period	Integer	No	60	The duration of a monitoring data entry. Valid values: **60** (default), **300**, **900**, and **3600**. Unit: seconds. • If the value of (EndTime - StartTime)/Period is greater than 200, a maximum of 200 monitoring data entries are returned at a time. • If the value of (EndTime - StartTime)/Period is less than or equal to 200, only the monitoring data collected between the start time and end time is returned.

Response parameters

Parameter	Type	Example	Description
EipMonitorDatas	Array of EipMonitorData		The detailed information about the monitoring data of the EIP.
EipMonitorData			
EipBandwidth	Integer	10	The average bandwidth value. This value is equal to **EipFlow/Period**. Unit: Byte/s. The default value of **Period** is **60**. Unit: seconds.
EipFlow	Integer	465	The sum of inbound and outbound traffic.
EipPackets	Integer	3434	The number of packets.
EipRX	Long	122	The inbound traffic. Unit: bytes.
EipTX	Long	343	The outbound bandwidth. Unit: bytes.
TimeStamp	String	2020-01-21T09:50:23Z	The timestamp of the monitoring data. The timestamp follows the ISO8601 standard. Example: `2020-01-21T09:50:23Z`.
RequestId	String	C8B26B44-0189-443E-9816-D951F59623A9	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeEipMonitorData
&AllocationId=eip-2zeerraiwb7uj6idcfv****
&EndTime=2020-01-05T03:05:10Z
&StartTime=2020-01-05T01:05:05Z
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeEipMonitorDataResponse>
 <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
 <EipMonitorDatas>
    <EipMonitorData>
       <EipPackets>3434</EipPackets>
       <EipBandwidth>10</EipBandwidth>
       <EipFlow>465</EipFlow>
       <EipTX>343</EipTX>
       <TimeStamp>2020-01-21T09:50:23Z</TimeStamp>
       <EipRX>122</EipRX>
    </EipMonitorData>
 </EipMonitorDatas>
</DescribeEipMonitorDataResponse>
```

`JSON` format

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
  "EipMonitorDatas": {
    "EipMonitorData": {
      "EipPackets": 3434,
      "EipBandwidth": 10,
      "EipFlow": 465,
      "EipTX": 343,
      "TimeStamp": "2020-01-21T09:50:23Z",
      "EipRX": 122
    }
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidIpInstanceId.NotFound	The specified Eip InstanceId does not exist in our records.	The error message returned because the specified EIP does not exist.
404	InvalidInstanceId.NotFound	The InstanceId provided does not exist in our records.	The error message returned because the specified Elastic Compute Service (ECS) instance does not exist in the virtual private cloud (VPC).
400	InvalidStartTime.Malformed	The specified parameter "StartTime" is not valid.	The error message returned because the value of the StartTime parameter is invalid.
400	InvalidEndTime.Malformed	The specified parameter "EndTime" is not valid.	The error message returned because the value of the EndTime parameter is invalid.
400	InvalidPeriod.ValueNotSupported	The specified parameter "Period" is not valid.	The error message returned because the value of the Period parameter is invalid.
400	InvalidStartTime.TooEarly	The specified parameter "StartTime" is too early.	The error message returned because the value of the StartTime parameter is invalid.
400	InvalidAllocationId.NotFound	Specified allocation id is not found.	The error message returned because the specified EIP does not exist. Check whether the EIP is valid.
400	OperationDenied.TooManyDataQueried	Specified operation is denied as too many data to return.	The error message returned because the number of data entries to be returned has reached the upper limit.
404	Forbidden.RegionNotFound	Specified region is not found during access authentication.	The error message returned because the specified region does not exist. Check whether the specified region ID is valid.

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

20.12. DescribeEipGatewayInfo

Queries the gateway address and subnet mask of an Elastic IP address.

API description

You can only query the gateway address and subnet mask of an Elastic IP address that is associated with a secondary Elastic Network Interface (ENI) in the multi-EIP to ENI mode.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DescribeEipGatewayInfo	The name of this action. Value: **DescribeEipGatewayInfo**.
InstanceId	String	Yes	eni-bp1d66qjxb3qoin3****	The ID of the secondary ENI associated with the Elastic IP address.
RegionId	String	Yes	cn-zhangjiakou	The ID of the region to which the Elastic IP address belongs. To query the region ID, call DescribeRegions.

Response parameters

Parameter	Type	Example value	Description
Code	String	200	The status code of the request.
EipInfos	Array		The details of the Elastic IP address.
EipInfo			The details of the Elastic IP address.
Ip	String	47.xx.xx.236	The IP address of the Elastic IP address.
IpGw	String	47.xx.xx.1	The gateway address of the Elastic IP address.
IpMask	String	255.255.255.0	The subnet mask of the Elastic IP address.
Message	String	successful	The message indicating whether the request is successful.
RequestId	String	C0FD0EED-F90D-4479-803D-DD62335357E5	The ID of the request.

Examples

Request example

```
http(s)://vpc.aliyuncs.com/? Action=DescribeEipGatewayInfo
&InstanceId=eni-bp1d66qjxb3qoin3****
&RegionId=cn-zhangjiakou
&<CommonParameters>
```

Response example

`XML` format

```
<DescribeEipGatewayInfoResponse>
  <Message>successful</Message>
  <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
  <EipInfos>
    <EipInfo>
      <IP>47.xx.xx.236</IP>
      <IpMask>255.255.255.0</IpMask>
      <IpGw>47.xx.xx.1</IpGw>
    </EipInfo>
  </EipInfos>
  <Code>200</Code>
</DescribeEipGatewayInfoResponse>
```

`JSON` format


```
{
 "Message":"successful",
 "RequestId":"0ED8D006-F706-4D23-88ED-E11ED28DCAC0",
 "EipInfos":{
  "EipInfo":[
   {
    "IpMask":"255.255.255.0",
    "IP":"47.xx.xx.236",
    "IpGw":"47.xx.xx.1"
   }
  ]
 },
 "Code":"200"
}
```


Errors

HTTP status code	Error code	Error message	Description
403	Forbbiden	User not authorized to operate on the specified resource.	You are not authorized to operate on this resource.

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

20.13. DescribePublicIpAddress

Queries the Internet IP address range of a VPC in a specified region.

API description

DescribePublicIpAddress cannot be used to query the range of Internet IP addresses in a classic network.

> **Notice** This API action is only available for Alibaba Cloud partners. Contact your Alibaba Cloud sales manager or business manager to add your account to the whitelist before using this API.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DescribePublicIpAddress	The action to perform. Valid value: **DescribePublicIpAddress**.

Parameter	Type	Required?	Example value	Description
RegionId	String	Yes	cn-qingdao-cm5-a01	The ID of the region to query. Valid values: • **cn-qingdao-cm5-a01**: China (Qingdao). • **cn-beijing-btc-a01**: China (Beijing). • **cn-zhangjiakou-na62-a01**: China (Zhangjiakou). • **cn-huhehaote-nt12-a01**: China (Hohhot). • **cn-hangzhou-dg-a01**: China (Hangzhou). • **cn-shanghai-eu13-a01**: China (Shanghai). • **cn-shenzhen-st3-a01**: China (Shenzhen). • **cn-chengdu-wt97-a01**: China (Chengdu). • **cn-hongkong-am4-c04**: Hong Kong, China. • **ap-northeast-jp59-a01**: Japan (Tokyo). • **ap-southeast-os30-a01**: Singapore. • **ap-southeast-au49-a01**: Australia (Sydney). • **ap-southeast-my88-a01**: Malaysia (Kuala Lumpur). • **ap-southeast-id35-a01**: Indonesia (Jakarta). • **ap-south-in73-a01**: India (Mumbai). • **us-east-us44-a01**: US (Virginia). • **us-west-ot7-a01**: US (Silicon Valley). • **me-east-db47-a01**: UAE (Dubai). • **eu-central-de46-a01**: Germany (Frankfurt). • **eu-west-1-gb33-a01**: UK (London).
PageNumber	Integer	No	1	The page number. Default value: **1**.
PageSize	Integer	No	10	The number of rows per page in a paged query. Default value: **100**.

Response parameters

Parameter	Type	Example value	Description
PublicIpAddress	String	110.11.XX.XX/24	The public IP address range of the specified region.
TotalCount	String	100	The number of total entries.
PageNumber	Integer	1	The current page number.
PageSize	Integer	10	The number of entries per page.
RequestId	String	365F4154-92F6-4AE4-92F8-7FF34B540710	The ID of the request.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=DescribePublicIpAddress
&RegionId=cn-qingdao-cm5-a01
&<CommonParameters>
```

Response example

`XML` format

```
<DescribePublicIpAddressResponse>
<RequestId>365F4154-92F6-4AE4-92F8-7FF34B540710</RequestId>
<PublicIpAddress>110.11.XX.XX/24</PublicIpAddress>
<PageNumber>1</PageNumber>
<PageSize>100</PageSize>
<TotalCount>100</TotalCount>
</DescribePublicIpAddressResponse>
```

`JSON` format

```
{
 "RequestId":"365F4154-92F6-4AE4-92F8-7FF34B540710",
 "PublicIpAddress":[
  "110.11.XX.XX/24"
 ],
 "PageNumber":"1",
 "PageSize":"100",
 "TotalCount":"100"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	Forbidden.	User not authorized to operate on the specified resource.	The specified region does not exist.
404	Forbidden.RegionNotFound	Specified region is not found during access authentication.	You are not authorized to operate on the specified resource. For more information about how to obtain permission, see Use RAM roles to manage VPC permissions.

20.14. DescribeHighDefinitionMonitorLogAttribute

Queries fine-grained monitoring configurations about an elastic IP address (EIP).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeHighDefinitionMonitorLogAttribute	The operation that you want to perform. Set the value to**DescribeHighDefinitionMonitorLogAttribute**.
InstanceId	String	Yes	eip-wz9fi6qboho9fwgx7****	The ID of the fine-grained monitoring instance.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the instance is deployed. You can call the DescribeRegions operation to query the most recent region list.
InstanceType	String	No	EIP	The ID of the instance. Set the value to **EIP**.

Response parameters

Parameter	Type	Example	Description
InstanceId	String	eip-wz9fi6qboho9fwgx7****	The ID of the fine-grained monitoring instance.
InstanceType	String	EIP	The type of the monitoring instance that is queried. The value is set to **EIP**.
LogProject	String	hdmonitor-cn-shenzhen-1658206966225390	The name of the log project of Log Service.
LogStore	String	hdmonitor	The name of the Logstore of Log Service.
RequestId	String	54B48E3D-DF70-471B-AA93-08E683A1B457	The ID of the request.
Success	String	true	Indicates whether the operation is performed. Valid values: • **true**: The operation is performed. • **false**: The operation is not performed.

Examples

Sample requests

```
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeHighDefinitionMonitorLogAttributeResponse>
  <RequestId>54B48E3D-DF70-471B-AA93-08E683A1B457</RequestId>
  <LogStore>hdmonitor</LogStore>
  <InstanceId>eip-wz9fi6qboho9fwgx7****</InstanceId>
  <InstanceType>EIP</InstanceType>
  <LogProject>hdmonitor-cn-shenzhen-1658206966225390</LogProject>
  <Success>true</Success>
</DescribeHighDefinitionMonitorLogAttributeResponse>
```

`JSON` format

```
{
  "RequestId": "54B48E3D-DF70-471B-AA93-08E683A1B457",
  "LogStore": "hdmonitor",
  "InstanceId": "eip-wz9fi6qboho9fwgx7****",
  "InstanceType": "EIP",
  "LogProject": "hdmonitor-cn-shenzhen-1658206966225390",
  "Success": true
}
```

Error codes

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

21.Flow log API

21.1. CreateFlowLog

Creates a flow log.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateFlowLog	The operation that you want to perform. Set the value to **CreateFlowLog**.
LogStoreName	String	Yes	FlowLogStore	The Logstore that stores the captured traffic data.
ProjectName	String	Yes	FlowLogProject	The Project that stores the captured traffic data.
RegionId	String	Yes	cn-qingdao	The region to which the flow log belongs. You can call the DescribeRegions operation to query the region IDs.
ResourceId	String	Yes	eni-askldfasza23****	The ID of the resource whose traffic you want to capture. The IDs of virtual private clouds (VPCs), VSwitches, and elastic network interfaces (ENIs) are supported. If the VPCs to which specified VSwitches or ENIs belong contain ECS instances of the following instance types, you cannot create flow logs for the VPCs, VSwitches, or ENIs: ecs.c1, ecs.c2, ecs.c4, ecs.c5, ecs.ce4, ecs.cm4, ecs.d1, ecs.e3, ecs.e4, ecs.ga1, ecs.gn4, ecs.gn5, ecs.i1, ecs.m1, ecs.m2, ecs.mn4, ecs.n1, ecs.n2, ecs.n4, ecs.s1, ecs.s2, ecs.s3, ecs.se1, ecs.sn1, ecs.sn2, ecs.t1, and ecs.xn4. To create a flow log, you must upgrade the instance. For more information, see Upgrade the instance types of subscription instances and Change the instance type of a pay-as-you-go instance. **Note** If your VPC contains one instance of the preceding instance types and you have created a flow log, you must upgrade the instance to ensure that the flow log can function as expected.
ResourceType	String	Yes	NetworkInterface	The type of the resource whose traffic you want to capture. Valid Values: • **NetworkInterface**: captures the flow log of an ENI. • **VSwitch**: captures the flow log of the VSwitch. • **VPC**: captures the flow log of a VPC.

Parameter	Type	Required	Example	Description
TrafficType	String	Yes	all	The type of the traffic that you want to capture. Valid values: • **All**: all traffic. • **Allow**: traffic that is allowed by access control. • **Drop**: traffic that is denied by access control.
FlowLogName	String	No	myFlowlog	The name of the flow log. The name must be 2 to 128 characters in length and start with a letter. The name can contain letters, digits, periods (.), underscores (_), and hyphens (-). The name cannot start with `http://` or `https://`.
Description	String	No	This is my Flowlog	The description of the flow log. The description must be 2 to 256 characters in length and start with a letter. The description cannot start with `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
FlowLogId	String	flowlog-m5evbtbptzsxdca****	The ID of the flow log.
RequestId	String	54B48E3D-DF70-471B-AA93-08E683A1B457	The ID of the request.
Success	String	true	Indicates whether the call was successful. **true**: The call was successful. **false**: The call failed.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=CreateFlowLog
&LogStoreName=FlowLogStore
&ProjectName=FlowLogProject
&RegionId=cn-qingdao
&ResourceId=eni-askldfasza23****
&ResourceType=NetworkInterface
&TrafficType=all
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateFlowLogResponse>
    <RequestId>54B48E3D-DF70-471B-AA93-08E683A1B457</RequestId>
    <FlowLogId>flowlog-m5evbtbptzsxdca****</FlowLogId>
</CreateFlowLogResponse>
```

`JSON` format

```
{
  "RequestId": "54B48E3D-DF70-471B-AA93-08E683A1B457",
  "FlowLogId": "flowlog-m5evbtbptzsxdca****"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	INVALID_PARAMETER	The parameter invalid.	The error message returned because the specified parameter is not valid.
400	MissingParameter	Missing mandatory parameter	The error message returned because the required parameters are missing. Check whether you have set all required parameters before you call this operation.

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

21.2. ModifyFlowLogAttribute

Modifies the name and description of a flow log.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyFlowLogAttribute	The operation that you want to perform. Set the value to **ModifyFlowLogAttribute**.
FlowLogId	String	Yes	flowlog-m5evbtbptxxxxxxxxxxxx	The ID of the flow log.
RegionId	String	Yes	cn-qingdao	The ID of the region to which the flow log belongs. You can call the DescribeRegions operation to query the region IDs.
FlowLogName	String	No	myFlowlog	The name of the flow log. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). The name must start with a letter and cannot start with `http://` or `https://`.
Description	String	No	This is my Flowlog.	The description of the flow log. The description must be 2 to 256 characters in length. The description must start with a letter, but cannot start with `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
RequestId	String	F7DDDC17-FA06-4AC2-8F35-59D2470FCFC1	The ID of the request.
Success	String	true	Indicates whether the request succeeded. • **true**: The request succeeded. • **false**: The request failed.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=ModifyFlowLogAttribute
&RegionId=cn-qingdao
&FlowLogId=flowlog-m5evbtbptxxxxxxxxxxxx
&FlowLogName=myFlowlog
&Common request parameter
```

Sample success responses

`XML` format

```
<ModifyFlowLogAttributeResponse>
  <RequestId>62172DD5-6BAC-45DF-8D44-xxxxxxxx</RequestId>
  <Success>true</Success>
</ModifyFlowLogAttributeResponse>
```

`JSON` format

```
{
  "RequestId": "62172DD5-6BAC-45DF-8D44-xxxxxxxx",
  "Success": "true"
}
```

Error codes

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

21.3. DescribeFlowLogs

Queries flow logs.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeFlowLogs	The operation that you want to perform. Set the value to **DescribeFlowLogs**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the flow log is deployed. You can call the DescribeRegions operation to query the region IDs.
FlowLogName	String	No	myFlowlog	The name of the flow log. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores ( ), and hyphens (-). The name cannot start with `http://` or `https://`.
FlowLogId	String	No	fl-bp1f6qqhsrc2c12ta****	The ID of the flow log.
Description	String	No	test flowlog	The description of the flow log.

Parameter	Type	Required	Example	Description
ResourceType	String	No	NetworkInterface	The type of resource from which traffic is captured. Valid values: • **NetworkInterface**: Traffic data is captured from elastic network interfaces (ENIs). • **VSwitch**: Traffic data is captured from all ENIs attached to a specified vSwitch. • **VPC**: Traffic data is captured from all ENIs in a specified virtual private cloud (VPC).
ResourceId	String	No	eni-askldfas****	The ID of the resource from which traffic is captured.
TrafficType	String	No	All	The type of traffic that is captured. Valid values: • **All**: all traffic. • **Allow**: traffic that is allowed by access control. • **Drop**: traffic that is denied by access control.
ProjectName	String	No	FlowLogProject	The project that stores the captured traffic data.
LogStoreName	String	No	FlowLogStore	The Logstore that stores the captured traffic data.
Status	String	No	Active	The status of the flow log. Valid values: • **Active**: indicates that the flow log is active. • **Inactive**: indicates that the flow log is inactive.
PageNumber	Integer	No	1	The number of the page to return. Default value: **1**.
PageSize	Integer	No	20	The number of entries to return on each page. Maximum value: **50**. Default value: **20**.
VpcId	String	No	vpc-bp1nwd16gvo1wgs****	The ID of the VPC to which the flow log belongs.

Response parameters

Parameter	Type	Example	Description
FlowLogs	Array of FlowLog		The returned flow logs.
FlowLog			
CreationTime	String	2021-01-21T03:08:50Z	The time when the flow log was created.
Description	String	test flowlog	The description of the flow log.
FlowLogId	String	fl-bp1f6qqhsrc2c12ta****	The ID of the flow log.
FlowLogName	String	myFlowlog	The name of the flow log.
LogStoreName	String	FlowLogStore	The Logstore that stores the captured traffic data.

Parameter	Type	Example	Description
ProjectName	String	FlowLogProject	The project that stores the captured traffic data.
RegionId	String	cn-hangzhou	The ID of the region where the flow log is deployed.
ResourceId	String	eni-askldfas****	The ID of the resource from which traffic is captured.
ResourceType	String	NetworkInterface	The type of resource from which traffic is captured. Valid values: • **NetworkInterface**: Traffic data is captured from ENIs. • **VSwitch**: Traffic data is captured from all ENIs attached to a specified vSwitch. • **VPC**: Traffic data is captured from all ENIs in a specified VPC.
Status	String	Active	The status of the flow log. Valid values: • **Active**: indicates that the flow log is active. • **Inactive**: indicates that the flow log is inactive.
TrafficType	String	All	The type of traffic that is captured. Valid values: • **All**: all traffic. • **Allow**: traffic that is allowed by access control. • **Drop**: traffic that is denied by access control.
PageNumber	String	1	The number of the returned page.
PageSize	String	20	The number of entries returned on each page.
RequestId	String	F7DDDC17-FA06-4AC2-8F35-59D2470FCFC1	The ID of the request.
Success	String	true	Indicates whether the call is successful. Valid values: • **true**: The call is successful. • **false**: The call is failed.
TotalCount	String	1	The number of log entries that are queried.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=DescribeFlowLogs
&RegionId=cn-hangzhou
&<Common request parameters>|
```

Sample success responses

`XML` format

```
<DescribeFlowLogsResponse>
 <TotalCount>1</TotalCount>
 <FlowLogs>
    <FlowLog>
       <Status>Active</Status>
       <FlowLogName>myFlowlog</FlowLogName>
       <LogStoreName>FlowLogStore</LogStoreName>
       <Description>test flowlog</Description>
       <ProjectName>FlowLogProject</ProjectName>
       <ResourceId>eni-askldfas****</ResourceId>
       <CreationTime>2021-01-21T03:08:50Z</CreationTime>
       <ResourceType>NetworkInterface</ResourceType>
       <RegionId>cn-hangzhou</RegionId>
       <FlowLogId>fl-bp1f6qqhsrc2c12ta****</FlowLogId>
       <TrafficType>All</TrafficType>
    </FlowLog>
 </FlowLogs>
 <PageSize>20</PageSize>
 <RequestId>F7DDDC17-FA06-4AC2-8F35-59D2470FCFC1</RequestId>
 <PageNumber>1</PageNumber>
 <Success>true</Success>
</DescribeFlowLogsResponse>
```

`JSON` format

```
{
  "TotalCount": 1,
  "FlowLogs": {
    "FlowLog": {
      "Status": "Active",
      "FlowLogName": "myFlowlog",
      "LogStoreName": "FlowLogStore",
      "Description": "test flowlog",
      "ProjectName": "FlowLogProject",
      "ResourceId": "eni-askldfas****",
      "CreationTime": "2021-01-21T03:08:50Z",
      "ResourceType": "NetworkInterface",
      "RegionId": "cn-hangzhou",
      "FlowLogId": "fl-bp1f6qqhsrc2c12ta****",
      "TrafficType": "All"
    }
  },
  "PageSize": 20,
  "RequestId": "F7DDDC17-FA06-4AC2-8F35-59D2470FCFC1",
  "PageNumber": 1,
  "Success": true
}
```

Error code

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

21.4. ActiveFlowLog

Enables a flow log. After the flow log is enabled, it starts to capture traffic information of a specified resource.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ActiveFlowLog	The operation that you want to perform. Set the value to **ActiveFlowLog**.
FlowLogId	String	Yes	fl-m5evbtbptxxxxxxxxxxxx	The ID of the flow log.
RegionId	String	Yes	cn-qingdao	The region to which the flow log belongs. You can call the DescribeRegions operation to query region IDs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	F7DDDC17-FA06-4AC2-8F35-59D2470FCFC1	The ID of the request.
Success	String	111	

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=ActiveFlowLog
&RegionId=cn-qingdao
&FlowLogId=fl-m5evbtbptxxxxxxxxxxxx
&Common request parameter
```

Sample success responses

`XML` format

```
<ActiveFlowLog>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
</ActiveFlowLog>
```

`JSON` format

```
{
 "RequestId":"04F0F334-1335-436C-A1D7-6C044FExxxxx"
}
```

Error codes

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

21.5. DeactiveFlowLog

Deactivates a flow log to stop capturing the traffic of the specified resource.

Debug

Use OpenAPI Explorer to perform debug operations and generate SDK code examples.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DeactiveFlowLog	The name of this action. Value: **DeactiveFlowLog**.
FlowLogId	String	Yes	fl-m5evbtbptxxxxxxxxxxxx	The ID of the flow log.

Parameter	Type	Required?	Example value	Description
RegionId	String	Yes	cn-qingdao	The ID of the region of the flow log. To query the region ID, call DescribeRegions.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	F7DDDC17-FA06-4AC2-8F35-59D2470FCFC1	The ID of the request.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=DeactiveFlowLog
&RegionId=cn-qingdao
&FlowLogId=fl-m5evbtbptxxxxxxxxxxxx
&<CommonParameters>
```

Response example

`XML` format

```
<DeactiveFlowLog>
    <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
</DeactiveFlowLog>
```

`JSON` format

```
{
 "RequestId":"04F0F334-1335-436C-A1D7-6C044FExxxxx"
}
```

Errors

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

21.6. DeleteFlowLog

Deletes a flow log.

Debug

Use OpenAPI Explorer to perform debug operations and generate SDK code examples.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DeleteFlowLog	The name of this action. Value: **DeleteFlowLog**.
FlowLogId	String	Yes	fl-m5evbtbptxxxxxxxxxxxx	The ID of the flow log.
RegionId	String	Yes	cn-qingdao	The ID of the region to which the flow log belongs. To query the region ID, call DescribeRegions.

Response parameters

Parameter	Type	Example value	Description

Parameter	Type	Example value	Description
RequestId	String	F7DDDC17-FA06-4AC2-8F35-59D2470FCFC1	The ID of the request.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=DeleteFlowLog
&RegionId=cn-qingdao
&FlowLogId=fl-m5evbtbptxxxxxxxxxxxx
&<CommonParameters>
```

Response example

`XML` format

```
<DeleteFlowLog>
    <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
</DeleteFlowLog>
```

`JSON` format

```
{
 "RequestId":"04F0F334-1335-436C-A1D7-6C044FExxxxx"
}
```

Errors

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

22.Monitoring

23.High-availability virtual IP addresses

23.1. CreateHaVip

Creates a high-availability virtual IP address (HAVIP).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateHaVip	The operation that you want to perform. Set the value to **CreateHaVip**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where you want to query HAVIPs. You can call the DescribeRegions operation to query region IDs.
VSwitchId	String	Yes	vsw-asdfjlnaue4g****	The ID of the VSwitch to which the HAVIP belongs.
Name	String	No	test	The description of the HAVIP. The name must be 2 to 128 characters and can contain letters, digits, underscores (_), and hyphens (-). The name must start with a letter.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to guarantee the idempotence of the request. You can use the client to generate a value that is unique among different requests.**ClientToken** supports only ASCII characters. It can contain up to 64 ASCII characters.
IpAddress	String	No	192.xx.xx.10	The IP address of the HAVIP. The specified IP address must be an idle IP address that falls within the CIDR block of the VSwitch. If this parameter is not set, an idle IP address from the CIDR block of the VSwitch is randomly assigned to the HAVIP.
Description	String	No	This is my HaVip.	The description of the HAVIP. The description must be 2 to 256 characters in length. It must start with a letter but cannot start with `http://` or `https://`.

Response parameters

Parameter	Type	Example	Description
HaVipId	String	havip-2zeo05qre24nhrqpy****	The ID of the HAVIP.
IpAddress	String	192.xx.xx.10	The IP address of the HAVIP.

Parameter	Type	Example	Description
RequestId	String	C44F62BE-9CE7-4277-B117-69243F3988BF	The request ID.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=CreateHaVip
&RegionId=cn-hangzhou
&VSwitchId=vsw-asdfjlnaue4g
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateHaVipResponse>
    <RequestId>4B864C2B-8B72-4544-A461-9A022767E784</RequestId>
    <IpAddress>192.xx.xx.188</IpAddress>
    <HaVipId>havip-hp3kphox7iw0u9h1m****</HaVipId>
</CreateHaVipResponse>
```

`JSON` format

```
{
  "RequestId": "4B864C2B-8B72-4544-A461-9A022767E784",
  "IpAddress": "192.xx.xx.188",
  "HaVipId": "havip-hp3kphox7iw0u9h1m****"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	Specified value of "regionId" is not supported.	The error message returned when the specified Region ID does not exist. Check whether the service is available in this region.
404	InvalidVSwitchId.NotFound	The specified VSwitch does not exist in the specified region.	The error message returned because the VSwitch does not exist in the specified region.
400	InvalidDescription.Malformed	The specified Description is wrongly formed.	The error message returned because the specified description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
403	CountLimitExceed.HaVipInVpc	Specified Vpc exceeds the quota of max number of ha-vip count.	The error message returned because the number of HAVIPs in a VPC exceeds the quota.
403	QuotaExceeded.HaVip	Living HaVip quota exceeded.	The error message returned because the number of HAVIPs exceeds the quota.
400	InvalidIPAddress.OutOfRange	The specified IPAddress is out of VSwitch CIDR.	The error message returned because the specified IP address does not fall within the CIDR block of the VSwitch.
400	InvalidIPAddress.NotAvailable	The specified IPAddress is not available because it is a system reserved IPAddress.	The error message returned because the specified IP address is reserved by the system and cannot be used.

HttpCode	Error code	Error message	Description
400	InvalidIPAddress.AlreadyUsed	The specified IPAddress is already used by other resource.	The error message returned because the specified IP address is already used by another resource.

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

23.2. DescribeHaVips

Queries high-availability virtual IP addresses (HAVIPs) in a specified region.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeHaVips	The operation that you want to perform. Set the value to **DescribeHaVips**.
RegionId	String	Yes	cn-hangzhou	The ID of the region that you want to query. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. Default value: **1**.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: **50**. Default value: **10**.
Filter.N.Key	String	No	HaVipId	Specifies filter keys. You can specify at most five filter keys. Valid values of **N**: **1 to 5**. The following filter keys are available: • **VpcId**: virtual private cloud (VPC) ID • **VSwitchId**: vSwitch ID • **Status**: HAVIP status • **HaVipId**: HAVIP ID • **HaVipAddress**: HAVIP IP address You can specify multiple values for each filter key. The logical relation among multiple values is OR. If one value is matched, the filter key is matched. The logical relation among multiple filter keys is AND, which indicates that all filter keys must be matched.
Filter.N.Value.N	RepeatList	No	havip-bp19o63nequs01i8d****	Specifies the values of a filter key. Valid values of **N**: **1 to 5**.

Response parameters

Parameter	Type	Example	Description
HaVips	Array of HaVip		The details about the HAVIP.
HaVip			

Parameter	Type	Example	Description
AssociatedEipAddresses	List	121.12.XX.XX	The elastic IP address (EIP) associated with the HAVIP.
AssociatedInstanceType	String	EcsInstance	The type of the instance that is associated with the HAVIP.
AssociatedInstances	List	i-bp145q7glnuzdvzu21****	The Elastic Compute Service (ECS) instance that is associated with the HAVIP.
ChargeType	String	none	The parameter is invalid. No value is returned.
CreateTime	String	2021-07-03T14:25:26Z	The time when the HAVIP was created.
Description	String	My HaVip	The description of the HAVIP.
HaVipId	String	havip-bp149uyvut73dpld****	The ID of the HAVIP.
IpAddress	String	192.27.XX.XX	The private IP address of the HAVIP.
MasterInstanceId	String	i-bp145q7glnuzdvz****	The ID of the active instance that is associated with the HAVIP.
Name	String	test	The name of the HAVIP.
RegionId	String	cn-hangzhou	The ID of the region to which the HAVIP belongs.
Status	String	Available	The status of the HAVIP. Valid values: • **Creating**: The HAVIP is being created. • **Available**: The HAVIP is available. • **Deleting**: The HAVIP is being deleted.
VSwitchId	String	vsw-bp1pkt1fba8e824ez****	The ID of the vSwitch to which the HAVIP belongs.
VpcId	String	vpc-bp1kcm36tevkpms97****	The ID of the VPC to which the HAVIP belongs.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned on each page.
RequestId	String	33E480C5-B46F-4CA5-B6FD-D77C746E86AB	The ID of the request.
TotalCount	Integer	1	The number of returned entries.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeHaVips
&RegionId=cn-hangzhou
&Filter=HaVipId.havip-bp149uyvut73dplduo****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeHaVipsResponse>
 <TotalCount>1</TotalCount>
 <HaVips>
    <HaVip>
       <Status>Available</Status>
       <Description>My HaVip</Description>
       <VpcId>vpc-bp1kcm36tevkpms97****</VpcId>
       <MasterInstanceId>i-bp145q7glnuzdvz****</MasterInstanceId>
       <ChargeType>none</ChargeType>
       <CreateTime>2018-07-03T14:25:26Z</CreateTime>
       <VSwitchId>vsw-bp1pkt1fba8e824ez****</VSwitchId>
       <IpAddress>192.27.XX.XX</IpAddress>
       <RegionId>cn-hangzhou</RegionId>
       <HaVipId>havip-bp149uyvut73dpld****</HaVipId>
       <AssociatedInstanceType>EcsInstance</AssociatedInstanceType>
       <Name>test</Name>
       <AssociatedInstances>
          <associatedInstance>i-bp145q7glnuzdvzu21****</associatedInstance>
       </AssociatedInstances>
       <AssociatedEipAddresses>
          <associatedEipAddresse>121.12.XX.XX</associatedEipAddresse>
       </AssociatedEipAddresses>
    </HaVip>
 </HaVips>
 <PageSize>10</PageSize>
 <RequestId>33E480C5-B46F-4CA5-B6FD-D77C746E86AB</RequestId>
 <PageNumber>1</PageNumber>
</DescribeHaVipsResponse>
```

`JSON` format

```
{
  "DescribeHaVipsResponse": {
    "TotalCount": 1,
    "HaVips": {
      "HaVip": {
        "Status": "Available",
        "Description": "My HaVip",
        "VpcId": "vpc-bp1kcm36tevkpms97****",
        "MasterInstanceId": "i-bp145q7glnuzdvz****",
        "ChargeType": "none",
        "CreateTime": "2018-07-03T14:25:26Z",
        "VSwitchId": "vsw-bp1pkt1fba8e824ez****",
        "IpAddress": "192.27.XX.XX",
        "RegionId": "cn-hangzhou",
        "HaVipId": "havip-bp149uyvut73dpld****",
        "AssociatedInstanceType": "EcsInstance",
        "Name": "test",
        "AssociatedInstances": {
          "associatedInstance": "i-bp145q7glnuzdvzu21****"
        },
        "AssociatedEipAddresses": {
          "associatedEipAddresse": "121.12.XX.XX"
        }
      }
    },
    "PageSize": 10,
    "RequestId": "33E480C5-B46F-4CA5-B6FD-D77C746E86AB",
    "PageNumber": 1
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidFilterKey.ValueNotSupported	Specified filter key is not supported: Filter.X.key	The error message returned because Filter.X.key is not supported.

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

23.3. AssociateHaVip

Associates a high-availability virtual IP address (HAVIP) with an Elastic Compute Service (ECS) instance or an elastic network interface (ENI) in a virtual private cloud (VPC).

Description

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

- An HAVIP immediately takes effect after it is associated. You do not need to restart the ECS instance. However, you must associate the HAVIP with the ENI of the ECS instance.
- The HAVIP and ECS instance must belong to the same vSwitch.
- You can associate an HAVIP with at most two ECS instances.
- The ECS instance must be in the **Running** or **Stopped** state.
- The HAVIP must be in the **Available** or **InUse** state.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AssociateHaVip	The operation that you want to perform. Set the value to **AssociateHaVip**.
HaVipId	String	Yes	havip-2zeo05qre24nhrqpy****	The ID of the HAVIP.
InstanceId	String	Yes	i-faf344422ffsfad****	The ID of the ECS instance to be associated with the HAVIP.
RegionId	String	Yes	cn-shanghai	The ID of the region to which the HAVIP belongs. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe63****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` can contain only ASCII characters and cannot exceed 64 characters in length.
InstanceType	String	No	EcsInstance	The type of the instance to be associated with the HAVIP. Valid values: - **EcsInstance**: an ECS instance - **NetworkInterface**: an ENI. If you want to associate the HAVIP with an ENI, this parameter is required.

Response parameters

Parameter	Type	Example	Description
RequestId	String	C44F62BE-9CE7-4277-B117-69243F3988BF	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=AssociateHaVip
&HaVipId=havip-2zeo05qre24nhrqpy****
&InstanceId=i-faf344422ffsfad****
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AssociateHaVipResponse>
 <RequestId>C44F62BE-9CE7-4277-B117-69243F3988BF</RequestId>
</AssociateHaVipResponse>
```

`JSON` format

```
{
"RequestId": "C44F62BE-9CE7-4277-B117-69243F3988BF"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	OperationUnsupported.BindOnFreeNetworkInterface	The network interface must be attached to an ECS instance.	The error message returned because the ENI must be associated with the ECS instance.
400	OperationUnsupported.BindMultipleType	You cannot bind HaVip to multiple instance types.	The error message returned because you cannot associate the ECS instance and the ENI at the same time.
400	OperationUnsupported.BindOnMultipleVswitch	The bound instance and HaVip must be on the same vSwitch.	The error message returned because the instance and HAVIP that you want to associate must belong to the same vSwitch.
400	CountLimitExceed.HaVipOnInstance	The amount of HaVip associated with the specified Instance reach its limits.	The error message returned because the number of HAVIPs has reached the upper limit.
400	CountLimitExceeded.HaVipOnECSInstance	The amount of Instance associated with the specified HaVip reach its limits.	The error message returned because the number of HAVIPs has reached the upper limit.
400	InvalidNetworkInterfaceId.NotFound	The network interface is not found.	The error message returned because the ENI does not exist.
400	OperationFailed.QueryNetworkInterfaceInfo	Failed to query network interface information.	The error message returned because the system failed to query ENI information.
400	IllegalParam.InstanceType	The specified instance type is invalid. Only ECS instances and network interface are allowed.	The error message returned because the type of the associated instance does not support this operation.
400	OperationUnsupported.BindOnSameEcs	You cannot bind two network interfaces on the same ECS instance.	The error message returned because you are not allowed to associate two ENIs of the same ECS instance.

HttpCode	Error code	Error message	Description
400	OperationUnsupported.HavipBindType	You cannot bind HAVIP to network interface in the specified region.	The error message returned because you are not allowed to associate ENIs in the specified region.
404	InvalidHaVipId.NotFound	The specified HaVip does not exist in the specified region.	The error message returned because the specified HAVIP does not exist in the specified region. Check whether the region ID is valid.
404	InvalidInstanceId.NotFound	The specified Instance does not exist in the specified region.	The error message returned because the instance does not exist in the specified region.

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

23.4. UnassociateHaVip

Dissociates a high-availability virtual IP address (HAVIP) from an Elastic Compute Service (ECS) instance in a virtual private cloud (VPC).

When you call this operation, note that:

- The ECS instance must be in the Running or Stopped state.
- The HAVIP must be in the Available or InUse state.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UnassociateHaVip	The operation that you want to perform. Set the value to **UnassociateHaVip**.
HaVipId	String	Yes	havip-2zeo05qre24nhrqpy****	The ID of the HAVIP that you want to disassociate from the ECS instance.
InstanceId	String	Yes	i-faf344422ffsfad****	The ID of the ECS instance from which you want to disassociate the HAVIP.
RegionId	String	Yes	cn-shanghai	The region ID of the HAVIP. You can call the DescribeRegions operation to query region IDs.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to guarantee the idempotence of the request. You can use the client to generate a value that is unique among different requests. **ClientToken** supports only ASCII characters. It can contain up to 64 ASCII characters.

Parameter	Type	Required	Example	Description
Force	String	No	True	Specifies whether to forcibly disassociate the HAVIP. • **True**: yes. • **False** (default value): no. **Note** If you set this parameter to **False**, you cannot disassociate the HAVIP from a primary ECS instance.

Response parameters

Parameter	Type	Example	Description
RequestId	String	C44F62BE-9CE7-4277-B117-69243F3988BF	The request ID.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=UnassociateHaVip
&HaVipId=havip-2zeo05qre24nhrqpy****
&InstanceId=i-faf344422ffsfad****
&RegionId=cn-shanghai
&<Common request parameters>
```

Sample success responses

`XML` format

```
<UnassociateHaVipResponse>
 <RequestId>C44F62BE-9CE7-4277-B117-69243F3988BF</RequestId>
</UnassociateHaVipResponse>
```

`JSON` format

```
{
"RequestId": "C44F62BE-9CE7-4277-B117-69243F3988BF"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidHaVipId.NotFound	The specified HaVip does not exist in the specified region.	The error message returned because the specified HAVIP does not exist in the specified region. Check whether the region is correct.
404	InvalidInstanceId.NotFound	The specified Instance does not exist in the specified region.	The error message returned because the instance does not exist in the specified region.
400	IncorrectHaVipStatus	HaVip can be operated by this action only when it's status is InUse.	The error message returned because the operation can be performed only when the HAVIP is in the InUse state.
400	IncorrectInstanceStatus	ECS instance can be operated by this action only when it's status is Running or Stopped.	The error message returned because the operation can be performed only when the ECS instance is in the Running or Stopped state.

HttpCode	Error code	Error message	Description
400	ResourceNotAssociated	The HaVip and ECS instance are not associated.	The error message returned because the HAVIP is not associated with the ECS instance.
400	Forbidden.UnassociateMaster	Unassociating a master instance is not allowed unless the parameter Force is True.	The error message returned because the Force parameter is set to False.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because unknown errors have occurred.

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

23.5. ModifyHaVipAttribute

Modifies the name and description of a high-availability virtual IP address (HAVIP).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyHaVipAttribute	The operation that you want to perform. Set the value to **ModifyHaVipAttribute**.
HaVipId	String	Yes	havip-2zeo05qre24nhrqp****	The ID of the HAVIP.
RegionId	String	Yes	cn-shanghai	The region ID of the HAVIP. You can call the DescribeRegions operation to query region IDs.
ClientToken	String	No	02fb3da4-130e-11e9-8e44-0016e0****	The client token that is used to guarantee the idempotence of the request. You can use the client to generate a value that is unique among different requests.**ClientToken** supports only ASCII characters. It can contain up to 64 ASCII characters.
Description	String	No	This is my HaVip.	The description of the HAVIP. The description must be 2 to 256 characters in length. It must start with a letter but cannot start with `http://` or `https://`.
Name	String	No	test	The description of the HAVIP. The name must be 2 to 128 characters and can contain digits, underscores (_), and hyphens (-). The name must start with a letter.

Response parameters

Parameter	Type	Example	Description
RequestId	String	C44F62BE-9CE7-4277-B117-69243F3988BF	The request ID.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=ModifyHaVipAttribute
&HaVipId=havip-2zeo05qre24nhrqp****
&RegionId=cn-shanghai
&Common request parameters
```

Sample success responses

`XML` format

```
<ModifyHaVipAttributeResponse>
 <RequestId>C44F62BE-9CE7-4277-B117-69243F3988BF</RequestId>
</ModifyHaVipAttributeResponse>
```

`JSON` format

```
{
"RequestId": "C44F62BE-9CE7-4277-B117-69243F3988BF"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidHaVipId.NotFound	The specified HaVip does not exist in the specified region.	The error message returned because the HAVIP does not exist in the specified region. Check whether the specified region is correct.
400	IncorrectStatus	HaVip can be deleted only when it's status is Available or InUse.	The error message returned because the HAVIP failed to be deleted because the HAVIP is unavailable.
400	InvalidDescription.Malformed	The specified Description is wrongly formed.	The error message returned because the specified description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.

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

23.6. DeleteHaVip

Deletes a high-availability virtual IP address (HAVIP).

When you call this operation, note that:

- You can only delete an HAVIP that is in the Available state.
- Make sure that no route is destined for the HAVIP that you want to delete.
- Make sure that the HAVIP you want to delete is not associated with an elastic IP address (EIP).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteHaVip	The operation that you want to perform. Set the value to**DeleteHaVip**.
HaVipId	String	Yes	havip-2zeo05qre24nhrqpy****	The ID of the HAVIP that you want to delete.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-shanghai	The region ID of the HAVIP. You can call the DescribeRegions operation to query region IDs.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to guarantee the idempotence of the request. You can use the client to generate a value that is unique among different requests.**ClientToken**supports only ASCII characters. It can contain up to 64 ASCII characters.

Response parameters

Parameter	Type	Example	Description
RequestId	String	C44F62BE-9CE7-4277-B117-69243F3988BF	The request ID.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DeleteHaVip
&HaVipId=havip-2zeo05qre24nhrqpy****
&RegionId=cn-shanghai
&Common request parameters
```

Sample success responses

`XML` format

```
<DeleteHaVipResponse>
 <RequestId>C44F62BE-9CE7-4277-B117-69243F3988BF</RequestId>
</DeleteHaVipResponse>
```

`JSON` format

```
{
"RequestId": "C44F62BE-9CE7-4277-B117-69243F3988BF"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidHaVipId.NotFound	The specified HaVip does not exist in the specified region.	The error message returned because the HAVIP does not exist in the specified region. Check whether the region is correct.
400	IncorrectStatus	HaVip can be deleted only when it is status is Available.	The error message returned because the HAVIP cannot be deleted. The HAVIP must be in the Available state.
400	DependencyViolation.HaVipReferedByRouteEntry	HaVip cannot be deleted when it is refered by a route table entry as next hop.	The error message returned because the HAVIP functions as the next hop of a route entry and cannot be deleted. You must delete the route entry before you can delete the HAVIP.
400	DependencyViolation.HaVipAssociatedWithEIP	HaVip cannot be deleted when it is associated with EIP.	The error message returned because the HAVIP is associated with an elastic IP address (EIP) and cannot be deleted.

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

24.Network ACL

24.1. CreateNetworkAcl

Creates a network access control list (ACL).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateNetworkAcl	The operation that you want to perform. Set the value to **CreateNetworkAcl**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where you want to create the network ACL. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	Yes	vpc-dsfd34356vdf****	The ID of the virtual private cloud (VPC) to which you want to apply the network ACL. VPCs that contain one of the following types of instance do not support network ACLs: ecs.c1, ecs.c2, ecs.c4, ecs.c5, ecs.ce4, ecs.cm4, ecs.d1, ecs.e3, ecs.e4, ecs.ga1, ecs.gn4, ecs.gn5, ecs.i1, ecs.m1, ecs.m2, ecs.mn4, ecs.n1, ecs.n2, ecs.n4, ecs.s1, ecs.s2, ecs.s3, ecs.se1, ecs.sn1, ecs.sn2, ecs.t1, and ecs.xn4. To create a network ACL for a VPC that contains one of the preceding types of instance, you must upgrade or release the instance. • For more information, see Upgrade the instance types of subscription instances and Change the instance type of a pay-as-you-go instance. • For more information about how to release an instance, see Release an instance. **Note** If your VPC contains one of the preceding types of instance and you have already created a network ACL, you must upgrade the type of instance to ensure that the network ACL can take effect.
NetworkAclName	String	No	acl-1	The name of the network ACL. The name must be 2 to 128 characters in length, and can contain letters, digits, underscores (_), and hyphens (-). The name must start with a letter and cannot start with `http://` or `https://`.
Description	String	No	This is my NetworkAcl.	The description of the network ACL. The description must be 2 to 256 characters in length. It must start with a letter and cannot start with `http://` or `https://`.

Parameter	Type	Required	Example	Description
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
NetworkAclAttribute	Struct		The attributes of the network ACL.
CreationTime	String	2019-04-25 11:33:27	The time when the network ACL was created.
Description	String	This is my NetworkAcl.	The description of the network ACL.
EgressAclEntries	Array of EgressAclEntry		The outbound rules.
EgressAclEntry			
Description	String	This is EgressAclEntries.	The description of the outbound rule.
DestinationCidrIp	String	10.0.0.0/24	The destination CIDR block.
NetworkAclEntryId	String	nae-a2d447uw4tillxsdc****	The ID of the outbound rule.
NetworkAclEntryName	String	acl-2	The name of the outbound rule.
Policy	String	accept	The action to be performed on network traffic that matches the rule. Valid values: • **accept**: allows the network traffic. • **drop**: blocks the network traffic.
Port	String	-1/-1	The range of destination ports.
Protocol	String	all	The transport layer protocols. Valid values: • **icmp**: Internet Control Message Protocol (ICMP) • **gre**: Generic Routing Encapsulation (GRE) • **tcp**: TCP • **udp**: UDP • **all**: all protocols
IngressAclEntries	Array of IngressAclEntry		The inbound rules.
IngressAclEntry			
Description	String	This is IngressAclEntries.	The description of the inbound rule.
NetworkAclEntryId	String	nae-a2dk86arlydmexscd****	The ID of the inbound rule.

Parameter	Type	Example	Description
NetworkAclEntryName	String	acl-3	The name of the inbound rule.
Policy	String	accept	The action to be performed on network traffic that matches the rule. Valid values: • **accept**: allows the network traffic. • **drop**: blocks the network traffic.
Port	String	-1/-1	The range of source ports.
Protocol	String	all	The transport layer protocols. Valid values: • **icmp**: ICMP • **gre**: GRE • **tcp**: TCP • **udp**: UDP • **all**: all protocols
SourceCidrIp	String	10.0.0.0/24	The source CIDR block.
NetworkAclId	String	nacl-a2do9e413e0spdefr****	The ID of the network ACL.
NetworkAclName	String	acl-1	The name of the network ACL.
RegionId	String	cn-hangzhou	The region where the network ACL is deployed.
Resources	Array of Resource		The resources that are associated with the network ACL.
Resource			
ResourceId	String	vsw-bp1de348lntdwgthy****	The ID of the associated resource.
ResourceType	String	VSwitch	The type of the associated resource.
Status	String	BINDED	The status of the associated resource. Valid values: • **BINDED**: The resource is associated with the network ACL. • **BINDING**: The resource is being associated with the network ACL. • **UNBINDING**: The resource is disassociated from the network ACL.
Status	String	Modifying	The status of the network ACL. Valid values: • **Available**: The network ACL is available for use. • **Modifying**: The network ACL is being configured.
VpcId	String	vpc-a2d33rfpl72k5xsscd****	The ID of the VPC to which the network ACL applies.
NetworkAclId	String	nacl-a2do9e413e0spzasx****	The ID of the network ACL.
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=CreateNetworkAcl
&RegionId=cn-hangzhou
&VpcId=vpc-dsfd34356vdf****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateNetworkAclResponse>
 <NetworkAclAttribute>
    <CreationTime>2019-04-25 11:33:27</CreationTime>
    <EgressAclEntries>
       <EgressAclEntry>
          <Port>-1/-1</Port>
          <Policy>accept</Policy>
          <NetworkAclEntryId>nae-a2d447uw4tillcdvf****</NetworkAclEntryId>
          <DestinationCidrIp>0.0.0.0/0</DestinationCidrIp>
          <Protocol>all</Protocol>
       </EgressAclEntry>
    </EgressAclEntries>
    <Status>Available</Status>
    <RegionId>cn-hangzhou</RegionId>
    <IngressAclEntries>
       <IngressAclEntry>
          <SourceCidrIp>0.0.0.0/0</SourceCidrIp>
          <Port>-1/-1</Port>
          <Policy>accept</Policy>
          <NetworkAclEntryId>nae-a2dk86arlydmecdvf****</NetworkAclEntryId>
          <Protocol>all</Protocol>
       </IngressAclEntry>
    </IngressAclEntries>
    <NetworkAclId>nacl-a2do9e413e0spcdvf****</NetworkAclId>
    <VpcId>vpc-a2d33rfpl72k5cdvf****</VpcId>
    <Resources>
  </Resources>
 </NetworkAclAttribute>
 <RequestId>AEAC0891-1E52-4A46-A29C-175FB6356FE8</RequestId>
 <NetworkAclId>nacl-a2do9e413e0spcdvf****</NetworkAclId>
</CreateNetworkAclResponse>
```

`JSON` format

```
{
  "NetworkAclAttribute":  {
    "CreationTime": "2019-04-25 11:33:27",
    "EgressAclEntries": {"EgressAclEntry": [    {
      "Port": "-1/-1",
      "Policy": "accept",
      "NetworkAclEntryId": "nae-a2d447uw4tillcdvf****",
      "DestinationCidrIp": "0.0.0.0/0",
      "Protocol": "all"
    }]},
    "Status": "Available",
    "RegionId": "cn-hangzhou",
    "IngressAclEntries": {"IngressAclEntry": [    {
      "SourceCidrIp": "0.0.0.0/0",
      "Port": "-1/-1",
      "Policy": "accept",
      "NetworkAclEntryId": "nae-a2dk86arlydmecdvf****",
      "Protocol": "all"
    }]},
    "NetworkAclId": "nacl-a2do9e413e0spcdvf****",
    "VpcId": "vpc-a2d33rfpl72k5cdvf****",
    "Resources": {"Resource": []}
  },
  "RequestId": "AEAC0891-1E52-4A46-A29C-175FB6356FE8",
  "NetworkAclId": "nacl-a2do9e413e0spcdvf****"
}
```


Error codes

HttpCode	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because unknown errors have occurred.

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

24.2. AssociateNetworkAcl

Associates a network ACL with a VSwitch.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	AssociateNetworkAcl	The name of this action. Valid value: **AssociateNetworkAcl**.
NetworkAclId	String	Yes	nacl-a2do9e413e0spxscd****	The ID of the network ACL.
RegionId	String	Yes	cn-hangzhou	The region of the network ACL. To query the region ID, call DescribeRegions.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	Ensures the idempotence of the request. 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.

Parameter	Type	Required?	Example value	Description
Resource.N.ResourceId	String	No	vsw-bp1de348lntdwbgnh****	The ID of the associated resource.
Resource.N.ResourceType	String	No	VSwitch	The type of the associated resource. Valid value: **VSwitch**.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	4CF20CC7-D1FC-425B-A15B-DF7C8E2131A7	The ID of the request.

Examples

Request example

```
http(s)://[Endpoint]/? Action=AssociateNetworkAcl
&NetworkAclId=nacl-a2do9e413e0spxscd****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Response example

`XML` format

```
<AssociateNetworkAclResponse>
   <RequestId>4CF20CC7-D1FC-425B-A15B-DF7C8E2131A7</RequestId>
</AssociateNetworkAclResponse>
```

`JSON` format

```
{
 "RequestId":"4CF20CC7-D1FC-425B-A15B-DF7C8E2131A7"
}
```

Errors

HTTP status code	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The request failed to be processed due to unknown errors.

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

24.3. ModifyNetworkAclAttributes

Modifies the attributes of a network access control list (ACL).

Debugging

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

Request parameters

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

Parameter	Type	Required	Example	Description
NetworkAclId	String	Yes	acl-bp1lhl0taikrxxxxxxxx	The description of the network ACL.
RegionId	String	Yes	cn-hangzhou	The region where the network ACL is deployed. You can call the DescribeRegions operation to query the region IDs.
Description	String	No	This is my NetworkAcl.	The description of the network ACL. The description must be 2 to 256 characters in length. The description must start with a letter but cannot start with `http://` or `https://` .
NetworkAclName	String	No	acl-1	The name of the network ACL. The name must be 2 to 128 characters in length and can contain digits, underscores (_), and hyphens (-). The name must start with a letter but cannot start with `http://` or `https://` .

Response parameters

Parameter	Type	Example	Description
RequestId	String	8F76C3E4-B39F-465D-B8B3-50BAF03CA833	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=ModifyNetworkAclAttributes
&NetworkAclId=acl-bp1lhl0taikrxxxxxxxx
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ModifyNetworkAclAttributesResponse>
  <RequestId>8F76C3E4-B39F-465D-B8B3-50BAF03CA833</RequestId>
</ModifyNetworkAclAttributesResponse>
```

`JSON` format

```
{
 "RequestId":"8F76C3E4-B39F-465D-B8B3-50BAF03CA833"
}
```

Error codes

HttpCode	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because unknown errors have occurred.

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

24.4. DescribeNetworkAcls

Queries network access control lists (ACLs).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeNetworkAcls	The operation that you want to perform. Set the value to **DescribeNetworkAcls**.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the network ACL is deployed. You can call the DescribeRegions operation to query the most recent region list.
NetworkAclId	String	No	nacl-bp1lhl0taikrbgnh****	The ID of the network ACL.
NetworkAclName	String	No	acl-1	The name of the network ACL. The name must be 2 to 128 characters in length, and can contain letters, digits, underscores (_), and hyphens (-). The name must start with a letter and cannot start with `http://` or `https://`.
VpcId	String	No	vpc-123456	The ID of the VPC to which the network ACL applies.
ResourceType	String	No	VSwitch	The type of the associated instance. This parameter is valid only if `ResourceType` and `ResourceId` are both set.
ResourceId	String	No	vsw-bp1de348lntdwnhbg*****	The ID of the associated instance. This parameter is valid only if `ResourceType` and `ResourceId` are both set.
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**.
ClientToken	String	No	123	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` can contain only ASCII characters. It cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
NetworkAcls	Array of NetworkAcl		The details of the network ACL.

Parameter	Type	Example	Description
NetworkAcl			
CreationTime	String	2019-04-25 11:44:17	The time when the network ACL was created.
Description	String	This is my NetworkAcl.	The description of the network ACL.
EgressAclEntries	Array of EgressAclEntry		The outbound rules.
EgressAclEntry			
Description	String	This is EgressAclEntries.	The description of the outbound rule.
DestinationCidrIp	String	10.0.0.0/24	The destination CIDR block.
NetworkAclEntryId	String	nae-a2d447uw4tillfvgb****	The ID of the outbound rule.
NetworkAclEntryName	String	acl-2	The name of the outbound rule.
Policy	String	accept	The action to be performed on network traffic that matches the rule. Valid values: • **accept**: allows the network traffic. • **drop**: blocks the network traffic.
Port	String	-1/-1	The range of destination ports.
Protocol	String	all	The transport layer protocols. Valid values: • **icmp**: Internet Control Message Protocol (ICMP) • **gre**: Generic Routing Encapsulation (GRE) • **tcp**: TCP • **udp**: UDP • **all**: All protocols are supported.
IngressAclEntries	Array of IngressAclEntry		The inbound rules.
IngressAclEntry			
Description	String	This is IngressAclEntries.	The description of the inbound rule.
NetworkAclEntryId	String	nae-a2dk86arlydmezasw****	The ID of the inbound rule.
NetworkAclEntryName	String	acl-3	The name of the inbound rule.
Policy	String	accept	The action to be performed on network traffic that matches the rule. Valid values: • **accept**: allows the network traffic. • **drop**: blocks the network traffic.
Port	String	-1/-1	The range of source ports.

Parameter	Type	Example	Description
Protocol	String	all	The transport layer protocols. Valid values: • **icmp**: ICMP • **gre**: GRE • **tcp**: TCP • **udp**: UDP • **all**: All protocols are supported.
SourceCidrIp	String	10.0.0.0/24	The source CIDR block.
NetworkAclId	String	nacl-a2do9e413e0spxscd****	The ID of the network ACL.
NetworkAclName	String	acl-8	The name of the network ACL.
OwnerId	Long	12345678	The ID of the Alibaba Cloud account to which the network ACL belongs.
RegionId	String	cn-hangzhou	The region where the network ACL is deployed.
Resources	Array of Resource		The resources that are associated with the network ACL.
Resource			
ResourceId	String	vsw-bp1de348lntdwcdf****	The ID of the associated resource.
ResourceType	String	VSwitch	The type of the associated resource.
Status	String	BINDED	The status of the associated resource. Valid values: • **BINDED**: The resource is associated with the network ACL. • **BINDING**: The resource is being associated with the network ACL. • **UNBINDING**: The resource is disassociated from the network ACL.
Status	String	Available	The status of the network ACL. Valid values: • **Available**: The network ACL is available for use. • **Modifying**: The network ACL is being configured.
VpcId	String	vpc-a2d33rfpl72k5defr****	The ID of the associated VPC.
PageNumber	String	1	The page number of the returned page.
PageSize	String	10	The number of entries on the current page.
RequestId	String	F7DDDC17-FA06-4AC2-8F35-59D2470FCFC1	The ID of the request.
TotalCount	String	2	The total number of entries returned.

Examples

Sample requests

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

Sample success responses

XML format

```
<DescribeNetworkAclsResponse>
 <TotalCount>2</TotalCount>
 <NetworkAcls>
    <NetworkAcl>
       <Status>Available</Status>
       <Description>This is my NetworkAcl.</Description>
       <OwnerId>12345678</OwnerId>
       <VpcId>vpc-a2d33rfpl72k5defr****</VpcId>
       <NetworkAclId>nacl-a2do9e413e0spxscd****</NetworkAclId>
       <CreationTime>2019-04-25 11:44:17</CreationTime>
       <NetworkAclName>acl-8</NetworkAclName>
       <RegionId>cn-hangzhou</RegionId>
       <IngressAclEntries>
          <IngressAclEntry>
             <Policy>accept</Policy>
             <Description>This is IngressAclEntries. </Description>
             <Port>-1/-1 </Port>
             <SourceCidrIp>10.0.0.0/24 </SourceCidrIp>
             <NetworkAclEntryName>acl-3 </NetworkAclEntryName>
             <Protocol>all</Protocol>
             <NetworkAclEntryId>nae-a2dk86arlydmezasw****</NetworkAclEntryId>
          </IngressAclEntry>
       </IngressAclEntries>
       <EgressAclEntries>
          <EgressAclEntry>
             <Policy>accept</Policy>
             <Description>This is EgressAclEntries. </Description>
             <DestinationCidrIp>10.0.0.0/24 </DestinationCidrIp>
             <Port>-1/-1 </Port>
             <NetworkAclEntryName>acl-2 </NetworkAclEntryName>
             <Protocol>all</Protocol>
             <NetworkAclEntryId>nae-a2d447uw4tillfvgb****</NetworkAclEntryId>
          </EgressAclEntry>
       </EgressAclEntries>
       <Resources>
          <Resource>
             <Status>BINDED</Status>
             <ResourceId>vsw-bp1de348lntdwcdf****</ResourceId>
             <ResourceType>VSwitch</ResourceType>
          </Resource>
       </Resources>
    </NetworkAcl>
 </NetworkAcls>
 <PageSize>10</PageSize>
 <RequestId>F7DDDC17-FA06-4AC2-8F35-59D2470FCFC1</RequestId>
 <PageNumber>1</PageNumber>
</DescribeNetworkAclsResponse>
```

JSON format


```
{"TotalCount":"2","NetworkAcls":{"NetworkAcl":[{"Status":"Available","Description":"This is my NetworkAcl.","OwnerId":"12345678","VpcId":"vpc-a2d33rfpl72k5defr****","NetworkAclId":"nacl-a2do9e413e0spxscd****","CreationTime":"2019-04-25 11:44:17","NetworkAclName":"acl-8","RegionId":"cn-hangzhou","IngressAclEntries":{"IngressAclEntry":[{"Policy":"accept","Description":"This is IngressAclEntries.\t","Port":"-1/-1\t","SourceCidrIp":"10.0.0.0/24\t","NetworkAclEntryName":"acl-3\t","Protocol":"all","NetworkAclEntryId":"nae-a2dk86arlydmezasw****"}]},"EgressAclEntries":{"EgressAclEntry":[{"Policy":"accept","Description":"This is EgressAclEntries.\t","DestinationCidrIp":"10.0.0.0/24\t","Port":"-1/-1\t","NetworkAclEntryName":"acl-2\t","Protocol":"all","NetworkAclEntryId":"nae-a2d447uw4tillfvgb****"}]},"Resources":{"Resource":[{"Status":"BINDED","ResourceId":"vsw-bp1de348lntdwcdf****","ResourceType":"VSwitch"}]}}]},"PageSize":"10","RequestId":"F7DDDC17-FA06-4AC2-8F35-59D2470FCFC1","PageNumber":"1"}
```

Error codes

HttpCode	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because unknown errors have occurred.

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

24.5. UpdateNetworkAclEntries

Updates one or more rules of a network ACL.

Make the API call

You can use OpenAPI Explorer to make API calls, search for API calls, perform debugging, and generate SDK example code.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	UpdateNetworkAclEntries	The name of this action. Valid value: **UpdateNetworkAclEntries**.
NetworkAclId	String	Yes	nacl-bp1lhl0taikrzxsc****	The ID of the network ACL.
RegionId	String	Yes	cn-hangzhou	The region of the network ACL. To query the region ID, call DescribeRegions.
IngressAclEntries.N.NetworkAclEntryName	String	No	acl-3	The name of the inbound rule entry.
IngressAclEntries.N.NetworkAclEntryId	String	No	nae-2zepn32de59j8m4****	The ID of the inbound rule entry.
IngressAclEntries.N.Policy	String	No	accept	The authorization policy of the rule. Values: • **accept**: Allow the specified traffic. • **drop**: Deny the specified traffic.
IngressAclEntries.N.Protocol	String	No	all	The transport layer protocol. Valid values: • **ICMP** • **GRE** • **TCP** • **UDP** • **all**: All protocols are supported.
IngressAclEntries.N.SourceCidrIp	String	No	10.0.0.0/24	The source IP address range.
IngressAclEntries.N.Port	String	No	-1/-1	The source port range.
IngressAclEntries.N.EntryType	String	No	custom	The rule type. Values: • **custom** (default): Custom rule. • **system**: System rule.
IngressAclEntries.N.Description	String	No	This is IngressAclEntries.	The description of the inbound rule.
EgressAclEntries.N.NetworkAclEntryName	String	No	acl-2	The name of the outbound rule.

Parameter	Type	Required?	Example value	Description
EgressAclEntries.N.NetworkAclEntryId	String	No	nae-2zecs97e0brcge46****	The ID of the outbound rule entry.
EgressAclEntries.N.Policy	String	No	accept	The authorization policy of the rule. Values: • **accept**: Allow the specified traffic. • **drop**: Deny the specified traffic.
EgressAclEntries.N.Protocol	String	No	all	The transport layer protocol. Valid values: • **ICMP** • **GRE** • **TCP** • **UDP** • **all**: All protocols are supported.
EgressAclEntries.N.DestinationCidrIp	String	No	10.0.0.0/24	The destination IP address range.
EgressAclEntries.N.Port	String	No	-1/-1	The destination port range.
EgressAclEntries.N.EntryType	String	No	custom	The rule type. Valid values: • **custom** (default): Custom rule. • **system**: System rule.
EgressAclEntries.N.Description	String	No	This is EgressAclEntries.	The description of the outbound rule.
UpdateIngressAclEntries	Boolean	No	false	Indicates whether to update the inbound rule. Valid values: • **true**: Update. • **false** (default): Do not update.
UpdateEgressAclEntries	Boolean	No	false	Indicates whether to update the outbound rule. Valid values: • **true**: Update. • **false** (default): Do not update.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that guarantees the idempotence of the request. The value of this parameter is generated by the client and is unique among different requests. Only ASCII characters are allowed. It can contain a maximum of 64 ASCII characters.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	1170A5A0-E760-4331-9133-A7D38D973215	The ID of the request.

Examples

Request example

```
http(s)://vpc.aliyuncs.com/? Action=UpdateNetworkAclEntries
&NetworkAclId=nacl-bp1lhl0taikrzxsc****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Response example

`XML` format

```
<UpdateNetworkAclEntriesResponse>
  <RequestId>1170A5A0-E760-4331-9133-A7D38D973215</RequestId>
</UpdateNetworkAclEntriesResponse>
```

`JSON` format

```
{
  "RequestId": "1170A5A0-E760-4331-9133-A7D38D973215"
}
```

Errors

HTTP status code	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The request failed to be processed due to unknown errors.

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

24.6. DescribeNetworkAclAttributes

Queries details about a network access control list (ACL).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeNetworkAclAttributes	The operation that you want to perform. Set the value to **DescribeNetworkAclAttributes**.
NetworkAclId	String	Yes	nacl-a2do9e413e0spzasx****	The ID of the network ACL.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the network ACL belongs. You can call the DescribeRegions operation to query the region IDs.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. **ClientToken** can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
NetworkAclAttribute	Struct		The details about the network ACL.
CreationTime	String	2020-04-25 11:33:27	The time when the network ACL was created.
Description	String	This is my NetworkAcl.	The description of the network ACL.
EgressAclEntries	Array of EgressAclEntry		The information about outbound rules of the network ACL.
EgressAclEntry			
Description	String	This is EgressAclEntries.	The description of the outbound rule.
DestinationCidrIp	String	10.0.0.0/24	The destination CIDR block.
NetworkAclEntryId	String	nae-a2d447uw4tillxdcv****	The ID of the outbound rule.
NetworkAclEntryName	String	acl-2	The name of the outbound rule.
Policy	String	accept	The action to be performed on network traffic that matches the rule. Valid values: • **accept**: allows the network traffic. • **drop**: blocks the network traffic.
Port	String	-1/-1	The destination ports.
Protocol	String	all	The transport layer protocols. Valid values: • **icmp**: ICMP • **gre**: GRE • **tcp**: TCP • **udp**: UDP • **all**: All protocols are supported.
IngressAclEntries	Array of IngressAclEntry		The information about inbound rules of the network ACL.
IngressAclEntry			
Description	String	This is IngressAclEntries.	The description of the inbound rule.
NetworkAclEntryId	String	nae-a2dk86arlydmevfbg****	The ID of the inbound rule.
NetworkAclEntryName	String	acl-3	The name of the inbound rule.
Policy	String	accept	The action to be performed on network traffic that matches the rule. Valid values: • **accept**: allows the network traffic. • **drop**: blocks the network traffic.
Port	String	-1/-1	The source ports.

Parameter	Type	Example	Description
Protocol	String	all	The transport layer protocols. Valid values: • **icmp**: ICMP • **gre**: GRE • **tcp**: TCP • **udp**: UDP • **all**: All protocols are supported.
SourceCidrIp	String	10.0.0.0/24	The CIDR block of the source address.
NetworkAclId	String	nacl-a2do9e413e0spnhmj****	The ID of the network ACL.
NetworkAclName	String	acl-1	The name of the network ACL.
OwnerId	Long	12345678	The ID of the Alibaba Cloud account to which the network ACL belongs.
RegionId	String	cn-hangzhou	The ID of the region to which the network ACL belongs.
Resources	Array of Resource		The resources that are associated with the network ACL.
Resource			
ResourceId	String	vsw-bp1de348lntdwxscd****	The ID of the associated resource.
ResourceType	String	VSwitch	The type of the associated resource.
Status	String	BINDED	The status of the associated resource. Valid values: • **BINDED**: The resource is associated with the network ACL. • **BINDING**: The resource is being associated with the network ACL. • **UNBINDING**: The resource is disassociated from the network ACL.
Status	String	Available	The status of the associated resource. Valid values: • **Available**: The resource is available for use. • **Modifying**: The resource is being configured.
VpcId	String	vpc-a2d33rfpl72k5defr****	The ID of the virtual private cloud (VPC) to which the network ACL applies.
RequestId	String	F5905F9C-0161-4E72-9CB1-1F3F3CF6268A	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeNetworkAclAttributes
&NetworkAclId=nacl-a2do9e413e0spzasx****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeNetworkAclAttributesResponse>
 <RequestId>F5905F9C-0161-4E72-9CB1-1F3F3CF6268A</RequestId>
 <NetworkAclAttribute>
    <Status>Available</Status>
    <Description>This is my NetworkAcl.</Description>
    <OwnerId>12345678</OwnerId>
    <VpcId>vpc-a2d33rfpl72k5defr****</VpcId>
    <NetworkAclId>nacl-a2do9e413e0spnhmj****</NetworkAclId>
    <CreationTime>2019-04-25 11:33:27</CreationTime>
    <NetworkAclName>acl-1</NetworkAclName>
    <RegionId>cn-hangzhou</RegionId>
    <IngressAclEntries>
       <IngressAclEntry>
          <Policy>accept</Policy>
          <Description>This is IngressAclEntries.</Description>
          <Port>-1/-1</Port>
          <SourceCidrIp>10.0.0.0/24</SourceCidrIp>
          <NetworkAclEntryName>acl-3</NetworkAclEntryName>
          <Protocol>all</Protocol>
          <NetworkAclEntryId>nae-a2dk86arlydmevfbg****</NetworkAclEntryId>
       </IngressAclEntry>
    </IngressAclEntries>
    <EgressAclEntries>
       <EgressAclEntry>
          <Policy>accept</Policy>
          <Description>This is EgressAclEntries.</Description>
          <DestinationCidrIp>10.0.0.0/24</DestinationCidrIp>
          <Port>-1/-1</Port>
          <NetworkAclEntryName>acl-2</NetworkAclEntryName>
          <Protocol>all</Protocol>
          <NetworkAclEntryId>nae-a2d447uw4tillxdcv****</NetworkAclEntryId>
       </EgressAclEntry>
    </EgressAclEntries>
    <Resources>
       <Resource>
          <Status>BINDED</Status>
          <ResourceId>vsw-bp1de348lntdwxscd****</ResourceId>
          <ResourceType>VSwitch</ResourceType>
       </Resource>
    </Resources>
 </NetworkAclAttribute>
</DescribeNetworkAclAttributesResponse>
```

`JSON` format

```
{
  "RequestId": "F5905F9C-0161-4E72-9CB1-1F3F3CF6268A",
  "NetworkAclAttribute": {
    "Status": "Available",
    "Description": "This is my NetworkAcl.",
    "OwnerId": 12345678,
    "VpcId": "vpc-a2d33rfpl72k5defr****",
    "NetworkAclId": "nacl-a2do9e413e0spnhmj****",
    "CreationTime": "2019-04-25 11:33:27",
    "NetworkAclName": "acl-1",
    "RegionId": "cn-hangzhou",
    "IngressAclEntries": {
      "IngressAclEntry": {
        "Policy": "accept",
        "Description": "This is IngressAclEntries.",
        "Port": "-1/-1",
        "SourceCidrIp": "10.0.0.0/24",
        "NetworkAclEntryName": "acl-3",
        "Protocol": "all",
        "NetworkAclEntryId": "nae-a2dk86arlydmevfbg****"
      }
    },
    "EgressAclEntries": {
      "EgressAclEntry": {
        "Policy": "accept",
        "Description": "This is EgressAclEntries.",
        "DestinationCidrIp": "10.0.0.0/24",
        "Port": "-1/-1",
        "NetworkAclEntryName": "acl-2",
        "Protocol": "all",
        "NetworkAclEntryId": "nae-a2d447uw4tillxdcv****"
      }
    },
    "Resources": {
      "Resource": {
        "Status": "BINDED",
        "ResourceId": "vsw-bp1de348lntdwxscd****",
        "ResourceType": "VSwitch"
      }
    }
  }
}
```


Error codes

HttpCode	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an unknown error occurred.

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

24.7. UnassociateNetworkAcl

Disassociates a network access control list (ACL) from a VSwitch.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	UnassociateNetworkAcl	The operation that you want to perform. Set the value to **UnassociateNetworkAcl**.
NetworkAclId	String	Yes	nacl-a2do9e413e0spxxxxxxx x	The description of the network ACL.
RegionId	String	Yes	cn-hangzhou	The region where the network ACL is deployed. You can call the DescribeRegions operation to query the region IDs.
Resource.N.ResourceId	String	No	vsw-bp1de348lntdwxxxxxxx x	The ID of the associated resource.
Resource.N.ResourceType	String	No	VSwitch	The type of the associated resource.

Response parameters

Parameter	Type	Example	Description
RequestId	String	AD024BAA-2D91-48FD-810B-8FB7489B6EE6	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=UnassociateNetworkAcl
&NetworkAclId=nacl-a2do9e413e0spxxxxxxxx
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<UnassociateNetworkAclResponse>
  <RequestId>AD024BAA-2D91-48FD-810B-8FB7489B6EE6</RequestId>
</UnassociateNetworkAclResponse>
```

`JSON` format

```
{
 "RequestId":"AD024BAA-2D91-48FD-810B-8FB7489B6EE6"
}
```

Error codes

HttpCode	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because unknown errors have occurred.

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

24.8. CopyNetworkAclEntries

Copies rules of a network ACL.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CopyNetworkAclEntries	The operation that you want to perform. Set the value to **CopyNetworkAclEntries**.
NetworkAclId	String	Yes	nacl-a2do9e413e0spxxxxxxxx	The ID of the network ACL.
RegionId	String	Yes	cn-hangzhou	The region where the network ACL is deployed. You can call the DescribeRegions operation to query the region IDs.
SourceNetworkAclId	String	Yes	nacl-ghuo9ehg3e0spxxxxxxxx	The ID of the network ACL whose rules are copied.

Response parameters

Parameter	Type	Example	Description
RequestId	String	6608E72F-F276-440F-ABEF-419971CEC4D1	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=CopyNetworkAclEntries
&NetworkAclId=nacl-a2do9e413e0spxxxxxxxx
&RegionId=cn-hangzhou
&SourceNetworkAclId=nacl-ghuo9ehg3e0spxxxxxxxx
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CopyNetworkAclEntriesResponse>
   <RequestId>6608E72F-F276-440F-ABEF-419971CEC4D1</RequestId>
</CopyNetworkAclEntriesResponse>
```

`JSON` format

```
{
 "RequestId":"6608E72F-F276-440F-ABEF-419971CEC4D1"
}
```

Error codes

HttpCode	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because unknown errors have occurred.

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

24.9. DeleteNetworkAcl

Deletes a network access control list (ACL).

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteNetworkAcl	The operation that you want to perform. Set the value to **DeleteNetworkAcl**.
NetworkAclId	String	Yes	nacl-bp1q8bgx4xnkmxxxxxxx x	The ID of the network ACL.
RegionId	String	Yes	cn-hangzhou	The region where the network ACL is deployed. You can call the DescribeRegions operation to query region IDs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	34F1206D-04B0-4A05-9D8A-80521E288BD1	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DeleteNetworkAcl
&NetworkAclId=nacl-bp1q8bgx4xnkmxxxxxxxx
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteNetworkAclResponse>
   <RequestId>34F1206D-04B0-4A05-9D8A-80521E288BD1</RequestId>
</DeleteNetworkAclResponse>
```

`JSON` format

```
{
 "RequestId":"34F1206D-04B0-4A05-9D8A-80521E288BD1"
}
```

Error codes

HttpCode	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because unknown errors have occurred.

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

25.IPv6 gateways

25.1. CreateIpv6Gateway

Creates an IPv6 gateway.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateIpv6Gateway	The operation that you want to perform. Set the value to **CreateIpv6Gateway**.
RegionId	String	Yes	cn-huhehaote	The ID of the region where you want to create the IPv6 gateway. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	Yes	vpc-123sedrfswd23****	The ID of the virtual private cloud (VPC) for which you want to create the IPv6 gateway.
Spec	String	No	Small	The edition of the IPv6 gateway. Valid values: • **Small** (default): Free Edition • **Medium**: Enterprise Edition • **Large**: Enhanced Enterprise Edition The throughput capacity of an IPv6 gateway varies based on the edition. For more information, see Editions of IPv6 gateways.
Name	String	No	ipv6GW	The name of the IPv6 gateway. The name must be 2 to 128 characters in length, and can contain letters, digits, underscores (_), and hyphens (-). The name must start with a letter but cannot start with `http://` or `https://`.
Description	String	No	ipv6gatewayforVPC1	The description of the IPv6 gateway. The description must be 2 to 256 characters in length. It cannot start with `http://` or `https://`.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length. **Note** If you do not specify this parameter, the system automatically uses the request ID as the client token. The ID of each request is unique.

Response parameters

Parameter	Type	Example	Description
Ipv6GatewayId	String	ipv6gw-hp3y0l3ln89j8cdvf****	The ID of the IPv6 gateway.
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateIpv6Gateway
&RegionId=cn-huhehaote
&VpcId=vpc-123sedrfswd23****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateIpv6GatewayResponse>
    <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
    <Ipv6GatewayId>ipv6gw-hp3y0l3ln89j8cdvf****</Ipv6GatewayId>
</CreateIpv6GatewayResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0",
  "Ipv6GatewayId": "ipv6gw-hp3y0l3ln89j8cdvf****"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

25.2. DeleteIpv6Gateway

Deletes an IPv6 gateway.

Prerequisites

Before you can delete an IPv6 gateway of the Enterprise Edition or Advanced Enterprise Edition, you must delete the egress-only rule. For more information, see DeleteIpv6EgressOnlyRule .

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteIpv6Gateway	The name of this action. Value: **DeleteIpv6Gateway**.
Ipv6GatewayId	String	Yes	ipv6gw-hp3y0l3ln89j8****	The ID of the IPv6 gateway to be deleted.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-huhehaote	The region ID of the IPv6 gateway. You can call DescribeRegions Interface to obtain the region ID.

Response parameters

Parameter	Type	Example	Description
RequestId	String	E9A8AABE-A84B-4AF2-A68A-8E2EA190E7AE	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteIpv6Gateway &Ipv6 GatewayId=ipv6gw-hp3y0l3ln89j8 **** &RegionId=cn-huhehaote &<public request parameters>
```

Sample success responses

`XML` format

```
<DeleteIpv6GatewayResponse> <RequestId>E9A8AABE-A84B-4AF2-A68A-8E2EA190E7AE</RequestId> </DeleteIpv6GatewayResponse>
```

`JSON` Address format

```
{ "RequestId": "E9A8AABE-A84B-4AF2-A68A-8E2EA190E7AE" }
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified Region ID does not exist.

Go to the Error Center see more error codes.

25.3. ModifyIpv6GatewaySpec

Changes the specification of an IPv6 gateway.

The forwarding and bandwidth capacity of an IPv6 gateway is based on the specification of the IPv6 gateway. For more information, see Editions of IPv6 gateways.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyIpv6GatewaySpec	The operation that you want to perform. Set the value to **ModifyIpv6GatewaySpec**.
Ipv6GatewayId	String	Yes	ipv6gw-123456xxxxxxxx	The ID of the IPv6 gateway.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-huhehaote	The ID of the region where the IPv6 gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.
Spec	String	Yes	Middle	The new specification that you want to set for the IPv6 gateway. Valid values: • **Small** (default): Free edition • **Middle**: Medium edition • **Large**: Large edition
ClientToken	String	No	123456	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	9DFEDBEE-E5AB-49E8-A2DC-CC114C67AF75	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=ModifyIpv6GatewaySpec
&RegionId=cn-huhehaote
&Ipv6GatewayId=ipv6gw-123456xxxxxxxx
&Spec=Middle
&Common request parameters
```

Sample success responses

`XML` format

```
<ModifyIpv6GatewaySpecResponse>
  <RequestId>9DFEDBEE-E5AB-49E8-A2DC-CC114C67AF75</RequestId>
</ModifyIpv6GatewaySpecResponse>
```

`JSON` format

```
{
 "RequestId":"9DFEDBEE-E5AB-49E8-A2DC-CC114C67AF75"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because RegionId is set to an invalid value. Check whether the service is available in the specified region.

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

25.4. DescribeIpv6EgressOnlyRules

Queries egress-only rules.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeIpv6EgressOnlyRules	The operation that you want to perform. Set the value to **DescribeIpv6EgressOnlyRules**.
Ipv6GatewayId	String	Yes	ipv6gw-123456xxxxxxxx	The ID of the IPv6 gateway.
RegionId	String	Yes	cn-huhehaote	The ID of the region where the IPv6 gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	No	i-123456xxxxxxxx	The ID of the instance that is associated with the IPv6 address to which the egress-only rule is applied.
InstanceType	String	No	Ipv6Address	The type of the instance to which you want to apply the egress-only rule. Set the value to: **Ipv6Address**. This value indicates that the egress-only rule is applied to an IPv6 address.
Ipv6EgressOnlyRuleId	String	No	ipv6gwpy-123456xxxxxxxx	The ID of the egress-only rule that you want to query.
Name	String	No	rulename	The name of the egress-only rule.
PageNumber	Integer	No	1	The number of the page to return. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description
Ipv6EgressOnlyRules			The details about the egress-only rule.
Description	String	ruledescription	The description of the egress-only rule.
InstanceId	String	i-123456xxxxxxxx	The ID of the instance to which the egress-only rule is applied.
InstanceType	String	Ipv6Address	The type of the instance to which the egress-only rule is applied.

Parameter	Type	Example	Description
Ipv6EgressOnlyRuleId	String	ipv6gwpy-123456xxxxxxxx	The ID of the egress-only rule.
Name	String	rulename	The name of the egress-only rule.
Status	String	Available	The status of the egress-only rule.
PageNumber	Integer	1	The page number of the returned page. Default value: 1.
PageSize	Integer	10	The number of entries retuned on each page. Maximum value: 50. Default value: 10.
RequestId	String	E16671B7-DEA6-48E0-8E9C-41913DAD44DD	The ID of the request.
TotalCount	Integer	1	The total number of entries returned.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DescribeIpv6EgressOnlyRules
&RegionId=cn-huhehaote
&Ipv6GatewayId=ipv6gw-123456xxxxxxxx
&Common request parameters
```

Sample success responses

`XML` format

```
<DescribeIpv6EgressOnlyRulesResponse>
  <Ipv6EgressOnlyRules>
    <Ipv6EgressOnlyRule>
      <Name></Name>
      <Status>Available</Status>
      <Description></Description>
      <InstanceId>ipv6-hp3b5a8t12ihyxxxxxxxx</InstanceId>
      <Ipv6EgressOnlyRuleId>ipv6py-hp3w98rmlbqp0xxxxxxxx</Ipv6EgressOnlyRuleId>
      <InstanceType>Ipv6Address</InstanceType>
    </Ipv6EgressOnlyRule>
  </Ipv6EgressOnlyRules>
  <PageNumber>1</PageNumber>
  <TotalCount>1</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>D1FFB517-D1A7-49BA-9169-C7E7194A9B55</RequestId>
</DescribeIpv6EgressOnlyRulesResponse>
```

`JSON` format

```
{
 "Ipv6EgressOnlyRules":{
  "Ipv6EgressOnlyRule":[
   {
    "Name":"",
    "Status":"Available",
    "Description":"",
    "Ipv6EgressOnlyRuleId":"ipv6py-hp3w98rmlbqp0xxxxxxxx",
    "InstanceId":"ipv6-hp3b5a8t12ihyxxxxxxxx",
    "InstanceType":"Ipv6Address"
   }
  ]
 },
 "PageNumber":1,
 "TotalCount":1,
 "PageSize":10,
 "RequestId":"D1FFB517-D1A7-49BA-9169-C7E7194A9B55"
}
```

Error codes

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

25.5. CreateIpv6EgressOnlyRule

Creates an egress-only rule for an IPv6 address.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateIpv6EgressOnlyRule	The operation that you want to perform. Set the value to **CreateIpv6EgressOnlyRule**.
InstanceId	String	Yes	ipv6-hp3nxjkfxn5pnhgl5****	The ID of the IPv6 address to which you want to apply the egress-only rule.
Ipv6GatewayId	String	Yes	ipv6gw-hp3c2paq0ywauasza****	The ID of the IPv6 gateway.
RegionId	String	Yes	cn-huhehaote	The ID of the region where the IPv6 gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.
InstanceType	String	No	IPv6Address	The type of instance to which you want to apply the egress-only rule. Set the value to: **Ipv6Address** (default): an IPv6 address.
Name	String	No	rulename	The name of the egress-only rule. The name must be 2 to 128 characters in length, and can contain letters, digits, underscores (_), and hyphens (-). The name must start with a letter but cannot start with `http://` or `https://`.

Parameter	Type	Required	Example	Description
Description	String	No	ruledescription	The description of the egress-only rule. The description must be 2 to 256 characters in length. It cannot start with `http://` or `https://`.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length. **Note** If you do not specify this parameter, the system automatically uses the request ID as the client token. The ID of each request is unique.

Response parameters

Parameter	Type	Example	Description
Ipv6EgressRuleId	String	ipv6py-hp3w98rmlbqp01245****	The ID of the egress-only rule.
RequestId	String	9DFEDBEE-E5AB-49E8-A2DC-CC114C67AF75	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateIpv6EgressOnlyRule
&InstanceId=ipv6-hp3nxjkfxn5pnhgl5****
&Ipv6GatewayId=ipv6gw-hp3c2paq0ywauasza****
&RegionId=cn-huhehaote
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateIpv6EgressOnlyRuleResponse>
  <RequestId>9DFEDBEE-E5AB-49E8-A2DC-CC114C67AF75</RequestId>
  <Ipv6EgressRuleId>ipv6py-hp3w98rmlbqp01245****</Ipv6EgressRuleId>
</CreateIpv6EgressOnlyRuleResponse>
```

`JSON` format

```
{
  "Ipv6EgressRuleId": "ipv6py-hp3w98rmlbqp01245****",
  "RequestId": "9DFEDBEE-E5AB-49E8-A2DC-CC114C67AF75"
}
```

Error codes

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

25.6. DeleteIpv6EgressOnlyRule

Deletes an egress-only rule.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteIpv6EgressOnlyRule	The operation that you want to perform. Set the value to **DeleteIpv6EgressOnlyRule**.
Ipv6EgressOnlyRuleId	String	Yes	ipv6py-hp3w98rmlbqp0xxxxxxxx	The ID of the egress-only rule that you want to delete.
RegionId	String	Yes	cn-huhehaote	The ID of the IPv6 gateway.
ClientToken	String	No	123456	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	9DFEDBEE-E5AB-49E8-A2DC-CC114C67AF75	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DeleteIpv6EgressOnlyRule
&RegionId=cn-huhehaote
&Ipv6GatewayId=ipv6gw-123456
&Ipv6EgressOnlyRuleId=ipv6py-hp3w98rmlbqp0xxxxxxxx
&Common request parameters
```

Sample success responses

`XML` format

```
<DeleteIpv6EgressOnlyRuleResponse>
  <RequestId>9DFEDBEE-E5AB-49E8-A2DC-CC114C67AF75</RequestId>
</DeleteIpv6EgressOnlyRuleResponse>
```

`JSON` format

```
{
 "RequestId":"4E40EAF1-783D-4C05-948D-DA0426C398C1"
}
```

Error codes

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

25.7. DeleteIpv6InternetBandwidth

Sets the Internet bandwidth value of an IPv6 address to zero.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteIpv6InternetBandwidth	The operation that you want to perform. Set the value to **DeleteIpv6InternetBandwidth**.
RegionId	String	Yes	cn-huhehaote	The ID of the region where the IPv6 gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.
Ipv6AddressId	String	No	ipv6-123456xxxxxxxx	The ID of the IPv6 address.
Ipv6InternetBandwidthId	String	No	2	The Internet bandwidth value of the IPv6 address.

Response parameters

Parameter	Type	Example	Description
RequestId	String	E07E0FE6-5C21-405F-AF82-7613AA81EF92	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DeleteIpv6InternetBandwidth
&RegionId=cn-huhehaote
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteIpv6InternetBandwidthResponse>
  <RequestId>6972A26E-99B1-4367-9890-FBDEBB0F5E7D</RequestId>
</DeleteIpv6InternetBandwidthResponse>
```

`JSON` format

```
{
 "RequestId":"E07E0FE6-5C21-405F-AF82-7613AA81EF92"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified RegionId parameter is invalid. Check whether the service is available in the specified region.

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

25.8. DescribeIpv6GatewayAttribute

Queries detailed information about a specified IPv6 gateway.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeIpv6GatewayAttribute	The operation that you want to perform. Set the value to **DescribeIpv6GatewayAttribute**.
Ipv6GatewayId	String	Yes	ipv6gw-123456xxxxxxxx	The ID of the IPv6 gateway that you want to query.
RegionId	String	Yes	cn-huhehaote	The ID of the region where the IPv6 gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
BusinessStatus	String	Normal	The status of the IPv6 gateway. Valid values: • **Normal**: working as expected • **FinancialLocked**: locked due to overdue payments • **SecurityLocked**: locked due to security reasons
CreationTime	String	2018-12-05T09:21:35Z	The time when the IPv6 gateway was created.
Description	String	test	The description of the IPv6 gateway.
ExpiredTime	String	2018-12-05T09:21:35Z	The time when the IPv6 gateway expires.
InstanceChargeType	String	PostPaid	The metering method of the IPv6 gateway.
Ipv6GatewayId	String	ipv6gw-123456xxxxxxxx	The ID of the IPv6 gateway.
Name	String	test	The name of the IPv6 gateway.
RegionId	String	cn-huhehaote	The ID of the region where the IPv6 gateway is deployed.
RequestId	String	ipv6gw-hp33p10bdbt77xxxxxxxx	The ID of the request.
Spec	String	Medium	The specification of the IPv6 gateway.
Status	String	Available	The status of the IPv6 gateway.
VpcId	String	vpc-123456xxxxxxxx	The ID of the virtual private cloud (VPC) to which the IPv6 gateway belongs.

Examples

Sample requests

```
https://vpc.cn-huhehaote.aliyuncs.com/?Action=DescribeIpv6GatewayAttribute
&Ipv6GatewayId=ipv6gw-hp33p10bdbt77xxxxxxxx
&RegionId=cn-huhehaote
&Common request parameters
```

Sample success responses

`XML` format

```
<DescribeIpv6GatewayAttributeResponse>
  <Name>ipv6gateway</Name>
  <CreationTime>2018-12-05T09:21:35Z</CreationTime>
  <Status>Available</Status>
  <Description></Description>
  <BusinessStatus>Normal</BusinessStatus>
  <Spec>Medium</Spec>
  <RequestId>F4517005-A716-40EB-8B80-F6AF8508B25F</RequestId>
  <RegionId>cn-huhehaote</RegionId>
  <InstanceChargeType>PostPaid</InstanceChargeType>
  <ExpiredTime></ExpiredTime>
  <VpcId>vpc-hp3kzilwd9yflxxxxxxxx</VpcId>
  <Ipv6GatewayId>ipv6gw-hp33p10bdbt77xxxxxxxx</Ipv6GatewayId>
</DescribeIpv6GatewayAttributeResponse>
```

`JSON` format

```
{
 "CreationTime":"2018-12-05T09:21:35Z",
 "Name":"ipv6gateway",
 "Status":"Available",
 "Description":"",
 "Spec":"Medium",
 "BusinessStatus":"Normal",
 "RegionId":"cn-huhehaote",
 "RequestId":"F4517005-A716-40EB-8B80-F6AF8508B25F",
 "InstanceChargeType":"PostPaid",
 "ExpiredTime":"",
 "VpcId":"vpc-hp3kzilwd9yflxxxxxxxx",
 "Ipv6GatewayId":"ipv6gw-hp33p10bdbt77xxxxxxxx"
}
```

Error codes

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

25.9. DescribeIpv6Addresses

Queries the IPv6 addresses in a specified region.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeIpv6Addresses	The operation that you want to perform. Set the value to **DescribeIpv6Addresses**.
RegionId	String	Yes	cn-huhehaote	The ID of the region in which you want to query IPv6 addresses. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
Ipv6AddressId	String	No	ipv6-2zen5j4axcp5l5qyy****	The IDs of the IPv6 addresses that you want to query. You can enter at most 20 IPv6 IDs in each API request. Separate IPv6 IDs with commas (,).
Ipv6Address	String	No	2408:XXXX:153:3921:851c:c435:7b12:1c5f	The IPv6 address that you want to query.
Name	String	No	test	The name of the IPv6 address that you want to query.
AssociatedInstanceId	String	No	i-2ze72wuqj4y3jl4f****	The ID of the instance that is assigned the IPv6 address.
AssociatedInstanceType	String	No	EcsInstance	The type of the instance that is assigned the IPv6 address. Set the value to **EcsInstance**, which indicates an Elastic Compute Service (ECS) instance in a VPC. This is the default value.
NetworkType	String	No	Private	The type of communication supported by the IPv6 address. Valid values: • **Private**: communication within the private network • **Public**: communication over the Internet
VpcId	String	No	vpc-bp15zckdt37pq72zv****	The ID of the VPC to which the IPv6 address belongs.
VSwitchId	String	No	vsw-25navfgbue4g****	The ID of the vSwitch to which the IPv6 address belongs.
Ipv6InternetBandwidthId	String	No	5	The public bandwidth of the IPv6 address. Unit: Mbit/s.
PageNumber	Integer	No	1	The number of the page to return. Default value: **1**.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: **50**. Default value: **10**.

Response parameters

Parameter	Type	Example	Description
Ipv6Addresses	Array of Ipv6Address		The details about the IPv6 addresses.
Ipv6Address			
AllocationTime	String	2020-12-20T14:56:09Z	The time when the IPv6 address was created.
AssociatedInstanceId	String	i-2ze72wuqj4y3jl4f****	The ID of the instance that is assigned the IPv6 address.
AssociatedInstanceType	String	EcsInstance	The type of the instance that is assigned the IPv6 address.

Parameter	Type	Example	Description
Ipv6Address	String	2408:XXXX:153:3921:851c:c435:7b12:1c5f	The IPv6 address.
Ipv6AddressId	String	ipv6-2zen5j4axcp5l5qyy****	The ID of the IPv6 address.
Ipv6AddressName	String	test	The name of the IPv6 address.
Ipv6GatewayId	String	ipv6gw-2zewg0l66s73b4k2q****	The ID of the IPv6 gateway to which the IPv6 address belongs.
Ipv6InternetBandwidth	Struct		The information about the public bandwidth of the IPv6 address.
Bandwidth	Integer	5	The exclusive public bandwidth of the IPv6 address. Unit: Mbit/s.
BusinessStatus	String	Normal	The status of the public bandwidth of the IPv6 address. Valid values: • **Normal**: normal • **FinancialLocked**: locked due to overdue payments • **SecurityLocked**: locked due to security reasons
InstanceChargeType	String	PostPaid	The billing method of the public bandwidth of the IPv6 address. Valid values: **PostPaid**: pay-as-you-go
InternetChargeType	String	PayByTraffic	The billing method of the public bandwidth of the IPv6 address. Valid values: • **PayByTraffic**: pay-by-data-transfer • **PayByBandwidth**: pay-by-bandwidth
Ipv6InternetBandwidthId	String	ipv6bw-hp3b35oq1fj50kbv****	The instance ID of the public bandwidth of the IPv6 address.
Ipv6Isp	String	BGP	The service provider of the IPv6 address: • **BGP**: Alibaba Cloud Border Gateway Protocol (BGP) IPv6. This is the default value. • **ChinaMobile**: China Mobile (single line). • **ChinaUnicom**: China Unicom (single line). • **ChinaTelecom**: China Telecom (single line).
NetworkType	String	Private	The type of communication supported by the IPv6 address. Valid values: • **Private**: communication within the private network • **Public**: communication over the public network

Parameter	Type	Example	Description
RealBandwidth	Integer	5	The peak bandwidth value of the IPv6 address. Valid value: • If the IPv6 gateway uses an EIP bandwidth plan, the value of **RealBandwidth** is the peak bandwidth value of the EIP bandwidth plan. • If the IPv6 gateway does not use an EIP bandwidth plan, the value of **RealBandwidth** is the peak bandwidth value of the public bandwidth of the IPv6 address. • If the IPv6 gateway does not use an EIP bandwidth plan or public bandwidth resources, the values of **RealBandwidth** and **Bandwidth** are both 0.
Status	String	Available	The status of the IPv6 address. Valid values: • **Pending**: The IPv6 address is being configured. • **Available**: The IPv6 address is available.
VSwitchId	String	vsw-25navfgbue4g****	The ID of the vSwitch to which the IPv6 address belongs.
VpcId	String	vpc-bp15zckdt37pq72zv****	The ID of the VPC to which the IPv6 address belongs.
PageNumber	Integer	1	The number of the page returned. Default value: **1**.
PageSize	Integer	10	The number of entries returned on each page. Maximum value: **50**. Default value: **10**.
RequestId	String	AA4486A8-B6AE-469E-AB09-820EF8ECFA2B	The ID of the request.
TotalCount	Integer	2	The number of returned entries.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeIpv6Addresses
&RegionId=cn-huhehaote
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeIpv6AddressesResponse>
 <TotalCount>2</TotalCount>
 <PageSize>10</PageSize>
 <RequestId>AA4486A8-B6AE-469E-AB09-820EF8ECFA2B</RequestId>
 <PageNumber>1</PageNumber>
 <Ipv6Addresses>
    <Ipv6Address>
       <AllocationTime>2020-12-20T14:56:09Z</AllocationTime>
       <Status>Available</Status>
       <Ipv6Isp>BGP</Ipv6Isp>
       <AssociatedInstanceId>i-2ze72wuqj4y3jl4f****</AssociatedInstanceId>
       <VpcId>vpc-bp15zckdt37pq72zv****</VpcId>
       <NetworkType>Private</NetworkType>
       <VSwitchId>vsw-25navfgbue4g****</VSwitchId>
       <Ipv6AddressId>ipv6-2zen5j4axcp5l5qyy****</Ipv6AddressId>
       <Ipv6GatewayId>ipv6gw-2zewg0l66s73b4k2q****</Ipv6GatewayId>
       <RealBandwidth>5</RealBandwidth>
       <AssociatedInstanceType>EcsInstance</AssociatedInstanceType>
       <Ipv6Address>2408:XXXX:153:3921:851c:c435:7b12:1c5f</Ipv6Address>
       <Ipv6AddressName>test</Ipv6AddressName>
       <Ipv6InternetBandwidth>
          <InstanceChargeType>PostPaid</InstanceChargeType>
          <Bandwidth>5</Bandwidth>
          <Ipv6InternetBandwidthId>ipv6bw-hp3b35oq1fj50kbv****</Ipv6InternetBandwidthId>
          <BusinessStatus>Normal</BusinessStatus>
          <InternetChargeType>PayByTraffic</InternetChargeType>
       </Ipv6InternetBandwidth>
    </Ipv6Address>
 </Ipv6Addresses>
</DescribeIpv6AddressesResponse>
```

`JSON` format

```
{
  "TotalCount": 2,
  "PageSize": 10,
  "RequestId": "AA4486A8-B6AE-469E-AB09-820EF8ECFA2B",
  "PageNumber": 1,
  "Ipv6Addresses": {
    "Ipv6Address": {
      "AllocationTime": "2020-12-20T14:56:09Z",
      "Status": "Available",
      "Ipv6Isp": "BGP",
      "AssociatedInstanceId": "i-2ze72wuqj4y3jl4f****",
      "VpcId": "vpc-bp15zckdt37pq72zv****",
      "NetworkType": "Private",
      "VSwitchId": "vsw-25navfgbue4g****",
      "Ipv6AddressId": "ipv6-2zen5j4axcp5l5qyy****",
      "Ipv6GatewayId": "ipv6gw-2zewg0l66s73b4k2q****",
      "RealBandwidth": 5,
      "AssociatedInstanceType": "EcsInstance",
      "Ipv6Address": "2408:XXXX:153:3921:851c:c435:7b12:1c5f",
      "Ipv6AddressName": "test",
      "Ipv6InternetBandwidth": {
        "InstanceChargeType": "PostPaid",
        "Bandwidth": 5,
        "Ipv6InternetBandwidthId": "ipv6bw-hp3b35oq1fj50kbv****",
        "BusinessStatus": "Normal",
        "InternetChargeType": "PayByTraffic"
      }
    }
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

25.10. AllocateIpv6InternetBandwidth

Purchases Internet bandwidth resources for an IPv6 address.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AllocateIpv6InternetBandwidth	The operation that you want to perform. Set the value to **AllocateIpv6InternetBandwidth**.

Bandwidth	Integer	Yes	2	The amount of Internet bandwidth resources of the IPv6 address, in Mbit/s. Valid values: **1 to 5000**.
				• If **InternetChargeType** is set to **PayByBandwidth**, the Internet bandwidth of the IPv6 address is from 1 to 5,000 Mbit/s.
				• If **InternetChargeType** is set to **PayByTraffic**, the amount of Internet bandwidth resources of the IPv6 address is limited by the specification of the IPv6 gateway.
				  ○ Small (default) specifies the Free edition and the Internet bandwidth is from 1 to 500 Mbit/s.
				  ○ Medium specifies the Medium edition and the Internet bandwidth is from 1 to 1,000 Mbit/s.
				  ○ Large specifies the Large edition and the Internet bandwidth is from 1 to 2,000 Mbit/s.

Ipv6AddressId	String	Yes	ipv6-123456xxxxxxxx	The ID of the IPv6 address.
Ipv6GatewayId	String	Yes	ipv5gw-123456xxxxxxxx	The ID of the IPv6 gateway.
RegionId	String	Yes	cn-huhehaote	The ID of the region where the IPv6 gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	123456	The client token that is used to ensure the idempotence of the request. You can use the client to generate a token, but you must ensure that the token is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.
InternetChargeType	String	No	PayByTraffic	The metering method of the Internet bandwidth resources of the IPv6 gateway. Valid values: • **PayByTraffic**: pay-by-data-transfer • **PayByBandwidth** (default): pay-by-bandwidth

Response parameters

Parameter	Type	Example	Description
InternetBandwidthId	String	2	The amount of Internet bandwidth resources purchased for the IPv6 gateway.
Ipv6AddressId	String	ipv6-hp352ungkzcknxxxxxxxx	The ID of the IPv6 address.
RequestId	String	6972A26E-99B1-4367-9890-FBDEBB0F5E7D	The ID of the request.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?AllocateIpv6InternetBandwidth
&Ipv6AddressId=ipv6-123456xxxxxxxx
&Ipv6GatewayId=ipv6gw-123456xxxxxxxx
&RegionId=cn-huhehaote
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AllocateIpv6InternetBandwidthResponse>
  <RequestId>6972A26E-99B1-4367-9890-FBDEBB0F5E7D</RequestId>
  <InternetBandwidthId>2</InternetBandwidthId>
  <Ipv6AddressId>ipv6-hp352ungkzcknxxxxxxxx</Ipv6AddressId>
</AllocateIpv6InternetBandwidthResponse>
```

`JSON` format

```
{
 "Ipv6AddressId":"ipv6-hp352ungkzcknxxxxxxxx",
 "RequestId":"6972A26E-99B1-4367-9890-FBDEBB0F5E7D",
 "InternetBandwidthId":2
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID is invalid. Check whether the service is available in the specified region.

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

25.11. ModifyIpv6InternetBandwidth

Modifies the amount of Internet bandwidth resources of an IPv6 address.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyIpv6InternetBandwidth	The operation that you want to perform. Set the value to **ModifyIpv6InternetBandwidth**.

Bandwidth	Long	Yes	4	The amount of Internet bandwidth resources of the IPv6 address, in Mbit/s. Valid values: **1** to **5000**.
				• If **InternetChargeType** is set to **PayByBandwidth**, the Internet bandwidth of the IPv6 address is from **1** to **5,000** Mbit/s.
				• If **InternetChargeType** is set to **PayByTraffic**, the amount of Internet bandwidth resources of the IPv6 address is limited by the specification of the IPv6 gateway.
				  ○ **Small** (default) specifies the Free edition and the Internet bandwidth is from **1** to **500** Mbit/s.
				  ○ **Medium** specifies the Medium edition and the Internet bandwidth is from **1** to **1,000** Mbit/s.
				  ○ **Large** specifies the Large edition and the Internet bandwidth is from **1** to **2,000** Mbit/s.

RegionId	String	Yes	cn-huhehaote	The ID of the region where the IPv6 gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.
Ipv6AddressId	String	No	ipv6-1233456****	The ID of the IPv6 address.
ClientToken	String	No	123456	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The token can contain only ASCII characters and cannot exceed 64 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	D560AF68-4CE8-4A5C-B3FE-469F558094D0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyIpv6InternetBandwidth
&Bandwidth=4
&RegionId=cn-huhehaote
&Common request parameters
```

Sample success responses

`XML` format

```
<ModifyIpv6InternetBandwidthResponse>
  <RequestId>D560AF68-4CE8-4A5C-B3FE-469F558094D0</RequestId>
</ModifyIpv6InternetBandwidthResponse>
```

`JSON` format

```
{
 "RequestId": "D560AF68-4CE8-4A5C-B3FE-469F558094D0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified region ID does not exist.

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

25.12. ModifyIpv6GatewayAttribute

Modifies the information of an IPv6 gateway.

Debug

Use OpenAPI Explorer to perform debug operations and generate SDK code examples.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	ModifyIpv6GatewayAttribute	The action to perform. Valid value: **ModifyIpv6GatewayAttribute**.
Ipv6GatewayId	String	Yes	ipv6gw-hp39kh1ya51yzp2lu****	The ID of the IPv6 gateway to be modified.
RegionId	String	Yes	cn-huhehaote	The region ID of the IPv6 gateway. To query the region ID, call DescribeRegions.
Description	String	No	ipv6description	The description of the IPv6 gateway.
Name	String	No	ipv6name	The name of the IPv6 gateway.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	9DFEDBEE-E5AB-49E8-A2DC-CC114C67AF75	The ID of the request.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=ModifyIpv6GatewayAttribute
&RegionId=cn-huhehaote
&Ipv6GatewayId=ipv6gw-hp39kh1ya51yzp2lu****
&<CommonParameters>
```

Response example:

`XML` format

```
<ModifyIpv6GatewayAttributeResponse>
  <RequestId>9DFEDBEE-E5AB-49E8-A2DC-CC114C67AF75</RequestId>
</ModifyIpv6GatewayAttributeResponse>
```

`JSON` format

```
{
 "RequestId":"9DFEDBEE-E5AB-49E8-A2DC-CC114C67AF75"
}
```

Errors

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The specified RegionId does not exist.

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

25.13. ModifyIpv6AddressAttribute

Modifies the name and description of an IPv6 address.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyIpv6AddressAttribute	The operation that you want to perform. Set the value to **ModifyIpv6AddressAttribute**.
Ipv6AddressId	String	Yes	ipv6-hp32vv2klzw4yerdf****	The ID of the IPv6 address.
RegionId	String	Yes	cn-huhehaote	The ID of the region where the IPv6 address is deployed. You can call the DescribeRegions operation to query the most recent region list.
Name	String	No	test	The name of the IPv6 address. The name must be 2 to 128 characters in length, and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It cannot start with `http://` or `https://` .
Description	String	No	test	The description of the IPv6 address. The description must be 2 to 256 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It cannot start with `http://` or `https://` .

Response parameters

Parameter	Type	Example	Description
RequestId	String	D560AF68-4CE8-4A5C-B3FE-469F558094D0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyIpv6AddressAttribute
&Ipv6AddressId=ipv6-hp32vv2klzw4yerdf****
&RegionId=cn-huhehaote
&Common request parameters
```

Sample success responses

`XML` format

```
<ModifyIpv6AddressAttributeResponse>
  <RequestId>D560AF68-4CE8-4A5C-B3FE-469F558094D0</RequestId>
</ModifyIpv6AddressAttributeResponse>
```

`JSON` format

```
{
 "RequestId": "D560AF68-4CE8-4A5C-B3FE-469F558094D0"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because RegionId is set to an invalid value. Check whether the service is available in the specified region.

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

25.14. DescribeIpv6Gateways

Queries IPv6 gateways.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeIpv6Gateways	The operation that you want to perform. Set the value to **DeleteIpv6Gateway**.
RegionId	String	Yes	cn-huhehaote	The ID of the region where the IPv6 gateway is deployed. You can call the DescribeRegions operation to query the most recent region list.
Ipv6GatewayId	String	No	ipv6gw-123456xxxxxxxx	The ID of the IPv6 gateway.
Name	String	No	ipv6GW	The name of the IPv6 gateway.
PageNumber	Integer	No	1	The number of the page to return.
PageSize	Integer	No	10	The number of entries to return on each page.
VpcId	String	No	vpc-123456xxxxxxxx	The ID of the VPC to which the IPv6 gateway belongs.

Parameter	Type	Required	Example	Description

Response parameters

Parameter	Type	Example	Description
Ipv6Gateways			The details of the IPv6 gateways
BusinessStatus	String	Normal	The status of the IPv6 gateway. Valid values: • **Normal**: working as expected. • **FinancialLocked**: locked due to overdue payments.
CreationTime	String	2018-12-20T14:51:23Z	The time when the IPv6 gateway was created.
Description	String	descriptionforIPv6GW	The description of the IPv6 gateway.
ExpiredTime	String	2018-12-20T14:51:23Z	The time when the IPv6 gateway expires.
InstanceChargeType	String	PostPaid	The metering method of the IPv6 gateway.
Ipv6GatewayId	String	ipv6gw-hp3rwmtmfhgisxxxxxxxx	The ID of the IPv6 gateway.
Name	String	name	The name of the IPv6 gateway.
RegionId	String	cn-huhehaote	The region where the IPv6 gateway is deployed.
Spec	String	Small	The specification of the IPv6 gateway.
Status	String	Available	The status of the IPv6 gateway.
VpcId	String	vpc-123456xxxxxxxx	The ID of the VPC to which the IPv6 gateway belongs.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	19	The number of entries returned per page.
RequestId	String	E3A06196-3E7C-490D-8F39-CB4B5A0CE8AD	The ID of the request.
TotalCount	Integer	2	The total number of entries returned.

Examples

Sample requests

```
https://vpc.aliyuncs.com/?Action=DescribeIpv6Gateways
&RegionId=cn-huhehaote
&Common request parameters
```

Sample success responses

`XML` format

```
<DescribeIpv6GatewaysResponse>
  <PageNumber>1</PageNumber>
  <Ipv6Gateways>
    <Ipv6Gateway>
      <Name></Name>
      <CreationTime>2018-12-20T14:51:23Z</CreationTime>
      <Status>Available</Status>
      <Description></Description>
      <BusinessStatus>Normal</BusinessStatus>
      <Spec>Medium</Spec>
      <RegionId>cn-huhehaote</RegionId>
      <InstanceChargeType>PostPaid</InstanceChargeType>
      <ExpiredTime></ExpiredTime>
      <VpcId>vpc-hp3ag7ydchedxxxxxxxxx</VpcId>
      <Ipv6GatewayId>ipv6gw-hp33of4uz4k4kxxxxxxxx</Ipv6GatewayId>
    </Ipv6Gateway>
    <Ipv6Gateway>
      <CreationTime>2018-12-05T09:21:35Z</CreationTime>
      <Name>IPv6 gateway</Name>
      <Status>Available</Status>
      <Description></Description>
      <BusinessStatus>Normal</BusinessStatus>
      <Spec>Medium</Spec>
      <RegionId>cn-huhehaote</RegionId>
      <InstanceChargeType>PostPaid</InstanceChargeType>
      <ExpiredTime></ExpiredTime>
      <VpcId>vpc-hp3kzilwd9yflxxxxxxxx</VpcId>
      <Ipv6GatewayId>ipv6gw-hp33p10bdbt77xxxxxxxx</Ipv6GatewayId>
    </Ipv6Gateway>
  </Ipv6Gateways>
  <TotalCount>2</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>E3A06196-3E7C-490D-8F39-CB4B5A0CE8AD</RequestId>
</DescribeIpv6GatewaysResponse>
```

`JSON` format

```
{
 "Ipv6Gateways":{
  "Ipv6Gateway":[
   {
    "CreationTime":"2018-12-20T14:51:23Z",
    "Name":"",
    "Status":"Available",
    "Description":"",
    "Spec":"Medium",
    "BusinessStatus":"Normal",
    "RegionId":"cn-huhehaote",
    "InstanceChargeType":"PostPaid",
    "ExpiredTime":"",
    "VpcId":"vpc-hp3ag7ydchedxxxxxxxxx",
    "Ipv6GatewayId":"ipv6gw-hp33of4uz4k4kxxxxxxxx"
   },
   {
    "Name":"IPv6 gateway",
    "CreationTime":"2018-12-05T09:21:35Z",
    "Status":"Available",
    "Description":"",
    "Spec":"Medium",
    "BusinessStatus":"Normal",
    "RegionId":"cn-huhehaote",
    "InstanceChargeType":"PostPaid",
    "ExpiredTime":"",
    "VpcId":"vpc-hp3kzilwd9yflxxxxxxxx",
    "Ipv6GatewayId":"ipv6gw-hp33p10bdbt77xxxxxxxx"
   }
  ]
 },
 "PageNumber":1,
 "TotalCount":2,
 "PageSize":10,
 "RequestId":"E3A06196-3E7C-490D-8F39-CB4B5A0CE8AD"
}
```


Error codes

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

26.Traffic mirroring

26.1. OpenTrafficMirrorService

Enables traffic mirroring.

Debugging

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

Request parameters

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

Response parameters

Parameter	Type	Example	Description
OrderId	String	123412341234123	The ID of the order.
RequestId	String	4FCCF008-4C13-4231-BE77-D5203801A9E2	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=OpenTrafficMirrorService
&<Common request parameters>
```

Sample success responses

`XML` format

```
<OpenTrafficMirrorServiceResponse>
 <RequestId>4FCCF008-4C13-4231-BE77-D5203801A9E2</RequestId>
 <OrderId>123412341234123</OrderId>
</OpenTrafficMirrorServiceResponse>
```

`JSON` format

```
{
  "RequestId": "4FCCF008-4C13-4231-BE77-D5203801A9E2",
  "OrderId": 123412341234123
}
```

Error codes

HttpCode	Error code	Error message	Description
400	OperationFailed.ExceedPurchaseLimit	You have reached the limit of purchase quantity.	The error message returned because you have reached the maximum units allowed for purchase.
400	OperationDenied.AccountTypeRestricted	The operation is denied because your account type is not supported.	The error message returned because your account type does not support this transaction.

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

26.2. GetTrafficMirrorServiceStatus

Queries the status of the traffic mirroring feature.

Debugging

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

Request parameters

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

Response parameters

Parameter	Type	Example	Description
Enabled	Boolean	true	Indicates whether the traffic mirroring feature is enabled. Valid values: • **true**: enabled • **false**: disabled
RequestId	String	37626066-2C6C-4B62-ADD3-498920C409C5	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetTrafficMirrorServiceStatus
&<Common request parameters>
```

Sample success responses

`XML` format

```
<GetTrafficMirrorServiceStatusResponse>
 <RequestId>37626066-2C6C-4B62-ADD3-498920C409C5</RequestId>
 <Enabled>true</Enabled>
</GetTrafficMirrorServiceStatusResponse>
```

`JSON` format

```
{
  "RequestId": "37626066-2C6C-4B62-ADD3-498920C409C5",
  "Enabled": true
}
```

Error codes

HttpCode	Error code	Error message	Description
400	OperationDenied.AccountTypeRestricted	The operation is denied because your account type is not supported.	The error message returned because your account type does not support this transaction.

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

26.3. CreateTrafficMirrorFilter

Creates a filter for traffic mirroring.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateTrafficMirrorFilter	The operation that you want to perform. Set the value to **CreateTrafficMirrorFilter**.
RegionId	String	Yes	cn-hongkong	The ID of the region to which the mirrored traffic belongs. You can call the DescribeRegions operation to query the most recent region list. For more information about regions that support traffic mirroring, see Overview of traffic mirroring.
TrafficMirrorFilterDescription	String	No	this is a filter.	The description of the filter. The description must be 2 to 256 characters in length. It must start with a letter and cannot start with `http://` or `https://`.
TrafficMirrorFilterName	String	No	abc	The name of the filter. The name must be 2 to 128 characters in length, and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with `http://` or `https://`.
ClientToken	String	No	123e4567-e89b-12d3-a456-4266****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. **ClientToken** supports only ASCII characters. It can contain up to 64 ASCII characters. For more information, see How can I ensure idempotence?
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: only prechecks the request. The filter is note created. The system prechecks the required parameters, request format, and service limits. If the request fails the precheck, the corresponding error code is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the request. This is the default value. If the request passes the precheck, a 2XX HTTP status code is returned and the filter is created.
IngressRules.N.Priority	Integer	No	1	The priority of the inbound rule. A smaller value indicates a higher priority. The maximum value of **N** is **10**, which indicates that you can configure at most 10 inbound rules for a filter.
IngressRules.N.Action	String	No	accept	The collection policy of the inbound rule. Valid values: • **accept**: collects network traffic. • **drop**: does not collect network traffic.

Parameter	Type	Required	Example	Description
IngressRules.N.Protocol	String	No	TCP	The transport protocol used by inbound traffic that needs to be mirrored. Valid values: • **ALL**: all protocols • **ICMP**: Internet Control Message Protocol (ICMP) • **TCP**: TCP • **UDP**: UDP
IngressRules.N.DestinationCidrBlock	String	No	10.0.0.0/24	The destination CIDR block of the inbound traffic.
IngressRules.N.SourceCidrBlock	String	No	10.0.0.0/24	The source CIDR block of the inbound traffic.
IngressRules.N.DestinationPortRange	String	No	80/120	The destination port range of the inbound traffic. Valid values: **1** to **65535**. Separate the first port and last port with a forward slash (/), for example, **1/200** or **80/80**. A value of **-1/-1** indicates that all ports are available. Therefore, do not set the value to -1/-1. **Note** When **IngressRules.N.Protocol** is set to **ICMP**, ignore this parameter.
IngressRules.N.SourcePortRange	String	No	80/120	The source port range of the inbound traffic. Valid values: **1** to **65535**. Separate the first port and last port with a forward slash (/), for example, **1/200** or **80/80**. A value of **-1/-1** indicates that all ports are available. Therefore, do not set the value to -1/-1. **Note** When **IngressRules.N.Protocol** is set to **ICMP**, ignore this parameter.
EgressRules.N.Priority	Integer	No	1	The priority of the outbound rule. A smaller value indicates a higher priority. The maximum value of **N** is **10**, which indicates that you can configure at most 10 outbound rules for a filter.
EgressRules.N.Action	String	No	accept	The collection policy of the outbound rule. Valid values: • **accept**: collects network traffic. • **drop**: does not collect network traffic.
EgressRules.N.Protocol	String	No	TCP	The transport protocol used by outbound traffic that needs to be mirrored. Valid values: • **ALL**: all protocols • **ICMP**: ICMP • **TCP**: TCP • **UDP**: UDP
EgressRules.N.DestinationCidrBlock	String	No	10.0.0.0/24	The destination CIDR block of the outbound traffic.
EgressRules.N.SourceCidrBlock	String	No	10.0.0.0/24	The source CIDR block of the outbound traffic.

Parameter	Type	Required	Example	Description
EgressRules.N.DestinationPortRange	String	No	22/40	The destination CIDR block of the outbound traffic. Valid values: **1** to **65535**. Separate the first port and last port with a forward slash (/), for example, **1/200** or **80/80**. A value of **-1/-1** indicates that all ports are available. Therefore, do not set the value to -1/-1. **Note** When **EgressRules.N.Protocol** is set to **ICMP**, ignore this parameter.
EgressRules.N.SourcePortRange	String	No	22/40	The source port range of the outbound traffic. Valid values: **1** to **65535**. Separate the first port and last port with a forward slash (/), for example, **1/200** or **80/80**. A value of **-1/-1** indicates that all ports are available. Therefore, do not set the value to -1/-1. **Note** When **EgressRules.N.Protocol** is set to **ICMP**, ignore this parameter.

Response parameters

Parameter	Type	Example	Description
RequestId	String	28DB147D-217B-43E8-9E94-A3F6837DDC8A	The ID of the request.
TrafficMirrorFilterId	String	tmf-j6cmls82xnc86vtpe****	The ID of the filter.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateTrafficMirrorFilter
&RegionId=cn-hongkong
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateTrafficMirrorFilterResponse>
 <RequestId>28DB147D-217B-43E8-9E94-A3F6837DDC8A</RequestId>
 <TrafficMirrorFilterId>tmf-j6cmls82xnc86vtpe****</TrafficMirrorFilterId>
</CreateTrafficMirrorFilterResponse>
```

`JSON` format

```
{
  "RequestId": "28DB147D-217B-43E8-9E94-A3F6837DDC8A",
  "TrafficMirrorFilterId": "tmf-j6cmls82xnc86vtpe****"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	IncorrectBusinessStatus.TrafficMirror	The business status of traffic mirror is incorrect.	The error message returned because the mirrored traffic is in an invalid state.

HttpCode	Error code	Error message	Description
400	OptInRequired.TrafficMirror	You need to subscribe to the traffic mirror service first.	The error message returned because traffic mirroring is not enabled.
400	QuotaExceeded.TrafficMirrorFilter	The maximum number of traffic image filters is exceeded.	The error message returned because the number of filters has reached the upper limit.
400	DuplicatedParam.Priority	The specified priority conflicts with the existing priority.	The error message returned because the specified priority is the same as an existing one.
400	UnsupportedRegion	The feature is not supported in current region.	The error message returned because this feature is not supported in the current region.

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

26.4. DeleteTrafficMirrorFilter

Deletes a filter.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteTrafficMirrorFilter	The operation that you want to perform. Set the value to **DeleteTrafficMirrorFilter**.
RegionId	String	Yes	cn-hongkong	The ID of the region to which the mirrored traffic belongs. You can call the DescribeRegions operation to query the most recent region list. For more information about regions that support traffic mirroring, see Overview of traffic mirroring.
TrafficMirrorFilterId	String	Yes	tmf-j6cmls82xnc86vtpe****	The ID of the filter.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe63****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` supports only ASCII characters. It can contain up to 64 ASCII characters.
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: only checks the API request. The filter is not deleted. The system checks the required parameters, request format, and limits. If the request fails the precheck, the corresponding error code is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the request. After the request passes the precheck, the filter is deleted.

Response parameters

Parameter	Type	Example	Description
RequestId	String	07F272E2-6AD5-433A-8207-A607C76F1676	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteTrafficMirrorFilter
&RegionId=cn-hongkong
&TrafficMirrorFilterId=tmf-j6cmls82xnc86vtpe****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteTrafficMirrorFilterResponse>
 <RequestId>07F272E2-6AD5-433A-8207-A607C76F1676</RequestId>
</DeleteTrafficMirrorFilterResponse>
```

`JSON` format

```
{
  "RequestId": "07F272E2-6AD5-433A-8207-A607C76F1676"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	ResourceNotFound.TrafficMirrorFilter	The specified resource of traffic mirror filter is not found.	The error message returned because the specified filter does not exist.
400	IncorrectStatus.TrafficMirrorFilter	The status of traffic mirror filter is incorrect.	The error message returned because the filter is in an invalid state.
400	IncorrectStatus.TrafficMirrorRule	The status of traffic mirror rule is incorrect.	The error message returned because the rule of the filter is in an invalid state.
400	DependencyViolation.TrafficMirrorSession	Some traffic mirror sessions depend on the specified resource.	The error message returned because the traffic mirror session depends on the current resource.

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

26.5. UpdateTrafficMirrorFilterAttribute

Modifies the configuration of a filter for traffic mirroring.

Debugging

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

Request parameters

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

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hongkong	The ID of the region to which the mirrored traffic belongs. You can call the DescribeRegions operation to query the most recent region list. For more information about regions that support traffic mirroring, see Overview of traffic mirroring.
TrafficMirrorFilterId	String	Yes	tmf-j6cmls82xnc86vtpe****	The ID of the filter.
TrafficMirrorFilterDescription	String	No	This is a new filter.	The description of the filter. The description must be 2 to 256 characters in length. It must start with a letter but cannot start with http:// or https://.
TrafficMirrorFilterName	String	No	test	The name of the filter. The name must be 2 to 128 characters in length and can contain digits, periods (.), underscores (_), and hyphens (-). It must start with a letter but cannot start with http:// or https://.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` supports only ASCII characters. It can contain up to 64 ASCII characters.
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: only prechecks the request. The configuration of the filter is not modified. The system prechecks the required parameters, request format, and service limits. If the request fails the precheck, the corresponding error code is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the request. This is the default value. If the request passes the precheck, a 2XX HTTP status code is returned and the configuration of the filter is modified.

Response parameters

Parameter	Type	Example	Description
RequestId	String	5816D35F-94D5-48CE-838F-2327C8EE8D49	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=UpdateTrafficMirrorFilterAttribute
&RegionId=cn-hongkong
&TrafficMirrorFilterId=tmf-j6cmls82xnc86vtpe****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<UpdateTrafficMirrorFilterAttributeResponse>
 <RequestId>5816D35F-94D5-48CE-838F-2327C8EE8D49</RequestId>
</UpdateTrafficMirrorFilterAttributeResponse>
```

JSON format

```
{
  "RequestId": "5816D35F-94D5-48CE-838F-2327C8EE8D49"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	ResourceNotFound.TrafficMirrorFilter	The specified resource of traffic mirror filter is not found.	The error message returned because the specified filter does not exist.
400	IncorrectStatus.TrafficMirrorFilter	The status of traffic mirror filter is incorrect.	The error message returned because the specified filter is in an invalid state.

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

26.6. ListTrafficMirrorFilters

Queries filters for traffic mirroring.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListTrafficMirrorFilters	The operation that you want to perform. Set the value to **ListTrafficMirrorFilters**.
RegionId	String	Yes	cn-hongkong	The ID of the region to which the mirrored traffic belongs. You can call the DescribeRegions operation to query the most recent region list. For more information about regions that support traffic mirroring, see Overview of traffic mirroring.
TrafficMirrorFilterName	String	No	abc	The name of the filter.
MaxResults	Integer	No	10	The maximum number of records to be returned for the query. Valid values: **1** to **100**. Default value: **10**.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The query token. Set this parameter to the NextToken value that is returned in the last API call. If no subsequent request is sent, you do not need to set this parameter.
TrafficMirrorFilterIds.N	RepeatList	No	tmf-j6cmls82xnc86vtpe****	The ID of the filter. The maximum value of **N** is **100**, which indicates that you can query at most 100 filters at a time.

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token that is required for the next query. If the NextToken parameter is empty, no subsequent request will be sent.
RequestId	String	739CA01C-92EB-4C69-BCC0-280149C6F41E	The ID of the request.
TotalCount	String	1	The total number of entries returned.
TrafficMirrorFilters	Array of TrafficMirrorFilter		The list of details about the filters.
EgressRules	Array of TrafficMirrorRule		The list of details about outbound rules.
Action	String	accept	The collection policy of the outbound rule. Valid values: • **accept**: collects network traffic. • **drop**: does not collect network traffic.
DestinationCidrBlock	String	10.0.0.0/24	The destination CIDR block of the outbound traffic.
DestinationPortRange	String	22/40	The destination port range of the outbound traffic.
Priority	Integer	1	The priority of the outbound rule. A smaller value indicates a higher priority.
Protocol	String	TCP	The transport protocol used by outbound traffic that needs to be mirrored. Valid values: • **ALL**: all protocols • **ICMP**: Internet Control Message Protocol (ICMP) • **TCP**: TCP • **UDP**: UDP
SourceCidrBlock	String	10.0.0.0/24	The source CIDR block of the outbound traffic.
SourcePortRange	String	22/40	The source port range of the outbound traffic.
TrafficDirection	String	egress	The direction of the network traffic. Valid values: • **egress**: outbound • **ingress**: inbound
TrafficMirrorFilterId	String	tmf-j6cmls82xnc86vtpe****	The ID of the filter associated with the outbound rule.
TrafficMirrorFilterRuleId	String	tmr-j6c89rzmtd3hhdugq****	The ID of the outbound rule.
TrafficMirrorFilterRuleStatus	String	Created	The state of the outbound rule. Valid values: • **Creating**: The rule is being created. • **Created**: The rule is created. • **Modifying**: The rule is being modified. • **Deleting**: The rule is being deleted.

Parameter	Type	Example	Description
IngressRules	Array of TrafficMirrorRule		The list of details about inbound rules.
Action	String	accept	The collection policy of the inbound rule. Valid values: • **accept**: collects network traffic. • **drop**: does not collect network traffic.
DestinationCidrBlock	String	0.0.0.0/0	The destination CIDR block of the inbound traffic.
DestinationPortRange	String	-1/-1	The destination port range of the inbound traffic.
Priority	Integer	1	The priority of the inbound rule. A smaller value indicates a higher priority.
Protocol	String	ALL	The transport protocol used by inbound traffic that needs to be mirrored. Valid values: • **ALL**: all protocols • **ICMP**: ICMP • **TCP**: TCP • **UDP**: UDP
SourceCidrBlock	String	0.0.0.0/0	The source CIDR block of the inbound traffic.
SourcePortRange	String	-1/-1	The destination port range of the inbound traffic.
TrafficDirection	String	ingress	The direction of the network traffic. Valid values: • **egress**: outbound • **ingress**: inbound
TrafficMirrorFilterId	String	tmf-j6cmls82xnc86vtpe****	The ID of the filter associated with the inbound rule.
TrafficMirrorFilterRuleId	String	tmr-j6cezu8e68rnpepet****	The ID of the inbound rule.
TrafficMirrorFilterRuleStatus	String	Created	The state of the inbound rule. Valid values: • **Creating**: The rule is being created. • **Created**: The rule is created. • **Modifying**: The rule is being modified. • **Deleting**: The rule is being deleted.
TrafficMirrorFilterDescription	String	This is a filter.	The description of the filter.
TrafficMirrorFilterId	String	tmf-j6cmls82xnc86vtpe****	The ID of the filter.
TrafficMirrorFilterName	String	abc	The name of the filter.

Parameter	Type	Example	Description
TrafficMirrorFilterStatus	String	Created	The state of the filter. Valid values: • **Creating**: The filter is being created. • **Created**: The filter is created. • **Modifying**: The filter is being modified. • **Deleting**: The filter is being deleted.

Example

Sample requests

```
http(s)://[Endpoint]/?Action=ListTrafficMirrorFilters
&RegionId=cn-hongkong
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ListTrafficMirrorFiltersResponse>
 <TrafficMirrorFilters>
    <TrafficMirrorFilterDescription>This is a filter.</TrafficMirrorFilterDescription>
    <TrafficMirrorFilterStatus>Created</TrafficMirrorFilterStatus>
    <TrafficMirrorFilterId>tmf-j6cmls82xnc86vtpe****</TrafficMirrorFilterId>
    <TrafficMirrorFilterName>abc</TrafficMirrorFilterName>
    <IngressRules>
       <DestinationPortRange>-1/-1</DestinationPortRange>
       <TrafficMirrorFilterRuleId>tmr-j6cezu8e68rnpepet****</TrafficMirrorFilterRuleId>
       <Action>accept</Action>
       <SourcePortRange>-1/-1</SourcePortRange>
       <Priority>1</Priority>
       <TrafficMirrorFilterRuleStatus>Created</TrafficMirrorFilterRuleStatus>
       <SourceCidrBlock>0.0.0.0/0</SourceCidrBlock>
       <DestinationCidrBlock>0.0.0.0/0</DestinationCidrBlock>
       <Protocol>ALL</Protocol>
       <TrafficDirection>ingress</TrafficDirection>
       <TrafficMirrorFilterId>tmf-j6cmls82xnc86vtpe****</TrafficMirrorFilterId>
    </IngressRules>
    <EgressRules>
       <DestinationPortRange>22/40</DestinationPortRange>
       <TrafficMirrorFilterRuleId>tmr-j6c89rzmtd3hhdugq****</TrafficMirrorFilterRuleId>
       <Action>accept</Action>
       <SourcePortRange>22/40</SourcePortRange>
       <Priority>1</Priority>
       <TrafficMirrorFilterRuleStatus>Created</TrafficMirrorFilterRuleStatus>
       <SourceCidrBlock>10.0.0.0/24</SourceCidrBlock>
       <DestinationCidrBlock>10.0.0.0/24</DestinationCidrBlock>
       <Protocol>TCP</Protocol>
       <TrafficDirection>egress</TrafficDirection>
       <TrafficMirrorFilterId>tmf-j6cmls82xnc86vtpe****</TrafficMirrorFilterId>
    </EgressRules>
 </TrafficMirrorFilters>
 <TotalCount>1</TotalCount>
 <NextToken>caeba0bbb2be03f84eb48b699f0a4883</NextToken>
 <RequestId>739CA01C-92EB-4C69-BCC0-280149C6F41E</RequestId>
</ListTrafficMirrorFiltersResponse>
```

`JSON` format

```
{
  "TrafficMirrorFilters": {
    "TrafficMirrorFilterDescription": "This is a filter.",
    "TrafficMirrorFilterStatus": "Created",
    "TrafficMirrorFilterId": "tmf-j6cmls82xnc86vtpe****",
    "TrafficMirrorFilterName": "abc",
    "IngressRules": {
      "DestinationPortRange": "-1/-1",
      "TrafficMirrorFilterRuleId": "tmr-j6cezu8e68rnpepet****",
      "Action": "accept",
      "SourcePortRange": "-1/-1",
      "Priority": 1,
      "TrafficMirrorFilterRuleStatus": "Created",
      "SourceCidrBlock": "0.0.0.0/0",
      "DestinationCidrBlock": "0.0.0.0/0",
      "Protocol": "ALL",
      "TrafficDirection": "ingress",
      "TrafficMirrorFilterId": "tmf-j6cmls82xnc86vtpe****"
    },
    "EgressRules": {
      "DestinationPortRange": "22/40",
      "TrafficMirrorFilterRuleId": "tmr-j6c89rzmtd3hhdugq****",
      "Action": "accept",
      "SourcePortRange": "22/40",
      "Priority": 1,
      "TrafficMirrorFilterRuleStatus": "Created",
      "SourceCidrBlock": "10.0.0.0/24",
      "DestinationCidrBlock": "10.0.0.0/24",
      "Protocol": "TCP",
      "TrafficDirection": "egress",
      "TrafficMirrorFilterId": "tmf-j6cmls82xnc86vtpe****"
    }
  },
  "TotalCount": 1,
  "NextToken": "caeba0bbb2be03f84eb48b699f0a4883",
  "RequestId": "739CA01C-92EB-4C69-BCC0-280149C6F41E"
}
```


Error codes

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

26.7. CreateTrafficMirrorFilterRules

Creates an inbound or outbound rule for traffic mirroring.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateTrafficMirrorFilterRules	The operation that you want to perform. Set the value to **CreateTrafficMirrorFilterRules**.
RegionId	String	Yes	cn-hongkong	The ID of the region to which the mirrored traffic belongs. You can call the DescribeRegions operation to query the most recent region list. For more information about regions that support traffic mirroring, see Overview of traffic mirroring.
TrafficMirrorFilterId	String	Yes	tmf-j6cmls82xnc86vtpe****	The ID of the filter.

Parameter	Type	Required	Example	Description
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe63****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. **ClientToken** supports only ASCII characters. It can contain up to 64 ASCII characters.
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: only checks the API request. The inbound or outbound rule is not created. The system checks the required parameters, request format, and limits. If the request fails the precheck, the corresponding error code is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the request. After the request passes the precheck, the inbound or outbound rule is created.
IngressRules.N.Priority	Integer	No	1	The priority of the inbound rule. A smaller value indicates a higher priority. The maximum value of **N** is **10**, which indicates that you can configure at most 10 inbound rules for a filter.
IngressRules.N.Action	String	No	accept	The collection policy of the inbound rule. Valid values: • **accept**: collects network traffic. • **drop**: does not collect network traffic.
IngressRules.N.Protocol	String	No	TCP	The transport protocol used by inbound traffic that needs to be mirrored. Valid values: • **ALL**: all protocols • **ICMP**: Internet Control Message Protocol (ICMP) • **TCP**: TCP • **UDP**: UDP
IngressRules.N.DestinationCidrBlock	String	No	10.0.0.0/24	The destination CIDR block of the inbound traffic.
IngressRules.N.SourceCidrBlock	String	No	10.0.0.0/24	The source CIDR block of the inbound traffic.
IngressRules.N.DestinationPortRange	String	No	80/120	The destination port range of the inbound traffic. Valid values: **1** to **65535**. Separate the first port and last port with a forward slash (/), for example, **1/200** or **80/80**. A value of **-1/-1** indicates that all ports are available. Therefore, do not set the value to -1/-1. **Note** When **IngressRules.N.Protocol** is set to **ICMP**, ignore this parameter.

Parameter	Type	Required	Example	Description
IngressRules.N.SourcePortRange	String	No	80/120	The source port range of the inbound traffic. Valid values: **1** to **65535**. Separate the first port and last port with a forward slash (/), for example, **1/200** or **80/80**. A value of **-1/-1** indicates that all ports are available. Therefore, do not set the value to -1/-1. **Note** When **IngressRules.N.Protocol** is set to **ICMP**, ignore this parameter.
EgressRules.N.Priority	Integer	No	1	The priority of the outbound rule. A smaller value indicates a higher priority. The maximum value of **N** is **10**, which indicates that you can configure at most 10 outbound rules for a filter.
EgressRules.N.Action	String	No	accept	The collection policy of the outbound rule. Valid values: • **accept**: collects network traffic. • **drop**: does not collect network traffic.
EgressRules.N.Protocol	String	No	TCP	The transport protocol used by outbound traffic that needs to be mirrored. Valid values: • **ALL**: all protocols • **ICMP**: ICMP • **TCP**: TCP • **UDP**: UDP
EgressRules.N.DestinationCidrBlock	String	No	10.0.0.0/24	The destination CIDR block of the outbound traffic.
EgressRules.N.SourceCidrBlock	String	No	10.0.0.0/24	The source CIDR block of the outbound traffic.
EgressRules.N.DestinationPortRange	String	No	22/40	The destination CIDR block of the outbound traffic. Valid values: **1** to **65535**. Separate the first port and last port with a forward slash (/), for example, **1/200** or **80/80**. A value of **-1/-1** indicates that all ports are available. Therefore, do not set the value to -1/-1. **Note** When **EgressRules.N.Protocol** is set to **ICMP**, ignore this parameter.
EgressRules.N.SourcePortRange	String	No	22/40	The source port range of the outbound traffic. Valid values: **1** to **65535**. Separate the first port and last port with a forward slash (/), for example, **1/200** or **80/80**. A value of **-1/-1** indicates that all ports are available. Therefore, do not set the value to -1/-1. **Note** When **EgressRules.N.Protocol** is set to **ICMP**, ignore this parameter.

Response parameters

Parameter	Type	Example	Description
EgressRules	Array of EgressRule		The list of outbound rules.
InstanceId	String	tmr-j6cok23ugp53eeib5****	The ID of the outbound rule.
IngressRules	Array of IngressRule		The list of inbound rules.
InstanceId	String	tmr-j6c6rtallo51ouzv3****	The ID of the inbound rule.
RequestId	String	07F272E2-6AD5-433A-8207-A607C76F1676	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateTrafficMirrorFilterRules
&RegionId=cn-hongkong
&TrafficMirrorFilterId=tmf-j6cmls82xnc86vtpe****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateTrafficMirrorFilterRulesResponse>
 <RequestId>07F272E2-6AD5-433A-8207-A607C76F1676</RequestId>
 <EgressRules>
    <InstanceId>tmr-j6cok23ugp53eeib5****</InstanceId>
 </EgressRules>
 <IngressRules>
    <InstanceId>tmr-j6c6rtallo51ouzv3****</InstanceId>
 </IngressRules>
</CreateTrafficMirrorFilterRulesResponse>
```

`JSON` format

```
{
  "RequestId": "07F272E2-6AD5-433A-8207-A607C76F1676",
  "EgressRules": {
    "InstanceId": "tmr-j6cok23ugp53eeib5****"
  },
  "IngressRules": {
    "InstanceId": "tmr-j6c6rtallo51ouzv3****"
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
400	ResourceNotFound.TrafficMirrorFilter	The specified resource of traffic mirror filter is not found.	The error message returned because the specified filter does not exist.
400	IncorrectStatus.TrafficMirrorFilter	The status of traffic mirror filter is incorrect.	The error message returned because the specified filter is in an invalid state.
400	IncorrectStatus.TrafficMirrorSession	The status of traffic mirror session is incorrect.	The error message returned because the traffic mirror session is in an invalid state.

HttpCode	Error code	Error message	Description
400	QuotaExceeded.TrafficMirrorRulesPerFilter	The quota of the number of traffic mirror rules per filter is exceeded.	The error message returned because the number of rules associated with the filter has reached the upper limit.
400	DuplicatedParam.Priority	The specified priority conflicts with the existing priority.	The error message returned because the specified priority is the same as an existing one.
400	UnsupportedRegion	The feature is not supported in current region.	The error message returned because this feature is not supported in the current region.

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

26.8. DeleteTrafficMirrorFilterRules

Deletes an inbound or outbound rule of a filter for traffic mirroring.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteTrafficMirrorFilterRules	The operation that you want to perform. Set the value to **DeleteTrafficMirrorFilterRules**.
RegionId	String	Yes	cn-hongkong	The ID of the region to which the mirrored traffic belongs. You can call the DescribeRegions operation to query the most recent region list. For more information about regions that support traffic mirroring, see Overview of traffic mirroring.
TrafficMirrorFilterId	String	Yes	tmf-j6cmls82xnc86vtpe****	The ID of the filter.
TrafficMirrorFilterRuleIds.N	RepeatList	Supported	tmr-j6cbmubn323k7jlq3****	The ID of the inbound or outbound rule.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe63****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` supports only ASCII characters. It can contain up to 64 ASCII characters.
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: only checks the API request. The inbound or outbound rule is not deleted. The system checks the required parameters, request format, and limits. If the request fails the precheck, the corresponding error code is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the request. After the request passes the precheck, the inbound or outbound rule is deleted.

Response parameters

Parameter	Type	Example	Description
RequestId	String	BD8A3F71-00C5-4655-8F55-11F3976C3274	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteTrafficMirrorFilterRules
&RegionId=cn-hongkong
&TrafficMirrorFilterId=tmf-j6cmls82xnc86vtpe****
&TrafficMirrorFilterRuleIds.1=tmr-j6cbmubn323k7jlq3****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteTrafficMirrorFilterRulesResponse>
 <RequestId>BD8A3F71-00C5-4655-8F55-11F3976C3274</RequestId>
</DeleteTrafficMirrorFilterRulesResponse>
```

`JSON` format

```
{
  "RequestId": "BD8A3F71-00C5-4655-8F55-11F3976C3274"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	ResourceNotFound.TrafficMirrorRule	The specified resource of traffic mirror rule is not found.	The error message returned because the specified filter does not exist.
400	IncorrectStatus.TrafficMirrorRule	The status of traffic mirror rule is incorrect.	The error message returned because the specified filter is in an invalid state.

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

26.9. UpdateTrafficMirrorFilterRuleAttribute

Modifies the configuration of an inbound or outbound rule for traffic mirroring.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UpdateTrafficMirrorFilterRuleAttribute	The operation that you want to perform. Set the value to **UpdateTrafficMirrorFilterRuleAttribute**.
RegionId	String	Yes	cn-hongkong	The ID of the region to which the mirrored traffic belongs. You can call the DescribeRegions operation to query the most recent region list. For more information about regions that support traffic mirroring, see Overview of traffic mirroring.

Parameter	Type	Required	Example	Description
TrafficMirrorFilterRuleId	String	Yes	tmr-j6c89rzmtd3hhdugq****	The ID of the inbound or outbound rule.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` supports only ASCII characters. It can contain up to 64 ASCII characters.
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: only checks the API request. The configuration of the inbound or outbound rule is not modified. The system prechecks the required parameters, request format, and service limits. If the request fails the precheck, the corresponding error code is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the request. This is the default value. If the request passes the precheck, a 2XX HTTP status code is returned and the configuration of the inbound or outbound rule is modified.
Priority	Integer	No	1	The new priority of the inbound or outbound rule. A smaller value indicates a higher priority.
Protocol	String	No	ICMP	The new transport layer protocol used by the traffic to be mirrored by the inbound or outbound rule. Valid values: • **ALL**: all protocols • **ICMP**: Internet Control Message Protocol (ICMP) • **TCP**: TCP • **UDP**: UDP
RuleAction	String	No	accept	The new collection policy of the inbound or outbound rule. Valid values: • **accept**: collects network traffic. • **drop**: does not collect network traffic.
DestinationCidrBlock	String	No	10.0.0.0/24	The new destination CIDR block of network traffic, which is specified in the inbound or outbound rule.
SourceCidrBlock	String	No	0.0.0.0/0	The new source CIDR block of network traffic, which is specified in the inbound or outbound rule.
DestinationPortRange	String	No	-1/-1	The new destination port range of network traffic, which is specified in the inbound or outbound rule. **Note** When **Protocol** is set to **ICMP**, you cannot change the port range.

Parameter	Type	Required	Example	Description
SourcePortRange	String	No	22/40	The source port range of network traffic, which is specified in the inbound or outbound rule. **Note** When **Protocol** is set to **ICMP**, you cannot change the port range.

Response parameters

Parameter	Type	Example	Description
RequestId	String	02EB8585-D4DC-4E29-A0F4-7C588C82863C	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=UpdateTrafficMirrorFilterRuleAttribute
&RegionId=cn-hongkong
&TrafficMirrorFilterRuleId=tmr-j6c89rzmtd3hhdugq****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<UpdateTrafficMirrorFilterRuleAttributeResponse>
    <RequestId>02EB8585-D4DC-4E29-A0F4-7C588C82863C</RequestId>
</UpdateTrafficMirrorFilterRuleAttributeResponse>
```

`JSON` format

```
{
  "RequestId": "02EB8585-D4DC-4E29-A0F4-7C588C82863C"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	ResourceNotFound.TrafficMirrorRule	The specified resource of traffic mirror rule is not found.	The error message returned because the specified filter does not exist.
400	IncorrectStatus.TrafficMirrorRule	The status of traffic mirror rule is incorrect.	The error message returned because the specified filter is in an invalid state.
400	DuplicatedParam.Priority	The specified priority conflicts with the existing priority.	The error message returned because the specified priority is the same as an existing one.

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

26.10. CreateTrafficMirrorSession

Creates a traffic mirror session.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateTrafficMirrorSession	The operation that you want to perform. Set the value to **CreateTrafficMirrorSession**.
Priority	Integer	Yes	1	The priority of the traffic mirror session. Valid values: **1** to **32766**. A smaller value indicates a higher priority. You cannot specify the same priority for traffic mirror sessions that are created in the same region with the same Alibaba Cloud account.
RegionId	String	Yes	cn-hongkong	The ID of the region to which the traffic mirror session belongs. You can call the DescribeRegions operation to query the most recent region list. For more information about regions that support traffic mirroring, see Overview of traffic mirroring.
TrafficMirrorFilterId	String	Yes	tmf-j6cmls82xnc86vtpe****	The ID of the filter.
TrafficMirrorSourceIds.N	RepeatList	Supported	eni-j6c2fp57q8rr47rp****	The ID of the mirror source. You can specify only an elastic network interface (ENI) as the mirror source. The default value of **N** is **1**, which indicates that you can add only one mirror source to a traffic mirror session.
TrafficMirrorTargetId	String	Yes	eni-j6c8znm5l1yt4sox****	The ID of the mirror destination. You can specify only an ENI or a Server Load Balancer (SLB) instance as a mirror destination.
TrafficMirrorTargetType	String	Yes	NetworkInterface	The type of the mirror destination. • **NetworkInterface**: an ENI • **SLB**: an internal-facing SLB instance
TrafficMirrorSessionDescription	String	No	This is a trafficmirrorsession.	The description of the traffic mirror session. The description must be 2 to 256 characters in length and cannot start with `http://` or `https://`.
TrafficMirrorSessionName	String	No	test	The name of the traffic mirror session. The name must be 2 to 128 characters in length and can contain digits, underscores (_), and hyphens (-). It must start with a letter.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe63****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. `ClientToken` can contain only ASCII characters. It cannot exceed 64 characters in length.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: only checks the API request. The mirror source is not created. The system checks the required parameters, request format, and limits. If the request fails the precheck, the corresponding error code is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the request. After the request passes the precheck, the traffic mirror session is created.
VirtualNetworkId	Integer	No	1	The VXLAN network identifier (VNI) that is used to distinguish different mirrored traffic. Valid values: **0** to **16777215**. You can specify VNIs for the traffic mirror destination to identify mirrored traffic from different sessions. If you do not specify a VNI, the system randomly allocates a VNI. If you want the system to randomly allocate a VNI, ignore this parameter.
Enabled	Boolean	No	false	Specifies whether to enable traffic mirror sessions. • **false** (default): no • **true**: yes
PacketLength	Integer	No	1500	The maximum transmission unit. Set the value to **1500** or ignore this parameter.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.
TrafficMirrorSessionId	String	tms-j6ce5di4w7nvigfjz****	The ID of the traffic mirror session.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateTrafficMirrorSession
&Priority=1
&RegionId=cn-hongkong
&TrafficMirrorFilterId=tmf-j6cmls82xnc86vtpe****
&TrafficMirrorSourceIds.1=eni-j6c2fp57q8rr47rp****
&TrafficMirrorTargetId=eni-j6c8znm5l1yt4sox****
&TrafficMirrorTargetType=NetworkInterface
&<Common request parameters>
```

Sample success responses

`XML` format

```
<CreateTrafficMirrorSessionResponse>
  <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
  <TrafficMirrorSessionId>tms-j6ce5di4w7nvigfjz****</TrafficMirrorSessionId>
</CreateTrafficMirrorSessionResponse>
```

JSON format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0",
  "TrafficMirrorSessionId": "tms-j6ce5di4w7nvigfjz****"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	IncorrectBusinessStatus.TrafficMirror	The business status of traffic mirror is incorrect.	The error message returned because the mirrored traffic is in an invalid state.
400	OptInRequired.TrafficMirror	You need to subscribe to the traffic mirror service first.	The error message returned because traffic mirroring is not enabled.
400	DuplicatedParam.SourceInstanceIds	The parameter of source instance IDs contains duplicate values.	the id parameter of the traffic mirror source instance contains duplicate values.
400	OperationDenied.DuplicateRole	The network interface must not be the source and the target of traffic mirror sessions at the same time.	The error message returned because an ENI cannot be specified as both the source and destination of a traffic mirror session.
400	ResourceNotFound.NetworkInterface	The specified resource of network interface is not found.	The error message returned because the specified ENI does not exist.
400	ResourceNotFound.EcsInstance	The specified resource of ECS instance is not found.	The error message returned because the specified Elastic Compute Service (ECS) instance does not exist.
400	ResourceNotFound.Slb	The specified resource of SLB is not found.	The error message returned because the specified SLB instance does not exist.
400	OperationDenied.SlbNotInVpc	The specified SLB is not in any VPC.	The error message returned because the specified SLB instance does not belong to a virtual private cloud (VPC).
400	ResourceNotFound.TrafficMirrorFilter	The specified resource of traffic mirror filter is not found.	The error message returned because the specified filter does not exist.
400	IncorrectStatus.TrafficMirrorFilter	The status of traffic mirror filter is incorrect.	The error message returned because the specified filter is in an invalid state.
400	OperationDenied.EcsNotSupportTrafficMirror	The ECS instance does not support traffic mirroring.	The error message returned because the ECS instance does not support traffic mirroring.
400	QuotaExceeded.SessionNum	The quota of the number of traffic mirror sessions is exceeded.	The error message returned because the number of traffic mirror sessions has reached the upper limit.
400	QuotaExceeded.FilterRelatedSession	The quota of the number of traffic mirror sessions related to one filter is exceeded.	The error message returned because the number of traffic mirror sessions associated with the filter has reached the upper limit.
400	QuotaExceeded.SourceNumPerSession	The quota of the number of traffic mirror sources per session is exceeded.	The error message returned because the number of mirror sources associated with a traffic mirror session has reached the upper limit.
400	QuotaExceeded.NetworkInterfaceRelatedSession	The quota of the number of traffic mirror sessions related to one network interface is exceeded.	The error message returned because the number of traffic mirror sessions associated with an ENI has reached the upper limit.

HttpCode	Error code	Error message	Description
400	QuotaExceeded.SlbRelatedSession	The quota of the number of traffic mirror sessions related to one SLB is exceeded.	The error message returned because the number traffic mirror sessions associated with an SLB instance has reached the upper limit.
400	UnsupportedRegion	The feature is not supported in current region.	The error message returned because this feature is not supported in the current region.
400	InvalidLoadBalancerId.NotFound	The specified resource of load balancer is not found.	The error message returned because the specified SLB instance does not exist.
400	OperationDenied.FreeNetworkInterface	The network interface is not attached to any ECS instance.	The error message returned because the specified ENI is not associated with an ECS instance.

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

26.11. DeleteTrafficMirrorSession

Deletes a traffic mirror session.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteTrafficMirrorSession	The operation that you want to perform. Set the value to **DeleteTrafficMirrorSession**.
RegionId	String	Yes	cn-hongkong	The ID of the region to which the traffic mirror session belongs. You can call the DescribeRegions operation to query the most recent region list. For more information about regions that support traffic mirroring, see Overview of traffic mirroring.
TrafficMirrorSessionId	String	Yes	tms-j6cla50buc44ap8tu****	The ID of the traffic mirror session.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe63****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. `ClientToken` supports only ASCII characters. It can contain up to 64 ASCII characters.
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: only checks the API request. If you select this option, the traffic mirror session is not deleted after the request passes the check. The system checks the required parameters, request format, and limits. If the request fails the precheck, the corresponding error code is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the request. After the request passes the precheck, the traffic mirror session is deleted.

Response parameters

Parameter	Type	Example	Description
RequestId	String	0ED8D006-F706-4D23-88ED-E11ED28DCAC0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteTrafficMirrorSession
&RegionId=cn-hongkong
&TrafficMirrorSessionId=tms-j6cla50buc44ap8tu****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DeleteTrafficMirrorSessionResponse>
  <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCAC0</RequestId>
</DeleteTrafficMirrorSessionResponse>
```

`JSON` format

```
{
  "RequestId": "0ED8D006-F706-4D23-88ED-E11ED28DCAC0"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	ResourceNotFound.TrafficMirrorSession	The specified resource of traffic mirror session is not found.	The error message returned because the specified traffic mirror session does not exist.
400	IncorrectStatus.TrafficMirrorSession	The status of traffic mirror session is incorrect.	The error message returned because the traffic mirror session is in an invalid state.

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

26.12. UpdateTrafficMirrorSessionAttribute

Modifies the configuration of a traffic mirror session.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UpdateTrafficMirrorSessionAttribute	The operation that you want to perform. Set the value to **UpdateTrafficMirrorSessionAttribute**.
RegionId	String	Yes	cn-hongkong	The ID of the region to which the traffic mirror session belongs. You can call the DescribeRegions operation to query the most recent region list. For more information about regions that support traffic mirroring, see Overview of traffic mirroring.

Parameter	Type	Required	Example	Description
TrafficMirrorSessionId	String	Yes	tms-j6cla50buc44ap8tu****	The new ID of the traffic mirror session.
TrafficMirrorSessionDescription	String	No	This is a new session.	The new description of the traffic mirror session. The description must be 2 to 256 characters in length, and cannot start with `http://` or `https://`.
TrafficMirrorSessionName	String	No	abc	The new name of the traffic mirror session. The name must be 2 to 128 characters in length and can contain digits, underscores (_), and hyphens (-). It must start with a letter.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe63****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. **Client Token** can contain only ASCII characters. It cannot exceed 64 characters in length.
DryRun	Boolean	No	false	Specifies whether to precheck this request only. Valid values: • **true**: only checks the API request. If you select this option, the configuration of the traffic mirror session is not modified after the request passes the check. The system checks the required parameters, request syntax, and service limits. If the request fails the precheck, the corresponding error message is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the request. This is the default value. If the request passes the precheck, a 2XX HTTP status code is returned and the configuration of the traffic mirror session is modified.
TrafficMirrorTargetId	String	No	eni-j6c2fp57q8rr47rp*****	The ID of the new traffic mirror destination.
TrafficMirrorTargetType	String	No	NetworkInterface	The type of the new traffic mirror destination. Valid values: • **NetworkInterface**: an elastic network interface (ENI) • **SLB**: an internal-facing Server Load Balancer (SLB) instance
TrafficMirrorFilterId	String	No	tmf-j6cmls82xnc86vtpe****	The ID of the new traffic mirroring filter.
VirtualNetworkId	Integer	No	10	The new VXLAN network identifier (VNI) that is used to distinguish different mirrored traffic. Valid values: **0** to **16777215**. You can specify VNIs for the traffic mirror destination to identify mirrored traffic from different sessions. If you do not specify a VNI, the system randomly allocates a VNI. If you want the system to randomly allocate a VNI, ignore this parameter.

Parameter	Type	Required	Example	Description
Priority	Integer	No	2	The new priority of the traffic mirror session. Valid values: **1** to **32766**. A smaller value indicates a higher priority. You cannot specify the same priority for traffic mirror sessions that are created in the same region with the same Alibaba Cloud account.
Enabled	Boolean	No	false	Specifies whether to enable the traffic mirror session. • **false** (default): does not enable the traffic mirror session. • **true**: enables the traffic mirror session.

Response parameters

Parameter	Type	Example	Description
RequestId	String	64DCAF03-E2C7-479A-ACEA-38B79876B006	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=UpdateTrafficMirrorSessionAttribute
&RegionId=cn-hongkong
&TrafficMirrorSessionId=tms-j6cla50buc44ap8tu****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<UpdateTrafficMirrorSessionAttributeResponse>
  <RequestId>64DCAF03-E2C7-479A-ACEA-38B79876B006</RequestId>
</UpdateTrafficMirrorSessionAttributeResponse>
```

`JSON` format

```
{
  "RequestId": "64DCAF03-E2C7-479A-ACEA-38B79876B006"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	IncorrectBusinessStatus.TrafficMirror	The business status of traffic mirror is incorrect.	The error message returned because the mirrored traffic is in an invalid state.
400	OptInRequired.TrafficMirror	You need to subscribe to the traffic mirror service first.	The error message returned because traffic mirroring is disabled.
400	DuplicatedParam.Priority	The specified priority conflicts with the existing priority.	The error message returned because the specified priority is the same as an existing one.
400	ResourceNotFound.TrafficMirrorSession	The specified resource of traffic mirror session is not found.	The error message returned because the specified traffic mirror session does not exist.

HttpCode	Error code	Error message	Description
400	IncorrectStatus.TrafficMirrorSession	The status of traffic mirror session is incorrect.	The error message returned because the traffic mirror session is in an invalid state.
400	ResourceNotFound.TrafficMirrorFilter	The specified resource of traffic mirror filter is not found.	The error message returned because the specified filter does not exist.
400	IncorrectStatus.TrafficMirrorFilter	The status of traffic mirror filter is incorrect.	The error message returned because the filter is in an invalid state.
400	QuotaExceeded.FilterRelatedSession	The quota of the number of traffic mirror sessions related to one filter is exceeded.	The error message returned because the number of traffic mirror sessions associated with the filter has reached the upper limit.
400	ResourceNotFound.NetworkInterface	The specified resource of network interface is not found.	The error message returned because the specified ENI does not exist.
400	ResourceNotFound.EcsInstance	The specified resource of ECS instance is not found.	The error message returned because the specified Elastic Compute Service (ECS) instance does not exist.
400	ResourceNotFound.Slb	The specified resource of SLB is not found.	The error message returned because the specified SLB instance does not exist.
400	OperationDenied.SlbNotInVpc	The specified SLB is not in any VPC.	The error message returned because the specified SLB instance does not belong to a virtual private cloud (VPC).
400	QuotaExceeded.NetworkInterfaceRelatedSession	The quota of the number of traffic mirror sessions related to one network interface is exceeded.	The error message returned because the number of traffic mirror sessions associated with an ENI has reached the upper limit.
400	QuotaExceeded.SlbRelatedSession	The quota of the number of traffic mirror sessions related to one SLB is exceeded.	The error message returned because the number of traffic mirror sessions associated with an SLB instance has reached the upper limit.
400	OperationDenied.EcsNotSupportTrafficMirror	The ECS instance does not support traffic mirroring.	The error message returned because the ECS instance does not support traffic mirroring.
400	OperationDenied.DuplicateRole	The network interface must not be the source and the target of traffic mirror sessions at the same time.	The error message returned because an ENI cannot be specified as both the source and destination of a traffic mirror session.
400	InvalidLoadBalancerId.NotFound	The specified resource of load balancer is not found.	The error message returned because the specified SLB instance does not exist.
400	OperationDenied.FreeNetworkInterface	The network interface is not attached to any ECS instance.	The error message returned because the specified ENI is not associated with an ECS instance.

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

26.13. ListTrafficMirrorSessions

Queries details about a traffic mirror session.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListTrafficMirrorSessions	The operation that you want to perform. Set the value to **ListTrafficMirrorSessions**.
RegionId	String	Yes	cn-hongkong	The ID of the region to which the traffic mirror session belongs. You can call the DescribeRegions operation to query the most recent region list. For more information about regions that support traffic mirroring, see Overview of traffic mirroring.
TrafficMirrorSessionName	String	No	abc	The name of the traffic mirror session.
MaxResults	Integer	No	10	The maximum number of records to be returned for the query. Valid values: **1** to **100**. Default value: **10**.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The query token. Set this parameter to the value of the NextToken parameter that is returned in the last API call. If no subsequent request is sent, you do not need to set this parameter.
TrafficMirrorSessionIds.N	RepeatList	No	tms-j6cla50buc44ap8tu****	The ID of the traffic mirror session. The maximum value of **N** is **100**, which indicates that you can query at most 100 traffic mirror sessions at a time.
TrafficMirrorSourceId	String	No	eni-j6c8znm5l1yt4sox*****	The ID of the mirror source. You can specify only an elastic network interface (ENI) as the mirror source.
TrafficMirrorTargetId	String	No	eni-j6c2fp57q8rr47rp****	The ID of the mirror destination. You can specify only an ENI or a Server Load Balancer (SLB) instance as a mirror destination.
TrafficMirrorFilterId	String	No	tmf-j6cmls82xnc86vtpe****	The ID of the filter.
VirtualNetworkId	Integer	No	10	The VXLAN network identifier (VNI) that is used to distinguish different mirrored traffic. Valid values: **0** to **16777215**. You can specify VNIs for the traffic mirror destination to identify mirrored traffic from different sessions. If you do not specify a VNI, the system randomly allocates a VNI. If you want the system to randomly allocate a VNI, ignore this parameter.
Priority	Integer	No	1	The priority of the traffic mirror session. Valid values: **1** to **32766**. A smaller value indicates a higher priority. You cannot specify the same priority for traffic mirror sessions that are created in the same region with the same Alibaba Cloud account.
Enabled	Boolean	No	false	Specifies whether to enable traffic mirror sessions. • **false** (default): no • **true**: yes

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token that is required for the next query. If the NextToken parameter is empty, no subsequent request will be sent.
RequestId	String	739CA01C-92EB-4C69-BCC0-280149C6F41E	The ID of the request.
TotalCount	String	1	The total number of entries returned.
TrafficMirrorSessions	Array of TrafficMirrorSession		The list of details about traffic mirror sessions.
Enabled	Boolean	false	Indicates whether traffic mirror sessions are enabled. • **false** (default): no • **true**: yes
PacketLength	Integer	1500	The maximum transmission unit (MTU).
Priority	Integer	1	The priority of the traffic mirror session. A smaller value indicates a higher priority.
TrafficMirrorFilterId	String	tmf-j6cmls82xnc86vtpe****	The ID of the filter.
TrafficMirrorSessionBusinessStatus	String	Normal	The state of the traffic mirror session. • **Normal**: working as expected • **FinancialLocked**: locked due to overdue payments
TrafficMirrorSessionDescription	String	This is a session.	The description of the traffic mirror session.
TrafficMirrorSessionId	String	tms-j6cla50buc44ap8tu****	The ID of the traffic mirror session.
TrafficMirrorSessionName	String	test	The name of the traffic mirror session.
TrafficMirrorSessionStatus	String	Created	The state of the traffic mirror session. Valid values: • **Creating**: The traffic mirror session is being created. • **Created**: The traffic mirror session is created. • **Modifying**: The traffic mirror session is being modified. • **Deleting**: The traffic mirror session is being deleted.
TrafficMirrorSourceIds	List	eni-j6c8znm5l1yt4sox****	The ID of the mirror source.
TrafficMirrorTargetId	String	eni-j6c2fp57q8rr47rp****	The ID of the mirror destination.
TrafficMirrorTargetType	String	NetworkInterface	The type of the mirror destination. • **NetworkInterface**: an ENI • **SLB**: an internal-facing SLB instance
VirtualNetworkId	Integer	10	You can specify VNIs to distinguish different mirrored traffic.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListTrafficMirrorSessions
&RegionId=cn-hongkong
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ListTrafficMirrorFiltersResponse>
 <TotalCount>1</TotalCount>
 <NextToken>caeba0bbb2be03f84eb48b699f0a4883</NextToken>
 <RequestId>739CA01C-92EB-4C69-BCC0-280149C6F41E</RequestId>
 <TrafficMirrorSessions>
    <TrafficMirrorTargetId>eni-j6c2fp57q8rr47rp****</TrafficMirrorTargetId>
    <TrafficMirrorSessionStatus>Created</TrafficMirrorSessionStatus>
    <VirtualNetworkId>10</VirtualNetworkId>
    <TrafficMirrorSessionBusinessStatus>Normal</TrafficMirrorSessionBusinessStatus>
    <Priority>1</Priority>
    <PacketLength>1500</PacketLength>
    <Enabled>false</Enabled>
    <TrafficMirrorSessionDescription>This is a session.</TrafficMirrorSessionDescription>
    <TrafficMirrorSessionId>tms-j6cla50buc44ap8tu****</TrafficMirrorSessionId>
    <TrafficMirrorSessionName>test</TrafficMirrorSessionName>
    <TrafficMirrorFilterId>tmf-j6cmls82xnc86vtpe****</TrafficMirrorFilterId>
    <TrafficMirrorTargetType>NetworkInterface</TrafficMirrorTargetType>
    <TrafficMirrorSourceIds>eni-j6c8znm5l1yt4sox****</TrafficMirrorSourceIds>
 </TrafficMirrorSessions>
</ListTrafficMirrorFiltersResponse>
```

`JSON` format

```
{
  "TotalCount": 1,
  "NextToken": "caeba0bbb2be03f84eb48b699f0a4883",
  "RequestId": "739CA01C-92EB-4C69-BCC0-280149C6F41E",
  "TrafficMirrorSessions": {
    "TrafficMirrorTargetId": "eni-j6c2fp57q8rr47rp****",
    "TrafficMirrorSessionStatus": "Created",
    "VirtualNetworkId": 10,
    "TrafficMirrorSessionBusinessStatus": "Normal",
    "Priority": 1,
    "PacketLength": 1500,
    "Enabled": false,
    "TrafficMirrorSessionDescription": "This is a session.",
    "TrafficMirrorSessionId": "tms-j6cla50buc44ap8tu****",
    "TrafficMirrorSessionName": "test",
    "TrafficMirrorFilterId": "tmf-j6cmls82xnc86vtpe****",
    "TrafficMirrorTargetType": "NetworkInterface",
    "TrafficMirrorSourceIds": "eni-j6c8znm5l1yt4sox****"
  }
}
```

Error codes

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

26.14. RemoveSourcesFromTrafficMirrorSession

Deletes a mirror source from a traffic mirror session.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RemoveSourcesFromTrafficMirrorSession	The operation that you want to perform. Set the value to **RemoveSourcesFromTrafficMirrorSession**.
RegionId	String	Yes	cn-hongkong	The ID of the region to which the traffic mirror session belongs. You can call the DescribeRegions operation to query the most recent region list. For more information about regions that support traffic mirroring, see Overview of traffic mirroring.
TrafficMirrorSessionId	String	Yes	tms-j6cla50buc44ap8tu****	The ID of the traffic mirror session from which you want to delete a mirror source.
TrafficMirrorSourceIds.N	RepeatList	Yes	eni-j6c8znm5l1yt4sox****	The ID of the mirror source to be deleted. The maximum value of **N** is **10**.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe63****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. `ClientToken` supports only ASCII characters. It can contain up to 64 ASCII characters.
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: only checks the API request. The mirror source is not deleted. The system checks the required parameters, request format, and limits. If the request fails the precheck, the corresponding error code is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the request. After the request passes the precheck, the mirror source is deleted.

Response parameters

Parameter	Type	Example	Description
RequestId	String	A33B2C6A-89D1-4DEA-A807-A6E8CC552484	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=RemoveSourcesFromTrafficMirrorSession
&RegionId=cn-hongkong
&TrafficMirrorSessionId=tms-j6cla50buc44ap8tu****
&TrafficMirrorSourceIds.1=eni-j6c8znm5l1yt4sox****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RemoveSourcesFromTrafficMirrorSessionResponse>
 <RequestId>A33B2C6A-89D1-4DEA-A807-A6E8CC552484</RequestId>
</RemoveSourcesFromTrafficMirrorSessionResponse>
```

`JSON` format

```
{
  "RequestId": "A33B2C6A-89D1-4DEA-A807-A6E8CC552484"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	IncorrectBusinessStatus.TrafficMirror	The business status of traffic mirror is incorrect.	The error message returned because the mirrored traffic is in an invalid state.
400	OptInRequired.TrafficMirror	You need to subscribe to the traffic mirror service first.	The error message returned because traffic mirroring is not enabled.
400	DuplicatedParam.SourceInstanceIds	The parameter of source instance IDs contains duplicate values.	the id parameter of the traffic mirror source instance contains duplicate values.
400	ResourceNotFound.TrafficMirrorSession	The specified resource of traffic mirror session is not found.	The error message returned because the specified traffic mirror session does not exist.
400	IncorrectStatus.TrafficMirrorSession	The status of traffic mirror session is incorrect.	The error message returned because the traffic mirror session is in an invalid state.
400	ResourceNotAssociated.TrafficMirrorSource	The specified traffic mirror source and session are not associated.	The error message returned because the specified mirror source is not associated with the traffic mirror session.
400	ResourceNotFound.NetworkInterface	The specified resource of network interface is not found.	The error message returned because the specified elastic network interface (ENI) does not exist.
400	ResourceNotFound.EcsInstance	The specified resource of ECS instance is not found.	The error message returned because the specified Elastic Compute Service (ECS) instance does not exist.

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

26.15. AddSourcesToTrafficMirrorSession

Adds a mirror source to a traffic mirror session.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AddSourcesToTrafficMirrorSession	The operation that you want to perform. Set the value to **AddSourcesToTrafficMirrorSession**.
RegionId	String	Yes	cn-hongkong	The ID of the region to which the traffic mirror session belongs. You can call the DescribeRegions operation to query the most recent region list. For more information about regions that support traffic mirroring, see Overview of traffic mirroring.
TrafficMirrorSessionId	String	Yes	tms-j6cla50buc44ap8tu****	The ID of the traffic mirror session.

Parameter	Type	Required	Example	Description
TrafficMirrorSourceIds.N	RepeatList	Yes	eni-j6ccmrl8z3xkvxgw****	The ID of the mirror source. You can specify only an elastic network interface (ENI) as the mirror source. The default value of **N** is **1**, which indicates that you can add only one mirror source to a traffic mirror session.
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe63****	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. **ClientToken** supports only ASCII characters. It can contain up to 64 ASCII characters.
DryRun	Boolean	No	false	Specifies whether to precheck this request. Valid values: • **true**: only checks the API request. The mirror source is not added. The system checks the required parameters, request format, and limits. If the request fails the precheck, the corresponding error code is returned. If the request passes the precheck, the `DryRunOperation` error code is returned. • **false**: sends the request. After the request passes the precheck, the mirror source is added.

Response parameters

Parameter	Type	Example	Description
RequestId	String	87F70089-5B38-41A8-BAD8-0B55E2F8DC57	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=AddSourcesToTrafficMirrorSession
&RegionId=cn-hongkong
&TrafficMirrorSessionId=tms-j6cla50buc44ap8tu****
&TrafficMirrorSourceIds.1=eni-j6ccmrl8z3xkvxgw****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<AddSourcesToTrafficMirrorSessionResponse>
 <RequestId>87F70089-5B38-41A8-BAD8-0B55E2F8DC57</RequestId>
</AddSourcesToTrafficMirrorSessionResponse>
```

`JSON` format

```
{
  "RequestId": "87F70089-5B38-41A8-BAD8-0B55E2F8DC57"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	IncorrectBusinessStatus.TrafficMirror	The business status of traffic mirror is incorrect.	The error message returned because the mirrored traffic is in an invalid state.

HttpCode	Error code	Error message	Description
400	OptInRequired.TrafficMirror	You need to subscribe to the traffic mirror service first.	The error message returned because traffic mirroring is not enabled.
400	DuplicatedParam.SourceInstanceIds	The parameter of source instance IDs contains duplicate values.	The error message returned because the specified mirror source ID has duplicate values.
400	ResourceNotFound.TrafficMirrorSession	The specified resource of traffic mirror session is not found.	The error message returned because the specified traffic mirror session does not exist.
400	IncorrectStatus.TrafficMirrorSession	The status of traffic mirror session is incorrect.	The error message returned because the traffic mirror session is in an invalid state.
400	ResourceAlreadyAssociated.TrafficMirrorSource	The specified traffic mirror source and session are already associated.	The error message returned because the specified mirror source is already associated with a traffic mirror session.
400	ResourceNotFound.NetworkInterface	The specified resource of network interface is not found.	The error message returned because the specified elastic network interface (ENI) does not exist.
400	ResourceNotFound.EcsInstance	The specified resource of ECS instance is not found.	The error message returned because the specified Elastic Compute Service (ECS) instance does not exist.
400	OperationDenied.EcsNotSupportTrafficMirror	The ECS instance does not support traffic mirroring.	The error message returned because the ECS instance does not support traffic mirroring.
400	OperationDenied.DuplicateRole	The network interface must not be the source and the target of traffic mirror sessions at the same time.	The error message returned because an ENI cannot be specified as both the source and destination of a traffic mirror session.
400	QuotaExceeded.NetworkInterfaceRelatedSession	The quota of the number of traffic mirror sessions related to one network interface is exceeded.	The error message returned because the number of traffic mirror sessions associated with an ENI has reached the upper limit.
400	OperationDenied.FreeNetworkInterface	The network interface is not attached to any ECS instance.	The error message returned because the specified ENI is not associated with an ECS instance.
400	QuotaExceeded.SourceNumPerSession	The quota of the number of traffic mirror sources per session is exceeded.	The error message returned because the number of mirror sources associated with a traffic mirror session has reached the upper limit.

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