

Express Connect

Developer Guide

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API reference

API reference

The following table is the overview of Express Connect API. Express Connect APIs are included in VPC API, [click here](#) to see details.

Physical connection API

API	Description
CreatePhysicalConnection	Apply for a physical connection
CancelPhysicalConnection	Cancel the access of a physical connection
DeletePhysicalConnection	Delete a physical connection
DescribePhysicalConnections	Query physical connection list
EnablePhysicalConnection	Enable a physical connection
ModifyPhysicalConnection	Modify a physical connection
TerminatePhysicalConnection	Terminate the access of a physical connection

Virtual border router API

API	Description
CreateVirtualBorderRouter	Create a virtual border router
DescribeVirtualBorderRouters	Query virtual border router list
DescribeVirtualBorderRoutersForPhysicalConnection	Check virtual border router list of a physical connection
ModifyVirtualBorderRouter	Modify a virtual border router

RecoverVirtualBorderRouter	Recover a virtual border router
TerminateVirtualBorderRouter	Terminate a virtual border router

Router interface API

API	Description
ActivateRouterInterface	Activate a router interface
ConnectRouterInterface	Initiate a connection
CreateRouterInterface	Create a router interface
DeactivateRouterInterface	Deactivate a router interface
DeleteRouterInterface	Delete a router interface
DescribeRouterInterfaces	Query router interface list
ModifyRouterInterfaceAttribute	Modify the attribute of a router interface
ModifyRouterInterfaceSpec	Modify the specification of a router interface

RAM access

Overview

The router interface and leased line you created are your own resource. By default, you have full operation permissions on your resources, and you can use all APIs described in this document to operate on your resources.

You can use your Alibaba Cloud account to create RAM users, and an unauthorized ram user cannot operate on resources of the Alibaba Cloud account. You must grant the permission to the RAM user to operate on resources of the Alibaba Cloud account by the RAM authorization.

Make sure that you have read the **RAM** and **API** carefully before you use RAM to authorize access to router interface and leased line.

Skip this section if you do not need to grant an RAM user to access Express Connect resources in an Alibaba Cloud Account. Skipping this section does not affect your understanding and usage of the Express Connect API.

Types of Express Connect resources for authorization in RAM

Resource type	Resource description in the authorization policy
RouterInterface	acs:vpc:\$regionid:\$accountid:routerinterface/\$routerinterfaceid acs:vpc:\$regionid:\$accountid:routerinterface/* acs:vpc:*\$accountid:routerinterface/*
PhysicalConnection	acs:vpc:\$regionid:\$accountid:physicalconnection/\$physicalconnectionid acs:vpc:\$regionid:\$accountid:physicalconnection/* acs:vpc:*\$accountid:physicalconnection/*
VirtualBorderRouter	acs:vpc:\$regionid:\$accountid:virtualborderrouter/\$virtualborderrouterid acs:vpc:\$regionid:\$accountid:virtualborderrouter/* acs:vpc:*\$accountid:virtualborderrouter/*
RouteTable	acs:vpc:\$regionid:\$accountid:routetable/\$routetableid acs:vpc:\$regionid:\$accountid:routetable/* acs:vpc:*\$accountid:routetable/*
Common expression	acs:vpc:\$regionid:\$accountid:* acs:vpc:*\$accountid:*

Where: each \$regionid indicates the ID of a certain region or "*" ; each \$routerinterface indicates the ID of a certain router interface or "*" , and so on.

Authorize actions for Express Connect in RAM

In RAM, you can authorize the following actions for Express Connect. The relation between an action and the corresponding API is as follows:

API	Action
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DescribeAccessPoints	vpc:DescribeAccessPoints
CreatePhysicalConnection	vpc:CreatePhysicalConnection
DescribePhysicalConnections	vpc:DescribePhysicalConnections
ModifyPhysicalConnectionAttribute	vpc:ModifyPhysicalConnectionAttribute
EnablePhysicalConnection	vpc:EnablePhysicalConnection
CancelPhysicalConnection	vpc:CancelPhysicalConnection
TerminatePhysicalConnection	vpc:TerminatePhysicalConnection
DeletePhysicalConnection	vpc>DeletePhysicalConnection
CreateVirtualBorderRouter	vpc:CreateVirtualBorderRouter
DescribeVirtualBorderRouters	vpc:DescribeVirtualBorderRouters
ModifyVirtualBorderRouterAttribute	vpc:ModifyVirtualBorderRouterAttribute
DeleteVirtualBorderRouter	vpc>DeleteVirtualBorderRouter
DescribeVirtualBorderRoutersForPhysicalConnection	vpc:DescribeVirtualBorderRoutersForPhysicalConnection
TerminateVirtualBorderRouter	vpc:TerminateVirtualBorderRouter
RecoverVirtualBorderRouter	vpc:RecoverVirtualBorderRouter
CreateRouteEntry	vpc:CreateRouteEntry
DescribeRouteTables	vpc:DescribeRouteTables
DeleteRouteEntry	vpc>DeleteRouteEntry
CreateRouterInterface	vpc:CreateRouterInterface
ConnectRouterInterface	vpc:ConnectRouterInterface
DescribeRouterInterfaces	vpc:DescribeRouterInterfaces
DeactivateRouterInterface	vpc:DeactivateRouterInterface
ActivateRouterInterface	vpc:ActivateRouterInterface
ModifyRouterInterfaceAttribute	vpc:ModifyRouterInterfaceAttribute
ModifyRouterInterfaceSpec	vpc:ModifyRouterInterfaceSpec
DeleteRouterInterface	vpc>DeleteRouterInterface

Authentication rules for Express Connect APIs

When a RAM account accesses the Express Connect resources of the corresponding Alibaba Cloud account by using APIs, the Express Connect backend authenticates the RAM account to make sure that the resource owner indeed grants access rights to related resources to the caller.

Each different API determines the resources of which the access rights are to be checked according to involved resources and the API definition. The authentication rules for the APIs are shown in the following table.

Action	Resource	Condition	
vpc:DescribeAccessPoints	acs:vpc:*:\$accountid:*		
vpc:CreatePhysicalConnection	acs:vpc:\$regionid:\$accountid:physicalconnection/*		
vpc:DescribePhysicalConnections	acs:vpc:\$regionid:\$accountid:physicalconnection/*		
vpc:ModifyPhysicalConnectionAttribute	acs:vpc:\$regionid:\$accountid:physicalconnection/\$physicalconnectionid		
vpc:EnablePhysicalConnection	acs:vpc:\$regionid:\$accountid:physicalconnection/\$physicalconnectionid		
vpc:CancelPhysicalConnection	acs:vpc:\$regionid:\$accountid:physicalconnection/\$physicalconnectionid		
vpc:TerminatePhysicalConnection	acs:vpc:\$regionid:\$accountid:physicalconnection/\$physicalconnectionid		
vpc>DeletePhysicalConnection	acs:vpc:\$regionid:\$accountid:physicalconnection/\$physicalconnectionid		
vpc:CreateVirtualBorderRouter	acs:vpc:\$regionid:\$accountid:virtualborderrouter/* acs:vpc:\$regionid:\$accountid:physicalconnection/\$physicalconnectionid		
vpc:DescribeVirtualBorderRouters	acs:vpc:\$regionid:\$accountid:virtualborderrouter/*		

vpc:ModifyVirtualBorderRouterAttribute	acs:vpc:\$regionid:\$accountid:virtualborderrouter/\$virtualborderrouterid	
vpc>DeleteVirtualBorderRouter	acs:vpc:\$regionid:\$accountid:virtualborderrouter/\$virtualborderrouterid	
vpc:DescribeVirtualBorderRoutersForPhysicalConnection	acs:vpc:\$regionid:\$accountid:virtualborderrouter/*	"vpc:PhysicalConnection" : "acs:vpc:\$regionid:\$accountid:physicalconnection/\$physicalconnectionid"
vpc:TerminateVirtualBorderRouter	acs:vpc:\$regionid:\$accountid:virtualborderrouter/\$virtualborderrouterid	
vpc:RecoverVirtualBorderRouter	acs:vpc:\$regionid:\$accountid:virtualborderrouter/\$virtualborderrouterid	
vpc:CreateRouteEntry	acs:vpc:\$regionid:\$accountid:routetable/\$routetableid	
vpc:DescribeRouteTables	acs:vpc:\$regionid:\$accountid:routetable/*	Route table in VRouter: "vpc:VRouter" : "acs:vpc:\$regionid:\$accountid:vrouter/\$vrouterid" Route table in RouteVirtualBorderRouter: "vpc:VirtualBorderRouter" : "acs:vpc:\$regionid:\$accountid:virtualborderrouter/\$virtualborderrouterid"
vpc>DeleteRouteEntry	acs:vpc:\$regionid:\$accountid:routetable/\$routetableid	
vpc>CreateRouterInterface	The RouterType is VRouter: acs:vpc:\$regionid:\$accountid:routerinterface/* acs:vpc:\$regionid:\$accountid:vrouter/\$vrouterid The RouterType is	

	VirtualBorderRouter: acs:vpc:\$regionid:\$a ccountid:routerinterf ace/* acs:vpc:\$regionid:\$a ccountid:virtualbord errouter/\$virtualbor derrouterid		
vpc:ConnectRouterIn terface	acs:vpc:\$regionid:\$a ccountid:routerinterf ace/\$routerinterfacei d		
vpc:DescribeRouterI nterfaces	acs:vpc:\$regionid:\$a ccountid:routerinterf ace/*		
vpc:DeactivateRoute rInterface	acs:vpc:\$regionid:\$a ccountid:routerinterf ace/\$routerinterfacei d		
vpc:ActivateRouterIn terface	acs:vpc:\$regionid:\$a ccountid:routerinterf ace/\$routerinterfacei d		
vpc:ModifyRouterInt erfaceAttribute	acs:vpc:\$regionid:\$a ccountid:routerinterf ace/\$routerinterfacei d		
vpc:ModifyRouterInt erfaceSpec	acs:vpc:\$regionid:\$a ccountid:routerinterf ace/\$routerinterfacei d		
vpc>DeleteRouterInt erface	acs:vpc:\$regionid:\$a ccountid:routerinterf ace/\$routerinterfacei d		

SDK reference

The SDK for ECS contains Express Connect related functions. For details, click [Here](#).