

VPC Endpoint

API Reference

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Huawei Cloud Computing Technologies Co., Ltd.

Address: Huawei Cloud Data Center Jiaoxinggong Road
 Qianzhong Avenue
 Gui'an New District
 Gui Zhou 550029
 People's Republic of China

Website: <https://www.huaweicloud.com/intl/en-us/>

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1

Before You Start

Welcome to *VPC Endpoint API Reference*. VPC Endpoint provides secure and private channels to connect your VPCs to VPC endpoint services (cloud services or your private services), providing flexible networking without having to use EIPs.

This document describes how to use application programming interfaces (APIs) to perform operations on VPC Endpoint resources, such as creating, querying, modifying, or deleting VPC endpoints and VPC endpoint services. For details about all supported operations, see [API Overview](#).

If you plan to access VPC Endpoint through an API, ensure that you are familiar with VPC Endpoint concepts. For details, see [Service Overview](#).

API Calling

VPC Endpoint supports Representational State Transfer (REST) APIs that can be called using HTTPS. For details about calling methods, see [Calling APIs](#).

VPC Endpoint

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions.

Constraints

- The number of VPC Endpoint resources that you can create is determined by your quota. To view or increase the quota, see [Quota Adjustment](#).
- For detailed constraints, see the constraints described in specific APIs.

Concepts

- Account

An account is created upon successful signing up. The account has full access permissions for all of its cloud services and resources. It can be used to reset user passwords and grant user permissions. The account is a payment entity, which should not be used directly to perform routine management. For security purposes, create Identity and Access Management (IAM) users and grant them permissions for routine management.

- User
An IAM user is created by an account in IAM to use cloud services. Each IAM user has its own identity credentials (password and access keys).
API authentication requires information such as the account name, username, and password.
- Region
Regions are divided based on geographical location and network latency. Public services, such as Elastic Cloud Server (ECS), Elastic Volume Service (EVS), Object Storage Service (OBS), Virtual Private Cloud (VPC), Elastic IP (EIP), and Image Management Service (IMS), are shared within the same region. Regions are classified into universal regions and dedicated regions. A universal region provides universal cloud services for common tenants. A dedicated region provides specific services for specific tenants.
For details, see [Region and AZ](#).
- AZ
An AZ comprises of one or more physical data centers equipped with independent ventilation, fire, water, and electricity facilities. Computing, network, storage, and other resources in an AZ are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical fibers to allow you to build cross-AZ high-availability systems.
- Project
A project corresponds to a region. Default projects are defined. Users can be granted permissions in a default project to access all resources under their accounts in the region associated with the project. If you need more refined access control, create subprojects under a default project and create resources in subprojects. Then you can assign users the permissions required to access only the resources in the specific subprojects.
- Enterprise Project
Enterprise projects group and manage resources across regions. Resources in different enterprise projects are logically isolated.
For details about enterprise projects and about how to obtain enterprise project IDs, see [Enterprise Management User Guide](#).

2 API Overview

VPC Endpoint provides extended RESTful APIs.

VPC Endpoint APIs allow you to use all VPC Endpoint functions. VPC Endpoint has two types of resources: VPC endpoints and VPC endpoint services.

Table 2-1 describes the APIs provided by VPC Endpoint.

Table 2-1 API overview

| API | Description |
|---------------------------|--|
| Version management APIs | APIs for querying version information of all VPC Endpoint APIs or a specified API |
| VPC endpoint service APIs | <ul style="list-style-type: none">APIs for creating, querying, modifying, or deleting a VPC endpoint serviceAPI for querying the list of VPC endpoint servicesAPIs for adding, querying, or deleting a whitelist recordAPIs for querying the VPC endpoints connected to and those accepted or rejected to connect to a VPC endpoint service <p>With these APIs, you can manage VPC endpoint services and configure rules based on service conditions to provide services for VPC endpoints.</p> |
| VPC endpoint APIs | <ul style="list-style-type: none">APIs for creating, querying, deleting a VPC endpointAPI for querying the list of VPC endpoints <p>With these APIs, you can manage VPC endpoints and use services provided by VPC endpoint services.</p> |
| Resource quota API | APIs for querying the quota of a VPC endpoint and a VPC endpoint service |
| Tag API | APIs for managing tags of VPC Endpoint resources, including querying resources by tag, adding or deleting a tag or tags to or from a resource, and querying resource tags |

3 Calling APIs

3.1 Making an API Request

This section describes the structure of a REST API request, and uses the IAM API for [creating an IAM user](#) as an example to demonstrate how to call an API.

Request URI

A request URI is in the following format:

{URI-scheme}://{Endpoint}/{resource-path}?{query-string}

Although a request URI is included in the request header, most programming languages or frameworks require the request URI to be transmitted separately.

Table 3-1 URI parameter description

| Parameter | Description |
|---------------|--|
| URI-scheme | Protocol used to transmit requests. All APIs use HTTPS. |
| Endpoint | Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from "Regions and Endpoints". For example, the endpoint of IAM in region Dublin is iam.myhuaweicloud.eu . |
| resource-path | Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the resource-path of the API used to obtain a user token is /v3/auth/tokens . |
| query-string | Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of <i>Parameter name=Parameter value</i> . For example, ?limit=10 indicates that a maximum of 10 data records will be displayed. |

IAM is a global service. You can create an IAM user using the endpoint of IAM in any region. For example, to create an IAM user in the **EU-Dublin** region, obtain the endpoint of IAM (**iam.myhuaweicloud.eu**) for this region and the **resource-path** (**/v3.0/OS-USER/users**) in the URI of the API for [creating an IAM user](#). Then construct the URI as follows:

```
https://iam.myhuaweicloud.eu/v3.0/OS-USER/users
```

NOTE

To simplify the URI display in this document, each API is provided only with a **resource-path** and a request method. The **URI-scheme** of all APIs is **HTTPS**, and the endpoints of all APIs in the same region are identical.

Request Methods

The HTTP protocol defines the following request methods that can be used to send a request to the server.

Table 3-2 HTTP methods

| Method | Description |
|--------|---|
| GET | Requests the server to return specified resources. |
| PUT | Requests the server to update specified resources. |
| POST | Requests the server to add resources or perform special operations. |
| DELETE | Requests the server to delete specified resources, for example, an object. |
| HEAD | Same as GET except that the server must return only the response header. |
| PATCH | Requests the server to update partial content of a specified resource. If the resource does not exist, a new resource will be created. |

For example, in the case of the API for [creating an IAM user](#), the request method is **POST**. An example request is as follows:

```
POST https://iam.myhuaweicloud.eu/v3.0/OS-USER/users
```

Request Header

You can also add additional header fields to a request, such as the fields required by a specified URI or HTTP method. For example, to request for the authentication information, add **Content-Type**, which specifies the request body type.

Common request header fields are as follows.

Table 3-3 Common request header fields

| Parameter | Description | Mandatory | Example Value |
|----------------|---|---|--|
| Host | Specifies the server domain name and port number of the resources being requested. The value can be obtained from the URL of the service API. The value is in the format of <i>Hostname:Port number</i> . If the port number is not specified, the default port is used. The default port number for https is 443 . | No This field is mandatory for AK/SK authentication. | code.test.com or code.test.com:443 |
| Content-Type | Specifies the type (or format) of the message body. The default value application/json is recommended. Other values of this field will be provided for specific APIs if any. | Yes | application/json |
| Content-Length | Specifies the length of the request body. The unit is byte. | No | 3495 |
| X-Project-Id | Specifies the project ID. Obtain the project ID by following the instructions in Obtaining a Project ID . | No This field is mandatory for requests that use AK/SK authentication in the Dedicated Cloud (DeC) scenario or multi-project scenario. | e9993fc787d94b6c886cbba340f9c0f4 |

| Parameter | Description | Mandatory | Example Value |
|--------------|---|---|--|
| X-Auth-Token | <p>Specifies the user token. It is a response to the API for obtaining a user token (This is the only API that does not require authentication).</p> <p>After the request is processed, the value of X-Subject-Token in the response header is the token value.</p> | No This field is mandatory for token authentication. | The following is part of an example token: MIIPAgYJKoZIhvcNAQcCo...ggg1B BIINPXsidG9rZ |

NOTE

In addition to supporting authentication using tokens, APIs support authentication using AK/SK, which uses SDKs to sign a request. During the signature, the **Authorization** (signature authentication) and **X-Sdk-Date** (time when a request is sent) headers are automatically added in the request.

For more details, see "Authentication Using AK/SK" in [Authentication](#).

The following shows an example request of the API for [creating an IAM user](#) when AK/SK authentication is used:

```
POST https://iam.myhuaweicloud.eu/v3.0/OS-USER/users
Content-Type: application/json
X-Sdk-Date: 20240416T095341Z
Authorization: SDK-HMAC-SHA256 Access=*****,
SignedHeaders=content-type;host;x-sdk-date,
Signature=*****
```

(Optional) Request Body

This part is optional. A request body is generally sent in a structured format (for example, JSON or XML), which is specified by **Content-Type** in the request header. It is used to transfer content other than the request header. If the request body contains full-width characters, these characters must be coded in UTF-8.

The request body varies depending on APIs. Certain APIs do not require the request body, such as the APIs requested using the GET and DELETE methods.

The following shows an example request (a request body included) of the API for [creating an IAM user](#). You can learn about request parameters and related description from this example. The bold parameters need to be replaced for a real request.

- **accountid**: account ID of an IAM user
- **username**: name of an IAM user
- **email**: email of an IAM user
- **password**: login password of an IAM user

```
POST https://iam.myhuaweicloud.eu/v3.0/OS-USER/users
Content-Type: application/json
```

```
X-Sdk-Date: 20240416T095341Z
Authorization: SDK-HMAC-SHA256 Access=*****,
SignedHeaders=content-type;host;x-sdk-date,
Signature=*****"

{
  "user": {
    "domain_id": "accountid",
    "name": "username",
    "password": "*****",
    "email": "email",
    "description": "IAM User Description"
  }
}
```

If all data required for the API request is available, you can send the request to call the API through [curl](#), [Postman](#), or coding.

3.2 Authentication

Requests for calling an API can be authenticated using either of the following methods:

- AK/SK authentication: Requests are encrypted using AK/SK pairs. AK/SK authentication is recommended because it is more secure than token authentication.
- Token authentication: Requests are authenticated using tokens.

AK/SK Authentication

NOTE

- AK/SK authentication supports API requests with a body not larger than 12 MB. For API requests with a larger body, token authentication is recommended.
- An AK/SK pair can either be permanent or temporary. If it is temporary, the **X-Security-Token** field must be included in the request header. The value is the security token of the temporary AK/SK pair.
- API Gateway checks the time format and compares the request time with the time when API Gateway received the request. If the time difference exceeds 15 minutes, API Gateway will reject the request. So, the local time on the client must be synchronized with the clock server to avoid a large offset in the value of **X-Sdk-Date** in the request header.

In AK/SK authentication, an AK/SK pair is used to sign requests and the signature is then added to the requests for authentication.

- AK: access key ID, which is a unique identifier used in conjunction with a secret access key to sign requests cryptographically.
- SK: secret access key, which is used in conjunction with an AK to sign requests cryptographically. It identifies a request sender and prevents the request from being modified.

In AK/SK authentication, you can use an AK/SK pair to sign requests based on the signature algorithm or using the signing SDK. For details about how to sign requests and use the signing SDK, see [AK/SK Signing and Authentication Guide](#).

NOTE

The signing SDK is only used for signing requests and is different from the SDKs provided by services.

Token Authentication

NOTE

- A token remains valid for 24 hours after it is generated. You can cache a token and reuse it for authentication instead of generating a new one each time.
- Before using a token, ensure that it has sufficient time remaining before expiration. Using a near-expiry token may cause API call failures.

A token specifies temporary permissions in a computer system. During API authentication using a token, the token is added to requests to get permissions for calling the API. You can obtain a token by calling the [Obtaining a User Token](#) API.

IMS is a project-level service. When you call the API, set **auth.scope** in the request body to **project**.

```
{  
  "auth": {  
    "identity": {  
      "methods": [  
        "password"  
      ],  
      "password": {  
        "user": {  
          "name": "username", // IAM user name  
          "password": "$ADMIN_PASS", // IAM user password. You are advised to store it in ciphertext in  
          // the configuration file or an environment variable and decrypt it when needed to ensure security.  
          "domain": {  
            "name": "domainname" // Name of the account that the IAM user belongs to  
          }  
        }  
      }  
    },  
    "scope": {  
      "project": {  
        "name": "xxxxxxxx" // Project name  
      }  
    }  
  }  
}
```

After a token is obtained, the **X-Auth-Token** header field must be added to requests to specify the token when calling other APIs. For example, if the token is **ABCDEFG....**, **X-Auth-Token: ABCDEFG....** can be added to a request as follows:

```
GET https://iam.myhuaweicloud.eu/v3/auth/projects  
Content-Type: application/json  
X-Auth-Token: ABCDEFG....
```

3.3 Response

Status Code

After sending a request, you will receive a response, including a status code, response header, and response body.

A status code is a group of digits, ranging from 1xx to 5xx. It indicates the status of a request. For more information, see [Status Code](#).

For example, if status code **201** is returned for calling the API used to [create an IAM user](#), the request is successful.

Response Header

Similar to a request, a response also has a header, for example, **Content-Type**.

[Figure 3-1](#) shows the response header for the API used to [create an IAM user](#).

NOTE

For security purposes, you are advised to set the token in ciphertext in configuration files or environment variables and decrypt it when using it.

[Figure 3-1](#) Header fields of the response to the request for creating an IAM user

```
"X-Frame-Options": "SAMEORIGIN",
"X-IAM-ETag-id": "2562365939-d8f6f12921974cb097338ac11fceac8a",
"Transfer-Encoding": "chunked",
"Strict-Transport-Security": "max-age=31536000; includeSubdomains;",
"Server": "api-gateway",
"X-Request-Id": "af2953f2bcc67a42325a69a19e6c32a2",
"X-Content-Type-Options": "nosniff",
"Connection": "keep-alive",
"X-Download-Options": "noopen",
"X-XSS-Protection": "1; mode=block;",
"X-IAM-Trace-Id": "token_____null_af2953f2bcc67a42325a69a19e6c32a2",
"Date": "Tue, 21 May 2024 09:03:40 GMT",
"Content-Type": "application/json; charset=utf8"
```

(Optional) Response Body

The body of a response is often returned in a structured format (for example, JSON or XML) as specified in the **Content-Type** header field. The response body transfers content except the response header.

The following shows part of the response body for the API used to [create an IAM user](#).

```
{
  "user": {
    "id": "c131886aec...",
    "name": "IAMUser",
    "description": "IAM User Description",
    "areacode": "",
    "phone": "",
    "email": "***@***.com",
    "status": null,
    "enabled": true,
    "pwd_status": false,
    "access_mode": "default",
    "is_domain_owner": false,
    "xuser_id": "",
    "xuser_type": "",
    "password_expires_at": null,
    "create_time": "2024-05-21T09:03:41.000000",
    "domain_id": "d78cbac1.....",
    "xdomain_id": "30086000.....",
    "xdomain_type": ""
  }
}
```

```
        "default_project_id": null
    }
```

If an error occurs during API calling, an error code and a message will be displayed. The following shows an error response body.

```
{
    "error_msg": "The request message format is invalid.",
    "error_code": "IMG.0001"
}
```

In the response body, **error_code** is an error code, and **error_msg** provides information about the error.

4 API

4.1 Version Management

4.1.1 Querying Versions of VPC Endpoint APIs

Function

This API is used to query versions of VPC Endpoint APIs.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|---------------------------|--------------|-----------------------------|---------------|-------|--------------|
| vpcep::listVersionDetails | List | - | - | - | - |

URI

GET /

Request Parameters

Table 4-1 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Response Parameters

Status code: 200

Table 4-2 Response body parameters

| Parameter | Type | Description |
|-----------|---|---------------------------------------|
| versions | Array of VersionObject objects | Specifies the list of VPCEP versions. |

Table 4-3 VersionObject

| Parameter | Type | Description |
|-----------|--------|---|
| status | String | Specifies the version status. - CURRENT : indicates a widely used version. - SUPPORT : indicates an earlier version that is still supported. - DEPRECATED : indicates a deprecated version which may be deleted later. |
| id | String | Specifies the version ID. • v1 : recommended version |
| updated | String | Specifies the time the API version was released. The applied UTC time format is <i>YYYY-MMDDTHH:MM:SSZ</i> . |
| version | String | Specifies the supported version number. |

| Parameter | Type | Description |
|-------------|---------------------------------------|---|
| min_version | String | Specifies the supported microversion number. If the APIs do not support microversions, the parameter is left blank. |
| links | Array of Link objects | Specifies the API URL. |

Table 4-4 Link

| Parameter | Type | Description |
|-----------|--------|--|
| href | String | Specifies the reference address of the current API version. |
| type | String | Specifies the MIME type of the request body. The value is application/json. |
| rel | String | Specifies the relationship between the current API version and the referenced address. |

Example Requests

Querying versions of VPCEP APIs

GET <https://{endpoint}/>

Example Responses

Status code: 200

The server has successfully processed the request.

```
{  
  "versions" : [ {  
    "updated" : "2018-09-30T00:00:00Z",  
    "version" : "1",  
    "min_version" : "",  
    "status" : "CURRENT",  
    "id" : "v1",  
    "links" : [ {  
      "href" : "https://{vpcep_uri}/v1",  
      "type" : "application/json",  
      "rel" : "self"  
    } ]  
  } ]  
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.1.2 Querying the Version of a VPC Endpoint API

Function

This API is used to query the version of a VPC Endpoint API.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|-----------------------------|--------------|-----------------------------|---------------|-------|--------------|
| vpcep::listSpecifiedVersion | List | - | - | - | - |

URI

GET /{version}

Table 4-5 Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--------|---|
| version | Yes | String | Specifies the version number to be queried. The value starts with v, for example, v1. If this parameter is left blank, versions of all VPCEP APIs are queried. |

Request Parameters

Table 4-6 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Response Parameters

Status code: 200

Table 4-7 Response body parameters

| Parameter | Type | Description |
|-----------|-----------------------------|-----------------------------------|
| version | VersionObject object | Specifies the VPCEP API versions. |

Table 4-8 VersionObject

| Parameter | Type | Description |
|-----------|--------|---|
| status | String | Specifies the version status. - CURRENT : indicates a widely used version. - SUPPORT : indicates an earlier version that is still supported. - DEPRECATED : indicates a deprecated version which may be deleted later. |

| Parameter | Type | Description |
|-------------|---------------------------------------|---|
| id | String | Specifies the version ID. • v1 : recommended version |
| updated | String | Specifies the time the API version was released. The applied UTC time format is <i>YYYY-MMDDTHH:MM:SSZ</i> . |
| version | String | Specifies the supported version number. |
| min_version | String | Specifies the supported microversion number. If the APIs do not support microversions, the parameter is left blank. |
| links | Array of Link objects | Specifies the API URL. |

Table 4-9 Link

| Parameter | Type | Description |
|-----------|--------|--|
| href | String | Specifies the reference address of the current API version. |
| type | String | Specifies the MIME type of the request body. The value is application/json. |
| rel | String | Specifies the relationship between the current API version and the referenced address. |

Example Requests

This API is used to query the v1 version of a specified VPCEP API.

```
GET https://{endpoint}/v1
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{
  "version":{
    {
      "updated":"2018-09-30T00:00:00Z",
      "version":"1",
      "min_version":"",
      "status":"CURRENT",
      "id":"v1",
      "links":[
        {
          "rel": "self",
          "href": "https://vpcep.{region}.huaweicloud.com/v1"
        }
      ]
    }
  }
}
```

```
{  
  "href": "https://vpcep.Uri/v1",  
  "type": "application/json",  
  "rel": "self"  
}  
]  
}  
}  
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2 VPC Endpoint Services

4.2.1 Creating a VPC Endpoint Service

Function

This API is used to create a VPC endpoint service. Other users can create a VPC endpoint to connect to the endpoint service.

This is an asynchronous API. If it is successfully called, status code **200** is returned, indicating that the request has been successfully delivered. It takes 1 to 2 minutes to create a VPC endpoint service. You can query whether it has been created by referring to [Querying Details of a VPC Endpoint Service](#).

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|-------------------------------|--------------|-----------------------------|---|----------------------------|--------------|
| vpcep:endpointServices:create | Write | endpoint Services * | vpcep:VpcServicePrivateDnsName | ● vpcep:ep services:create | - |
| | | vpc * | - | | |
| | | - | <ul style="list-style-type: none">g:Request Tag/<tag-key>g:TagKeysg:EnterpriseProjectId | | |

URI

POST /v1/{project_id}/vpc-endpoint-services

Table 4-10 Path Parameters

| Parameter | Mandatory | Type | Description |
|------------|-----------|--------|--|
| project_id | Yes | String | Project ID. For details about how to obtain the project ID, see Obtaining a Project ID . |

Request Parameters

Table 4-11 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It is a response to the API for obtaining a user token. This API is the only one that does not require authentication. The value of X-Subject-Token in the response header is the token value. |

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Table 4-12 Request body parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--------|--|
| port_id | Yes | String | <p>Specifies the ID that identifies the backend resource of the VPC endpoint service. The ID is in UUID format. The value can be:</p> <ul style="list-style-type: none">• The port ID of the private IP address of a load balancer (recommended).• The NIC ID of an ECS IP address.• The NIC ID of the virtual server for which the virtual IP address is configured (discarded).• You cannot create a VPC endpoint service in a VPC whose CIDR block overlaps with 198.19.128.0/17.• The destination address of the custom route in the VPC route table cannot overlap with 198.19.128.0/17. <p>For details, see section "Viewing Details of a Load Balancer" in the <i>Elastic Load Balance API Reference</i>.</p> <p>For details, see the port_id field in the response parameters of section "Querying NICs of an ECS" in the <i>Elastic Cloud Server API Reference</i>.</p> <p>Note:</p> |

| Parameter | Mandatory | Type | Description |
|------------------|-----------|---------|--|
| service_name | No | String | <p>Specifies the name of the VPC endpoint service. The name can contain a maximum of 16 characters, including letters, digits, underscores (_), and hyphens (-).</p> <ul style="list-style-type: none">• If you do not specify this parameter, the VPC endpoint service name is in regionName.serviceld format:• If you specify a valid value, the VPC endpoint service name is in the following format: regionNameserviceNameserviceld. |
| vpc_id | Yes | String | Specifies the ID of the VPC where the backend resource of the VPC endpoint service is located. |
| approval_enabled | No | Boolean | <p>Specifies whether connection approval is required.</p> <ul style="list-style-type: none">• false: Connection approval is not required. The created VPC endpoint is in the accepted state.• true: Connection approval is required. The created VPC endpoint is in the pendingAcceptance state, and it can be used only after being approved by the user of the VPC endpoint service. <p>The default value is true.</p> |

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|---|
| service_type | No | String | <p>Specifies the type of the VPC endpoint service.</p> <p>Only your private services can be configured into interface VPC endpoint services.</p> <p>There are two types of VPC endpoint services: interface and gateway.</p> <ul style="list-style-type: none">• gateway: indicates the VPC endpoint services that are configured by the O&M personnel. You can use them directly without creating them by yourselves.• interface: indicates the cloud services configured by the O&M personnel and private services created by yourselves. <p>You can directly use the cloud services configured by the O&M personnel without creating them by yourself.</p> <p>You can query the public VPC endpoint services to view the VPC endpoint services that are visible and accessible to all users and are configured by the O&M personnel.</p> <p>You can create VPC endpoints to connect to gateway and interface VPC endpoint services.</p> |
| server_type | Yes | String | <p>Specifies the resource type.</p> <ul style="list-style-type: none">• VM: indicates a cloud server.• VIP: indicates a virtual IP address. (This value has been discarded. LB is recommended.)• LB: indicates a load balancer that works well for high-traffic services that require high reliability and disaster recovery (DR) performance. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|---|---|
| ports | Yes | Array of PortList objects | <p>Specifies the port mappings opened by the VPC endpoint service.</p> <p>Duplicate port mappings are not allowed in the same VPC endpoint service. If multiple VPC endpoint services share one port ID, the combinations of server ports and protocols for all port mappings between VPC endpoint services must be unique.</p> <p>A maximum of 200 port mappings can be added at a time.</p> |

| Parameter | Mandatory | Type | Description |
|-------------|-----------|--|---|
| tcp_proxy | No | String | <p>Definition Specifies whether to transfer client information, such as source IP addresses, source port numbers, and marker IDs, to the server.</p> <p>Constraints</p> <ul style="list-style-type: none">• TCP TOA: The client information is placed into the tcp option field and sent to the server. TCP TOA is available only when the backend resource is an OBS resource.• Proxy Protocol: The client information is placed into the tcp payload field and sent to the server. <p>tcp_proxy is available only when the server can parse the tcp option and tcp payload fields.</p> <p>Range</p> <ul style="list-style-type: none">• close: Neither TCP TOA nor Proxy Protocol information is carried.• toa_open: TCP TOA information is carried.• proxy_open: Proxy Protocol information is carried.• open: Both TCP TOA and Proxy Protocol information are carried. <p>Default Value close</p> |
| tags | No | Array of TagList objects | Lists the resource tags. A maximum of 20 tags can be added to each VPC endpoint service. |
| description | No | String | Specifies the description field. The value can contain characters such as letters and digits, but cannot contain angle brackets (< or >). |

| Parameter | Mandatory | Type | Description |
|---------------|-----------|---------|---|
| enable_policy | No | boolean | Specifies whether the VPC endpoint policy is enabled. • false: The VPC endpoint policy cannot be set. • true: The VPC endpoint policy can be set. The default value is false. |

Table 4-13 PortList

| Parameter | Mandatory | Type | Description |
|-------------|-----------|---------|---|
| client_port | No | Integer | Specifies the port to be accessed by a VPC endpoint. This port is provided by the VPC endpoint, allowing you to access the VPC endpoint service. Supported range: 1 to 65535. |
| server_port | No | Integer | Specifies the port for accessing the VPC endpoint service. This port is associated with backend resources to provide VPC endpoint services. Supported range: 1 to 65535 |
| protocol | No | String | Port mapping protocol. TCP is supported. |

Table 4-14 TagList

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--------|---|
| key | No | String | Specifies the tag key. key cannot be left blank. A key can contain 1 to 128 characters. A key can contain UTF-8 letters, digits, spaces, and the following special characters _ . : = + - @ Keys cannot start with _sys_ because it indicates a system tag. A key cannot start or end with a space. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--------|---|
| value | No | String | <p>Specifies the tag value.</p> <p>A value can contain 0 to 255 characters.</p> <p>A value can contain UTF-8 letters, digits, spaces, and the following special characters _ . : / = + - @</p> <p>A value can be an empty string.</p> |

Response Parameters

Status code: 200

Table 4-15 Response body parameters

| Parameter | Type | Description |
|--------------|--------|--|
| id | String | Specifies the unique ID of the VPC endpoint service. |
| port_id | String | <p>Specifies the ID that identifies the backend resource of the VPC endpoint service.</p> <p>The ID is in UUID format.</p> <p>The value can be:</p> <ul style="list-style-type: none">• LB: indicates the port ID of the private IP address of a load balancer (recommended).• VM: indicates the NIC ID of an ECS IP address.• VIP: indicates the NIC ID of the virtual server for which the virtual IP address is configured. (This value has been discarded. LB is recommended.) |
| service_name | String | Specifies the name of the VPC endpoint service. |
| server_type | String | <p>Specifies the resource type.</p> <ul style="list-style-type: none">• VM: cloud server• VIP: virtual IP address• LB: enhanced load balancer |

| Parameter | Type | Description |
|------------------|---------|---|
| vpc_id | String | Specifies the ID of the VPC where the backend resource of the VPC endpoint service is located. |
| pool_id | String | Specifies the cluster ID of the VPC endpoint service. |
| approval_enabled | Boolean | <p>Specifies whether connection approval is required.</p> <ul style="list-style-type: none">• false: Connection approval is not required. The created VPC endpoint is in the accepted state.• true: Connection approval is required. The created VPC endpoint is in the pendingAcceptance state, and it can be used only after being approved by the user of the VPC endpoint service. |
| status | String | <p>Specifies the status of the VPC endpoint service.</p> <ul style="list-style-type: none">• creating: The VPC endpoint service is being created.• available: The VPC endpoint service is connectable.• failed: The VPC endpoint service failed to be created. |
| service_type | String | <p>Specifies the type of the VPC endpoint service.</p> <p>There are two types of VPC endpoint services: interface and gateway.</p> <ul style="list-style-type: none">• gateway: indicates the VPC endpoint services that are configured by the O&M personnel. You can use them directly without creating them by yourselves.• interface: indicates the cloud services configured by the O&M personnel and private services created by yourselves. <p>You cannot configure these cloud services, but can use them.</p> <p>You can create VPC endpoints to connect to gateway and interface VPC endpoint services.</p> |

| Parameter | Type | Description |
|------------|---|---|
| created_at | String | Specifies when the VPC endpoint service was created. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| updated_at | String | Specifies when the VPC endpoint service was updated. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| project_id | String | Specifies the project ID. |
| ports | Array of PortList objects | Specifies the port mappings opened to the VPC endpoint service. Duplicate port mappings are not allowed in the same VPC endpoint service. If multiple VPC endpoint services share one port_id , either server_port or protocol , or both server_port and protocol of each of these endpoint services must be unique. |

| Parameter | Type | Description |
|---------------|--|---|
| tcp_proxy | String | <p>Definition</p> <p>Specifies whether to transfer client information, such as source IP addresses, source port numbers, and marker IDs, to the server.</p> <p>Constraints</p> <ul style="list-style-type: none">• TCP TOA: The client information is placed into the tcp option field and sent to the server. TCP TOA is available only when the backend resource is an OBS resource.• Proxy Protocol: The client information is placed into the tcp payload field and sent to the server. tcp_proxy is available only when the server can parse the tcp option and tcp payload fields. <p>Range</p> <ul style="list-style-type: none">• close: Neither TCP TOA nor Proxy Protocol information is carried.• toa_open: TCP TOA information is carried.• proxy_open: Proxy Protocol information is carried.• open: Both TCP TOA and Proxy Protocol information are carried. <p>Default Value close</p> |
| tags | Array of TagList objects | Specifies resource tags. |
| description | String | Specifies the description field. The value can contain characters such as letters and digits, but cannot contain angle brackets (< or >). |
| enable_policy | Boolean | <p>Specifies whether the VPC endpoint policy can be customized.</p> <ul style="list-style-type: none">• false: The VPC endpoint policy cannot be customized.• true: The VPC endpoint policy can be customized. <p>The default value is false.</p> |

Table 4-16 PortList

| Parameter | Type | Description |
|-------------|---------|---|
| client_port | Integer | <p>Specifies the port to be accessed by a VPC endpoint.</p> <p>This port is provided by the VPC endpoint, allowing you to access the VPC endpoint service. Supported range: 1 to 65535.</p> |
| server_port | Integer | <p>Specifies the port for accessing the VPC endpoint service.</p> <p>This port is associated with backend resources to provide VPC endpoint services. Supported range: 1 to 65535</p> |
| protocol | String | Port mapping protocol. TCP is supported. |

Table 4-17 TagList

| Parameter | Type | Description |
|-----------|--------|--|
| key | String | <p>Specifies the tag key.</p> <p>key cannot be left blank. A key can contain 1 to 128 characters.</p> <p>A key can contain UTF-8 letters, digits, spaces, and the following special characters _ . : = + - @</p> <p>Keys cannot start with <code>_sys_</code> because it indicates a system tag.</p> <p>A key cannot start or end with a space.</p> |
| value | String | <p>Specifies the tag value.</p> <p>A value can contain 0 to 255 characters.</p> <p>A value can contain UTF-8 letters, digits, spaces, and the following special characters _ . : / = + - @</p> <p>A value can be an empty string.</p> |

Example Requests

Creating an interface VPC endpoint service and setting **approval_enabled** to **false**, **service_type** to **VM**, **client_port** to **8080** and **8081**, **server_port** to **90** and **80**, and **protocol** to **TCP**

```
POST https://{{endpoint}}/v1/{{project_id}}/vpc-endpoint-services

{
  "port_id" : "4189d3c2-8882-4871-a3c2-d380272eed88",
  "vpc_id" : "4189d3c2-8882-4871-a3c2-d380272eed80",
  "approval_enabled" : false,
  "service_type" : "interface",
  "server_type" : "VM",
  "ports" : [ {
    "client_port" : 8080,
    "server_port" : 90,
    "protocol" : "TCP"
  }, {
    "client_port" : 8081,
    "server_port" : 80,
    "protocol" : "TCP"
  } ]
}
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{
  "id" : "4189d3c2-8882-4871-a3c2-d380272eed83",
  "port_id" : "4189d3c2-8882-4871-a3c2-d380272eed88",
  "vpc_id" : "4189d3c2-8882-4871-a3c2-d380272eed80",
  "pool_id" : "5289d3c2-8882-4871-a3c2-d380272eed80",
  "status" : "available",
  "approval_enabled" : false,
  "service_name" : "test123",
  "service_type" : "interface",
  "server_type" : "VM",
  "project_id" : "6e9df51d1124e8d8498dce894923a0d",
  "created_at" : "2022-04-14T09:35:47Z",
  "ports" : [ {
    "client_port" : 8080,
    "server_port" : 90,
    "protocol" : "TCP"
  }, {
    "client_port" : 8081,
    "server_port" : 80,
    "protocol" : "TCP"
  } ]
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2.2 Querying VPC Endpoint Services

Function

This API is used to query VPC endpoint services.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|-----------------------------|--------------|-----------------------------|-----------------------|-------------------------|--------------|
| vpcep:endpointServices:list | List | endpoint Services * | - | • vpcep:epServices:list | - |
| | | - | g:EnterpriseProjectId | | |

URI

GET /v1/{project_id}/vpc-endpoint-services

Table 4-18 Path Parameters

| Parameter | Mandatory | Type | Description |
|------------|-----------|--------|-------------|
| project_id | Yes | String | Project ID. |

Table 4-19 Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------------------|-----------|---------|--|
| endpoint_service_name | No | String | Specifies the name of the VPC endpoint service. The name can contain letters and supports fuzzy match. |
| id | No | String | Specifies the unique ID of the VPC endpoint service. |
| status | No | String | Specifies the status of the VPC endpoint service. <ul style="list-style-type: none">• creating: The VPC endpoint service is being created.• available: The VPC endpoint service is connectable.• failed: The VPC endpoint service failed to be created.• deleting: The VPC endpoint service is being deleted. |
| sort_key | No | String | Specifies by what the VPC endpoint services are listed. <ul style="list-style-type: none">• create_at: VPC endpoint services are listed by creation time.• update_at: VPC endpoint services are listed by update time. The default value is create_at . |
| sort_dir | No | String | Specifies how VPC endpoint services are sorted. <ul style="list-style-type: none">• desc: indicates the descending order.• asc: indicates the ascending order. The default value is desc . |
| limit | No | Integer | Specifies the maximum number of VPC endpoint services displayed on each page. The value ranges from 0 to 1000 and is generally 10, 20, or 50. The default number is 10. |

| Parameter | Mandatory | Type | Description |
|---------------------|-----------|---------|--|
| offset | No | Integer | Specifies the offset. All VPC endpoint services after this offset will be queried. The offset must be an integer greater than 0 but less than the number of VPC endpoint services. |
| public_border_group | No | String | Specifies the VPC endpoint service that matches the edge attribute in the filtering result. |
| net_type | No | String | Specifies the type of the network to which the IPv4 address of the VPC endpoint belongs. |

Request Parameters

Table 4-20 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Response Parameters

Status code: 200

Table 4-21 Response body parameters

| Parameter | Type | Description |
|-------------------|--|--|
| endpoint_services | Array of ServiceList objects | Specifies VPC endpoint services. |
| total_count | Integer | Specifies the total number of VPC endpoint services that meet the search criteria. The number is not affected by limit or offset . |

Table 4-22 ServiceList

| Parameter | Type | Description |
|--------------|--------|--|
| id | String | Specifies the unique ID of the VPC endpoint service. |
| port_id | String | Specifies the ID that identifies the backend resource of the VPC endpoint service. The ID is in UUID format. The value can be: <ul style="list-style-type: none">• LB: indicates the port ID of the private IP address of a load balancer (recommended).• VM: indicates the NIC ID of an ECS IP address.• VIP: indicates the NIC ID of the virtual server for which the virtual IP address is configured. (This value has been discarded. LB is recommended.) |
| service_name | String | Specifies the name of the VPC endpoint service. |
| server_type | String | Specifies the resource type. <ul style="list-style-type: none">• VM: cloud server• VIP: virtual IP address• LB: enhanced load balancer |
| vpc_id | String | Specifies the ID of the VPC where the backend resource of the VPC endpoint service is located. |

| Parameter | Type | Description |
|------------------|---------|---|
| approval_enabled | Boolean | <p>Specifies whether connection approval is required.</p> <ul style="list-style-type: none">• false: Connection approval is not required. The created VPC endpoint is in the accepted state.• true: Connection approval is required. The created VPC endpoint is in the pendingAcceptance state, and it can be used only after being approved by the user of the VPC endpoint service. |
| status | String | <p>Specifies the status of the VPC endpoint service.</p> <ul style="list-style-type: none">• creating: The VPC endpoint service is being created.• available: The VPC endpoint service is connectable.• failed: The VPC endpoint service failed to be created.• deleting: The VPC endpoint service is being deleted. |
| service_type | String | <p>Specifies the type of the VPC endpoint service.</p> <p>There are two types of VPC endpoint services: interface and gateway.</p> <ul style="list-style-type: none">• gateway: indicates the VPC endpoint services that are configured by the O&M personnel. You can use them directly without creating them by yourselves.• interface: indicates the cloud services configured by the O&M personnel and private services created by yourselves. <p>You cannot configure these cloud services, but can use them.</p> <p>You can create VPC endpoints to connect to gateway and interface VPC endpoint services.</p> |
| created_at | String | <p>Specifies when the VPC endpoint service was created.</p> <p>The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used.</p> |

| Parameter | Type | Description |
|------------------|---|---|
| updated_at | String | Specifies when the VPC endpoint service was updated. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| project_id | String | Project ID. For details about how to obtain the project ID, see Obtaining a Project ID . |
| domain_id | String | Domain ID |
| ports | Array of PortList objects | Specifies the port mappings opened by the VPC endpoint service. Duplicate port mappings are not allowed in the same VPC endpoint service. If multiple VPC endpoint services share one port ID, the combinations of server ports and protocols for all port mappings between VPC endpoint services must be unique. |
| tags | Array of TagList objects | Resource tag list |
| connection_count | Integer | Specifies the number of VPC endpoints that are in the Creating or Accepted status. |

| Parameter | Type | Description |
|---------------------|--|---|
| tcp_proxy | String | <p>Definition</p> <p>Specifies whether to transfer client information, such as source IP addresses, source port numbers, and marker IDs, to the server.</p> <p>Constraints</p> <ul style="list-style-type: none">• TCP TOA: The client information is placed into the tcp option field and sent to the server. TCP TOA is available only when the backend resource is an OBS resource.• Proxy Protocol: The client information is placed into the tcp payload field and sent to the server. tcp_proxy is available only when the server can parse the tcp option and tcp payload fields. <p>Range</p> <ul style="list-style-type: none">• close: Neither TCP TOA nor Proxy Protocol information is carried.• toa_open: TCP TOA information is carried.• proxy_open: Proxy Protocol information is carried.• open: Both TCP TOA and Proxy Protocol information are carried. <p>Default Value close</p> |
| error | Array of Error objects | Specifies the error message returned when a task submission exception occurs. |
| description | String | Specifies the description field. The value can contain characters such as letters and digits, but cannot contain angle brackets (< or >). |
| public_border_group | String | Specifies the information about Public Border Group of the pool corresponding to the VPC endpoint service. |

| Parameter | Type | Description |
|---------------|---------|---|
| enable_policy | Boolean | <p>Specifies whether the VPC endpoint policy can be customized.</p> <ul style="list-style-type: none">• false: The VPC endpoint policy cannot be customized.• true: The VPC endpoint policy can be customized. <p>The default value is false.</p> |

Table 4-23 PortList

| Parameter | Type | Description |
|-------------|---------|---|
| client_port | Integer | <p>Specifies the port to be accessed by a VPC endpoint.</p> <p>This port is provided by the VPC endpoint, allowing you to access the VPC endpoint service. Supported range: 1 to 65535.</p> |
| server_port | Integer | <p>Specifies the port for accessing the VPC endpoint service.</p> <p>This port is associated with backend resources to provide VPC endpoint services. Supported range: 1 to 65535</p> |
| protocol | String | Port mapping protocol. TCP is supported. |

Table 4-24 TagList

| Parameter | Type | Description |
|-----------|--------|--|
| key | String | <p>Specifies the tag key.</p> <p>key cannot be left blank. A key can contain 1 to 128 characters.</p> <p>A key can contain UTF-8 letters, digits, spaces, and the following special characters _ . : = + - @</p> <p>Keys cannot start with _sys_ because it indicates a system tag.</p> <p>A key cannot start or end with a space.</p> |

| Parameter | Type | Description |
|-----------|--------|---|
| value | String | <p>Specifies the tag value.</p> <p>A value can contain 0 to 255 characters.</p> <p>A value can contain UTF-8 letters, digits, spaces, and the following special characters _ . : / = + - @</p> <p>A value can be an empty string.</p> |

Table 4-25 Error

| Parameter | Type | Description |
|-----------|--------|---------------------------------|
| message | String | Task error description |
| code | String | Error code of a task exception. |

Example Requests

Querying VPC endpoint services

```
GET https://{endpoint}/v1/{project_id}/vpc-endpoint-services?  
endpoint_service_name={endpoint_service_name}&id={id}&sort_key={sort_key}&sort_dir={sort_dir}&limit={li  
mit}&offset={offset}&status={status}
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{  
  "endpoint_services": [ {  
    "id": "4189d3c2-8882-4871-a3c2-d380272eed83",  
    "port_id": "4189d3c2-8882-4871-a3c2-d380272eed88",  
    "vpc_id": "4189d3c2-8882-4871-a3c2-d380272eed80",  
    "status": "available",  
    "approval_enabled": false,  
    "service_name": "test123",  
    "server_type": "VM",  
    "service_type": "interface",  
    "ports": [ {  
      "client_port": "8080",  
      "server_port": "80",  
      "protocol": "TCP"  
    }, {  
      "client_port": "8081",  
      "server_port": "80",  
      "protocol": "TCP"  
    } ],  
    "project_id": "6e9dfdf51d1124e8d8498dce894923a0d",  
    "created_at": "2022-04-14T09:35:47Z",  
    "updated_at": "2022-04-14T09:36:47Z",  
    "public_border_group": "br-abc-aaa1",  
    "supported_editions": [ "basic", "profession" ]  
  } ],
```

```
        "total_count" : 1
    }
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2.3 Querying Details of a VPC Endpoint Service

Function

This API is used to query details of a VPC endpoint service.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|----------------------------|--------------|-----------------------------|-------------------------|-------------------------|--------------|
| vpcep:endpointServices:get | Read | endpoint Services * | g:ResourceTag/<tag-key> | • vpcep:ep services:get | - |

URI

GET /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}

Table 4-26 Path Parameters

| Parameter | Mandatory | Type | Description |
|-------------------------|-----------|--------|---|
| project_id | Yes | String | Specifies the project ID. |
| vpc_endpoint_service_id | Yes | String | Specifies the ID of the VPC endpoint service. |

Request Parameters

Table 4-27 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Response Parameters

Status code: 200

Table 4-28 Response body parameters

| Parameter | Type | Description |
|-----------|--------|--|
| id | String | Specifies the unique ID of the VPC endpoint service. |

| Parameter | Type | Description |
|------------------|---------|---|
| port_id | String | <p>Specifies the ID that identifies the backend resource of the VPC endpoint service.</p> <p>The ID is in UUID format. The value can be:</p> <ul style="list-style-type: none">• LB: indicates the port ID of the private IP address of a load balancer (recommended).• VM: indicates the NIC ID of an ECS IP address.• VIP: indicates the NIC ID of the virtual server for which the virtual IP address is configured. (This value has been discarded. LB is recommended.) |
| service_name | String | Specifies the name of the VPC endpoint service. |
| server_type | String | Specifies the resource type. |
| server_type | String | <ul style="list-style-type: none">• VM: cloud server• VIP: virtual IP address• LB: enhanced load balancer |
| vpc_id | String | Specifies the ID of the VPC where the backend resource of the VPC endpoint service is located. |
| approval_enabled | Boolean | <p>Specifies whether connection approval is required.</p> <ul style="list-style-type: none">• false: Connection approval is not required. The created VPC endpoint is in the accepted state.• true: Connection approval is required. The created VPC endpoint is in the pendingAcceptance state, and it can be used only after being approved by the user of the VPC endpoint service. |

| Parameter | Type | Description |
|--------------|--------|---|
| status | String | <p>Specifies the status of the VPC endpoint service.</p> <ul style="list-style-type: none">• creating: The VPC endpoint service is being created.• available: The VPC endpoint service is connectable.• failed: The VPC endpoint service failed to be created.• deleting: The VPC endpoint service is being deleted. |
| service_type | String | <p>Specifies the type of the VPC endpoint service.</p> <p>There are two types of VPC endpoint services: interface and gateway.</p> <ul style="list-style-type: none">• gateway: indicates the VPC endpoint services that are configured by the O&M personnel. You can use them directly without creating them by yourselves.• interface: indicates the cloud services configured by the O&M personnel and private services created by yourselves. <p>You cannot configure these cloud services, but can use them.</p> <p>You can create VPC endpoints to connect to gateway and interface VPC endpoint services.</p> |
| created_at | String | <p>Specifies when the VPC endpoint service was created.</p> <p>The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used.</p> |
| updated_at | String | <p>Specifies when the VPC endpoint service was updated.</p> <p>The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used.</p> |
| project_id | String | <p>Specifies the project ID. For details about how to obtain the project ID, see "Obtaining a Project ID".</p> |

| Parameter | Type | Description |
|-----------|---|---|
| cidr_type | String | <p>Specifies the CIDR block type.</p> <ul style="list-style-type: none">• public: indicates a public CIDR block.• internal: indicates a private CIDR block. <p>The default value is internal.</p> |
| ports | Array of PortList objects | <p>Specifies the port mappings opened to the VPC endpoint service.</p> <p>Duplicate port mappings are not allowed in the same VPC endpoint service. If multiple VPC endpoint services share one port_id, either server_port or protocol, or both server_port and protocol of each of these endpoint services must be unique.</p> |

| Parameter | Type | Description |
|---------------|--|---|
| tcp_proxy | String | <p>Definition</p> <p>Specifies whether to transfer client information, such as source IP addresses, source port numbers, and marker IDs, to the server.</p> <p>Constraints</p> <ul style="list-style-type: none">• TCP TOA: The client information is placed into the tcp option field and sent to the server. TCP TOA is available only when the backend resource is an OBS resource.• Proxy Protocol: The client information is placed into the tcp payload field and sent to the server. tcp_proxy is available only when the server can parse the tcp option and tcp payload fields. <p>Range</p> <ul style="list-style-type: none">• close: Neither TCP TOA nor Proxy Protocol information is carried.• toa_open: TCP TOA information is carried.• proxy_open: Proxy Protocol information is carried.• open: Both TCP TOA and Proxy Protocol information are carried. <p>Default Value close</p> |
| tags | Array of TagList objects | Specifies resource tags. |
| error | Array of Error objects | Specifies the error message returned when there is an error. |
| enable_policy | Boolean | <p>Specifies whether the VPC endpoint policy can be customized.</p> <ul style="list-style-type: none">• false: The VPC endpoint policy cannot be customized.• true: The VPC endpoint policy can be customized. <p>The default value is false.</p> |

| Parameter | Type | Description |
|-------------|--------|---|
| description | String | Specifies the description field. The value can contain characters such as letters and digits, but cannot contain angle brackets (< or >). |

Table 4-29 PortList

| Parameter | Type | Description |
|-------------|---------|--|
| client_port | Integer | Specifies the port to be accessed by a VPC endpoint. This port is provided by the VPC endpoint, allowing you to access the VPC endpoint service. Supported range: 1 to 65535. |
| server_port | Integer | Specifies the port for accessing the VPC endpoint service. This port is associated with backend resources to provide VPC endpoint services. Supported range: 1 to 65535 |
| protocol | String | Port mapping protocol. TCP is supported. |

Table 4-30 TagList

| Parameter | Type | Description |
|-----------|--------|---|
| key | String | Specifies the tag key. key cannot be left blank. A key can contain 1 to 128 characters. A key can contain UTF-8 letters, digits, spaces, and the following special characters _ . : + - @ Keys cannot start with _sys_ because it indicates a system tag. A key cannot start or end with a space. |

| Parameter | Type | Description |
|-----------|--------|---|
| value | String | <p>Specifies the tag value.</p> <p>A value can contain 0 to 255 characters.</p> <p>A value can contain UTF-8 letters, digits, spaces, and the following special characters _ . : / = + - @</p> <p>A value can be an empty string.</p> |

Table 4-31 Error

| Parameter | Type | Description |
|-----------|--------|---------------------------------|
| message | String | Task error description |
| code | String | Error code of a task exception. |

Example Requests

Querying details about a VPC endpoint service

```
GET https://{endpoint}/v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}
```

For example, you can call the API (GET `https://{endpoint}/v1/{project_id}/vpc-endpoint-services/4189d3c2-8882-4871-a3c2-d380272eed88`) to query the VPC endpoint service whose ID is `4189d3c2-8882-4871-a3c2-d380272eed88`.

Example Responses

Status code: 200

The server has successfully processed the request.

```
{
  "id" : "4189d3c2-8882-4871-a3c2-d380272eed83",
  "port_id" : "4189d3c2-8882-4871-a3c2-d380272eed88",
  "vpc_id" : "4189d3c2-8882-4871-a3c2-d380272eed80",
  "status" : "available",
  "approval_enabled" : false,
  "service_name" : "test123",
  "server_type" : "VM",
  "service_type" : "interface",
  "ports" : [ {
    "client_port" : "8080",
    "server_port" : "80",
    "protocol" : "TCP"
  }, {
    "client_port" : "8081",
    "server_port" : "80",
    "protocol" : "TCP"
  } ],
  "project_id" : "6e9dfd51d1124e8d8498dce894923a0d",
  "created_at" : "2022-04-14T09:35:47Z",
  "updated_at" : "2022-04-14T09:36:47Z"
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2.4 Modifying a VPC Endpoint Service

Function

This API is used to modify a VPC endpoint service.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|-------------------------------|--------------|-----------------------------|-------------------------|----------------------------|--------------|
| vpcep:endpointServices:update | Write | endpoint Services * | g:ResourceTag/<tag-key> | • vpcep:ep services:update | - |

URI

PUT /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}

Table 4-32 Path Parameters

| Parameter | Mandatory | Type | Description |
|------------|-----------|--------|---------------------------|
| project_id | Yes | String | Specifies the project ID. |

| Parameter | Mandatory | Type | Description |
|-------------------------|-----------|--------|---|
| vpc_endpoint_service_id | Yes | String | Specifies the ID of the VPC endpoint service. |

Request Parameters

Table 4-33 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Table 4-34 Request body parameters

| Parameter | Mandatory | Type | Description |
|------------------|-----------|---------|---|
| approval_enabled | No | Boolean | <p>Specifies whether connection approval is required.</p> <ul style="list-style-type: none">• false: Connection approval is not required. The created VPC endpoint is in the accepted state.• true: Connection approval is required. The created VPC endpoint can be used only after the owner of the associated VPC endpoint service approves the connection. <p>The default value is true.</p> |

| Parameter | Mandatory | Type | Description |
|--------------|-----------|---|--|
| service_name | No | String | Specifies the name of the VPC endpoint service. The name can contain a maximum of 16 characters, including letters, digits, underscores (_), and hyphens (-). |
| ports | No | Array of PortList objects | Specifies the port mapping list of the service. Duplicate port mappings are not allowed in the same VPC endpoint service. If multiple VPC endpoint services share the same port ID, service ports and terminal ports of all these endpoint services cannot be duplicated when the protocol is the same. A maximum of 200 port mappings can be created at a time. The value of this parameter will be completely updated. |
| port_id | No | String | Specifies the ID of the NIC that ECS private IP address is bound to. |

| Parameter | Mandatory | Type | Description |
|-------------|-----------|--------|---|
| tcp_proxy | No | String | <p>Definition Specifies whether to transfer client information, such as source IP addresses, source port numbers, and marker IDs, to the server.</p> <p>Constraints</p> <ul style="list-style-type: none">• TCP TOA: The client information is placed into the tcp option field and sent to the server. TCP TOA is available only when the backend resource is an OBS resource.• Proxy Protocol: The client information is placed into the tcp payload field and sent to the server. <p>tcp_proxy is available only when the server can parse the tcp option and tcp payload fields.</p> <p>Range</p> <ul style="list-style-type: none">• close: Neither TCP TOA nor Proxy Protocol information is carried.• toa_open: TCP TOA information is carried.• proxy_open: Proxy Protocol information is carried.• open: Both TCP TOA and Proxy Protocol information are carried. <p>Default Value close</p> |
| description | No | String | Specifies the description field. The value can contain characters such as letters and digits, but cannot contain angle brackets (< or >). |

Table 4-35 PortList

| Parameter | Mandatory | Type | Description |
|-------------|-----------|---------|---|
| client_port | No | Integer | Specifies the port to be accessed by a VPC endpoint. This port is provided by the VPC endpoint, allowing you to access the VPC endpoint service. Supported range: 1 to 65535. |
| server_port | No | Integer | Specifies the port for accessing the VPC endpoint service. This port is associated with backend resources to provide VPC endpoint services. Supported range: 1 to 65535 |
| protocol | No | String | Port mapping protocol. TCP is supported. |

Response Parameters

Status code: 200

Table 4-36 Response body parameters

| Parameter | Type | Description |
|-----------|--------|---|
| id | String | Specifies the unique ID of the VPC endpoint service. |
| port_id | String | Specifies the ID that identifies the backend resource of the VPC endpoint service. The ID is in UUID format. The value can be: <ul style="list-style-type: none">• LB: indicates the port ID of the private IP address of a load balancer (recommended).• VM: indicates the NIC ID of an ECS IP address.• VIP: indicates the NIC ID of the virtual server for which the virtual IP address is configured. (This value has been discarded. LB is recommended.) |

| Parameter | Type | Description |
|------------------|---------|--|
| service_name | String | Specifies the name of the VPC endpoint service. |
| server_type | String | Specifies the resource type. <ul style="list-style-type: none">• VM: cloud server• VIP: virtual IP address• LB: enhanced load balancer |
| vpc_id | String | Specifies the ID of the VPC where the backend resource of the VPC endpoint service is located. |
| pool_id | String | Specifies the cluster ID of the VPC endpoint service. |
| approval_enabled | Boolean | Specifies whether connection approval is required. <ul style="list-style-type: none">• false: Connection approval is not required. The created VPC endpoint is in the accepted state.• true: Connection approval is required. The created VPC endpoint is in the pendingAcceptance state, and it can be used only after being approved by the user of the VPC endpoint service. |
| status | String | Specifies the status of the VPC endpoint service. <ul style="list-style-type: none">• creating: The VPC endpoint service is being created.• available: The VPC endpoint service is connectable.• failed: The VPC endpoint service failed to be created. |

| Parameter | Type | Description |
|--------------|---|---|
| service_type | String | <p>Specifies the type of the VPC endpoint service.</p> <p>There are two types of VPC endpoint services: interface and gateway.</p> <ul style="list-style-type: none">• gateway: indicates the VPC endpoint services that are configured by the O&M personnel. You can use them directly without creating them by yourselves.• interface: indicates the cloud services configured by the O&M personnel and private services created by yourselves. <p>You cannot configure these cloud services, but can use them.</p> <p>You can create VPC endpoints to connect to gateway and interface VPC endpoint services.</p> |
| created_at | String | <p>Specifies when the VPC endpoint service was created.</p> <p>The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used.</p> |
| updated_at | String | <p>Specifies when the VPC endpoint service was updated.</p> <p>The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used.</p> |
| project_id | String | Specifies the project ID. |
| ports | Array of PortList objects | <p>Specifies the port mappings opened to the VPC endpoint service.</p> <p>Duplicate port mappings are not allowed in the same VPC endpoint service.</p> <p>If multiple VPC endpoint services share one port_id, either server_port or protocol, or both server_port and protocol of each of these endpoint services must be unique.</p> |

| Parameter | Type | Description |
|---------------|--|---|
| tcp_proxy | String | <p>Definition</p> <p>Specifies whether to transfer client information, such as source IP addresses, source port numbers, and marker IDs, to the server.</p> <p>Constraints</p> <ul style="list-style-type: none">• TCP TOA: The client information is placed into the tcp option field and sent to the server. TCP TOA is available only when the backend resource is an OBS resource.• Proxy Protocol: The client information is placed into the tcp payload field and sent to the server. tcp_proxy is available only when the server can parse the tcp option and tcp payload fields. <p>Range</p> <ul style="list-style-type: none">• close: Neither TCP TOA nor Proxy Protocol information is carried.• toa_open: TCP TOA information is carried.• proxy_open: Proxy Protocol information is carried.• open: Both TCP TOA and Proxy Protocol information are carried. <p>Default Value close</p> |
| tags | Array of TagList objects | Specifies resource tags. |
| description | String | Specifies the description field. The value can contain characters such as letters and digits, but cannot contain angle brackets (< or >). |
| enable_policy | Boolean | <p>Specifies whether the VPC endpoint policy can be customized.</p> <ul style="list-style-type: none">• false: The VPC endpoint policy cannot be customized.• true: The VPC endpoint policy can be customized. <p>The default value is false.</p> |

Table 4-37 PortList

| Parameter | Type | Description |
|-------------|---------|--|
| client_port | Integer | Specifies the port to be accessed by a VPC endpoint. This port is provided by the VPC endpoint, allowing you to access the VPC endpoint service. Supported range: 1 to 65535. |
| server_port | Integer | Specifies the port for accessing the VPC endpoint service. This port is associated with backend resources to provide VPC endpoint services. Supported range: 1 to 65535 |
| protocol | String | Port mapping protocol. TCP is supported. |

Table 4-38 TagList

| Parameter | Type | Description |
|-----------|--------|---|
| key | String | Specifies the tag key. key cannot be left blank. A key can contain 1 to 128 characters. A key can contain UTF-8 letters, digits, spaces, and the following special characters _ . : = + - @ Keys cannot start with _sys_ because it indicates a system tag. A key cannot start or end with a space. |
| value | String | Specifies the tag value. A value can contain 0 to 255 characters. A value can contain UTF-8 letters, digits, spaces, and the following special characters _ . : / = + - @ A value can be an empty string. |

Example Requests

Modifying a VPC endpoint service and setting **approval_enabled** to **true**, **client_port** to **8081** and **8082**, and **server_port** to **22** and **23**

```
PUT https://{endpoint}/v1/{project_id}/vpc-endpoint-services/4189d3c2-8882-4871-a3c2- d380272eed88

{
  "approval_enabled" : true,
  "service_name" : "test",
  "ports" : [ {
    "client_port" : 8081,
    "server_port" : 22,
    "protocol" : "TCP"
  }, {
    "client_port" : 8082,
    "server_port" : 23,
    "protocol" : "TCP"
  } ]
}
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{
  "id" : "4189d3c2-8882-4871-a3c2-d380272eed83",
  "port_id" : "4189d3c2-8882-4871-a3c2-d380272eed88",
  "vpc_id" : "4189d3c2-8882-4871-a3c2-d380272eed80",
  "pool_id" : "5289d3c2-8882-4871-a3c2-d380272eed80",
  "status" : "available",
  "approval_enabled" : false,
  "service_name" : "test123",
  "service_type" : "interface",
  "server_type" : "VM",
  "project_id" : "6e9df51d1124e8d8498dce894923a0d",
  "created_at" : "2022-04-14T09:35:47Z",
  "ports" : [ {
    "client_port" : 8080,
    "server_port" : 90,
    "protocol" : "TCP"
  }, {
    "client_port" : 8081,
    "server_port" : 80,
    "protocol" : "TCP"
  } ],
  "tcp_proxy" : "proxy_open"
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2.5 Deleting a VPC Endpoint Service

Function

This API is used to delete a VPC endpoint service.

This API is asynchronous. If it is successfully called, status code **200** is returned, indicating that the request has been successfully delivered. It takes 1 to 2 minutes to delete a VPC endpoint service. You can query whether it has been deleted by referring to [Querying Details of a VPC Endpoint Service](#).

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|-------------------------------|--------------|-----------------------------|-------------------------|-----------------------------|--------------|
| vpcep:endpointServices:delete | Write | endpoint Services * | g:ResourceTag/<tag-key> | • vpcep:ep services: delete | - |

URI

DELETE /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}

Table 4-39 Path Parameters

| Parameter | Mandatory | Type | Description |
|-------------------------|-----------|--------|---|
| project_id | Yes | String | Specifies the project ID. |
| vpc_endpoint_service_id | Yes | String | Specifies the ID of the VPC endpoint service. |

Request Parameters

Table 4-40 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Response Parameters

Status code: 204

The server has successfully processed the request.

None

Example Requests

Deleting a VPC endpoint service

```
DELETE https://{endpoint}/v1/{project_id}/vpc-endpoint-services/4189d3c2-8882-4871-a3c2-d380272eed88
```

Example Responses

None

Status Codes

| Status Code | Description |
|-------------|--|
| 204 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2.6 Querying Connections to a VPC Endpoint Service

Function

This API is used to query connections to a VPC endpoint service. The marker ID is the unique ID of each connection.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|--|--------------|-----------------------------|---------------|--------------------------|--------------|
| vpcep:endpointServices:listConnections | List | endpoint Services * | - | • vpcep:connections:list | - |

URI

GET /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/connections

Table 4-41 Path Parameters

| Parameter | Mandatory | Type | Description |
|-------------------------|-----------|--------|---|
| project_id | Yes | String | Specifies the project ID. |
| vpc_endpoint_service_id | Yes | String | Specifies the ID of the VPC endpoint service. |

Table 4-42 Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--------|--|
| id | No | String | Specifies the unique ID of the VPC endpoint. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|---------|---|
| marker_id | No | String | Specifies the packet ID of the VPC endpoint. |
| status | No | String | Specifies the status of the VPC endpoint. <ul style="list-style-type: none">• pendingAcceptance: The VPC endpoint is to be accepted.• accepted: The VPC endpoint has been accepted.• rejected: The VPC endpoint has been rejected.• failed: The VPC endpoint failed to be created. |
| sort_key | No | String | Specifies by what the VPC endpoints are listed. <ul style="list-style-type: none">• create_at: VPC endpoints are listed by creation time.• update_at: VPC endpoints are listed by update time. The default value is create_at . |
| sort_dir | No | String | Specifies how the VPC endpoints are sorted. <ul style="list-style-type: none">• desc: indicates the descending order.• asc: indicates the ascending order. The default value is desc . |
| limit | No | Integer | Specifies the maximum number of connections displayed on each page. The value ranges from 0 to 1000 and is generally 10, 20, or 50. The default number is 10. |
| offset | No | Integer | Specifies the offset. All VPC endpoint services after this offset will be queried. The offset must be an integer greater than 0 but less than the number of VPC endpoint services. |

Request Parameters

Table 4-43 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Response Parameters

Status code: 200

Table 4-44 Response body parameters

| Parameter | Type | Description |
|-------------|---|--|
| connections | Array of ConnectionEndpoints objects | Specifies the connection list. |
| total_count | Integer | Specifies the total number of VPC endpoints that meet the search criteria. The number is not affected by limit or offset . |

Table 4-45 ConnectionEndpoints

| Parameter | Type | Description |
|-----------|---------|--|
| id | String | Specifies the unique ID of the VPC endpoint. |
| marker_id | Integer | Specifies the packet ID of the VPC endpoint. |

| Parameter | Type | Description |
|-------------|---|---|
| created_at | String | Specifies when the VPC endpoint was created. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| updated_at | String | Specifies when the VPC endpoint was updated. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| domain_id | String | Domain ID of a user. |
| error | Array of QueryError objects | Specifies the error message. This field is returned when the VPC endpoint is abnormal, that is, the value of status is failed. |
| status | String | Specifies the status of the VPC endpoint. <ul style="list-style-type: none">• pendingAcceptance: The VPC endpoint is to be accepted.• creating: The VPC endpoint is being created.• accepted: The VPC endpoint has been accepted.• rejected: The VPC endpoint has been rejected.• failed: The VPC endpoint failed to be created.• deleting: The VPC endpoint is being deleted. |
| description | String | Specifies the description of a VPC endpoint connection. |

Table 4-46 QueryError

| Parameter | Type | Description |
|---------------|--------|----------------|
| error_code | String | Error code. |
| error_message | String | Error message. |

Example Requests

Querying connections to a VPC endpoint service

```
GET https://[endpoint]/v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/connections?  
id={vpc_endpoint_id}&marker_id={marker_id}&status={status}&sort_key={sort_key }&sort_dir={sort_dir}&limi  
t={limit}&offset={offset}
```

For example, you can call the API (GET `https://[endpoint]/v1/{project_id}/vpc-endpoint-services/4189d3c2-8882-4871-a3c2-d380272eed88/connections`) to query the connections of the VPC endpoint service whose ID is `4189d3c2-8882-4871-a3c2-d380272eed88`.

Example Responses

Status code: 200

The server has successfully processed the request.

```
{  
  "connections" : [ {  
    "id" : "adb7b229-bb11-4072-bcc0-3327cd784263",  
    "status" : "accepted",  
    "marker_id" : 16777510,  
    "domain_id" : "5fc973eea581490997e82ea11a1df31f",  
    "created_at" : "2018-09-17T11:10:11Z",  
    "updated_at" : "2018-09-17T11:10:12Z"  
  }, {  
    "id" : "fd69d29f-dc29-4a9b-80d8-b51d1e7e58ea",  
    "status" : "accepted",  
    "marker_id" : 16777513,  
    "domain_id" : "5fc973eea581490997e82ea11a1df31f",  
    "created_at" : "2018-09-17T07:28:56Z",  
    "updated_at" : "2018-09-17T07:28:58Z"  
  } ],  
  "total_count" : 2  
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2.7 Accepting or Rejecting a VPC Endpoint

Function

This API is used to accept or reject a VPC endpoint for a VPC endpoint service.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|--|--------------|-----------------------------|---------------|----------------------------|--------------|
| vpcep:endpointServices:updateConnections | Write | endpoint Services * | - | • vpcep:connections:update | - |

URI

POST /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/connections/action

Table 4-47 Path Parameters

| Parameter | Mandatory | Type | Description |
|-------------------------|-----------|--------|---|
| project_id | Yes | String | Specifies the project ID. |
| vpc_endpoint_service_id | Yes | String | Specifies the ID of the VPC endpoint service. |

Request Parameters

Table 4-48 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Table 4-49 Request body parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------------------|---|
| action | Yes | String | Specifies whether to accept or reject a VPC endpoint for a VPC endpoint service. <ul style="list-style-type: none">• receive: Accept the VPC endpoint.• reject: Reject the VPC endpoint. |
| endpoints | Yes | Array of strings | Specifies VPC endpoint IDs. Each request accepts or rejects only one VPC endpoint. |

Response Parameters

Status code: 200

Table 4-50 Response body parameters

| Parameter | Type | Description |
|-------------|---|--------------------------------|
| connections | Array of ConnectionEndp oints objects | Specifies the connection list. |

Table 4-51 ConnectionEndpoints

| Parameter | Type | Description |
|------------|---------|--|
| id | String | Specifies the unique ID of the VPC endpoint. |
| marker_id | Integer | Specifies the packet ID of the VPC endpoint. |
| created_at | String | Specifies when the VPC endpoint was created. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| updated_at | String | Specifies when the VPC endpoint was updated. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| domain_id | String | Domain ID of a user. |

| Parameter | Type | Description |
|-------------|---|---|
| error | Array of QueryError objects | Specifies the error message. This field is returned when the VPC endpoint is abnormal, that is, the value of status is failed. |
| status | String | Specifies the status of the VPC endpoint. <ul style="list-style-type: none">• pendingAcceptance: The VPC endpoint is to be accepted.• creating: The VPC endpoint is being created.• accepted: The VPC endpoint has been accepted.• rejected: The VPC endpoint has been rejected.• failed: The VPC endpoint failed to be created.• deleting: The VPC endpoint is being deleted. |
| description | String | Specifies the description of a VPC endpoint connection. |

Table 4-52 QueryError

| Parameter | Type | Description |
|---------------|--------|----------------|
| error_code | String | Error code. |
| error_message | String | Error message. |

Example Requests

Accepting a connection from a VPC endpoint

```
POST https://{endpoint}/v1/{project_id}/vpc-endpoint-services/4189d3c2-8882-4871-a3c2- d380272eed88/  
connections/action  
  
{  
  "endpoints" : [ "705290f3-0d00-41f2-aedc-71f09844e879" ],  
  "action" : "receive"  
}
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{  
  "connections" : [ {  
    "id" : "4189d3c2-8882-4871-a3c2-d380272eed83",  
    "status" : "accepted",  
    "marker_id" : 422321321312321321,  
    "domain_id" : "6e9dfd51d1124e8d8498dce894923a0d",  
    "created_at" : "2022-04-14T09:35:47Z",  
    "updated_at" : "2022-04-14T09:36:47Z"  
  } ]  
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2.8 Querying Whitelist Records of a VPC Endpoint Service

Function

This API is used to query whitelist records of a VPC endpoint service.

Note

Your account is in the whitelist of your own VPC endpoint service by default.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|--|--------------|-----------------------------|---------------|--------------------------|--------------|
| vpcep:endpointServices:listPermissions | List | endpoint Services * | - | • vpcep:permissions:list | - |

URI

GET /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/permissions

Table 4-53 Path Parameters

| Parameter | Mandatory | Type | Description |
|-------------------------|-----------|--------|---|
| project_id | Yes | String | Specifies the project ID. |
| vpc_endpoint_service_id | Yes | String | Specifies the ID of the VPC endpoint service. |

Table 4-54 Query Parameters

| Parameter | Mandatory | Type | Description |
|------------|-----------|---------|--|
| permission | No | String | Specifies the permission account ID in <i>iam:domain::domain_id</i> format. <i>domain_id</i> indicates the account ID of the authorized user, for example, iam:domain::6e9dfd51d1124e8d8498dce894923a0d . Fuzzy search is supported. |
| limit | No | Integer | Specifies the number of returned whitelist records of the VPC endpoint service on each page. The value ranges from 0 to 500 and is generally 10, 20, or 50. The default number is 10. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|---------|--|
| offset | No | Integer | <p>Specifies the offset.</p> <p>All VPC endpoint services after this offset will be queried. The offset must be an integer greater than 0 but less than the number of VPC endpoint services.</p> |
| sort_key | No | String | <p>Specifies by what the VPC endpoint services are listed.</p> <ul style="list-style-type: none">• create_at: VPC endpoint services are listed by creation time.• update_at: VPC endpoint services are listed by update time. <p>The default value is create_at.</p> |
| sort_dir | No | String | <p>Specifies how the whitelist records are listed.</p> <ul style="list-style-type: none">• desc: indicates the descending order.• asc: indicates the ascending order. <p>The default value is desc.</p> |

Request Parameters

Table 4-55 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Response Parameters

Status code: 200

Table 4-56 Response body parameters

| Parameter | Type | Description |
|-------------|---|--|
| permissions | Array of PermissionObject objects | Specifies the permissions. |
| total_count | Integer | Specifies the total number of whitelist records that meet the search criteria. The number is not affected by limit or offset . |

Table 4-57 PermissionObject

| Parameter | Type | Description |
|-----------|--------|--|
| id | String | Specifies the unique ID of the permission. |

| Parameter | Type | Description |
|-----------------|--------|--|
| permission | String | <p>Specifies the permissions.</p> <p>The permission formats are as follows:</p> <ul style="list-style-type: none">• iam:domain::domain_id• organizations:orgPath::org_path <p>iam:domain:: is a fixed format. <i>domain_id</i> indicates the account ID of the user that can be connected.</p> <p><i>domain_id</i> can contain a maximum of 64 characters, including only letters and digits.</p> <p>organizations:orgPath:: is a fixed format. <i>org_path</i> indicates the organization path of the user that can be connected.</p> <p><i>org_path</i> can contain a maximum of 1,024 characters, including only letters, digits, forward slashes (/), hyphens (-), and question marks (?).</p> <p>You can also enter an asterisk (*) for <i>domain_id</i> or <i>org_path</i>, which indicates that this VPC endpoint service allows accesses from any VPC endpoint.</p> <p>Examples:</p> <ul style="list-style-type: none">• iam:domain::6e9dfd51d1124e8d8498dce894923a0dd• organizations:orgPath::o-3j59d1231uprgk9yuvlidra7zbzfi578/r-rldbu1vmxdw5ahdknxnvd5rgag77m2z/ou-7tuddd8nh99rebxtawsm6qct5z7rklv/* |
| permission_type | String | <p>Specifies the whitelist type of the VPC endpoint service.</p> <ul style="list-style-type: none">• domainId: indicates the whitelisted ID of the account that can create VPC endpoints to connect to the VPC endpoint service.• orgPath: indicates the whitelisted organization path under which accounts can create VPC endpoints to connect to the VPC endpoint service. |

| Parameter | Type | Description |
|------------|--------|--|
| created_at | String | Specifies when the whitelist record was added. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |

Example Requests

Querying whitelist records of a VPC endpoint service

```
GET https://[endpoint]/v1/[project_id]/vpc-endpoint-services/4189d3c2-8882-4871-a3c2-d380272eed88/permissions?permission={permission}&sort_dir={sort_dir}&limit={limit}&offset={offset}
```

For example, you can call the API (GET `https://[endpoint]/v1/[project_id]/vpc-endpoint-services/4189d3c2-8882-4871-a3c2-d380272eed88/permissions`) to query the whitelist records of the VPC endpoint service whose ID is `4189d3c2-8882-4871-a3c2-d380272eed88`.

Example Responses

Status code: 200

The server has successfully processed the request.

```
{
  "permissions" : [ {
    "id" : "f2659906-c622-480a-83e9-ef42bdb67b90",
    "permission" : "*",
    "created_at" : "2018-10-18T13:26:40Z"
  }],
  "total_count" : 1
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2.9 Batch Adding or Deleting Whitelist Records of a VPC Endpoint Service

Function

This API is used to batch add or delete whitelist records of a VPC endpoint service.

Note

Your account is in the whitelist of your own VPC endpoint service by default.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|--|-----------------------|-----------------------------|--|----------------------------|--------------|
| vpcep:endpointServices:updatePermissions | Permission management | endpoint Services * | - | • vpcep:permissions:update | - |
| | | - | • vpcep:Vpc eEndpoint OrgPath • vpcep:Vpc eEndpoint Owner | | |

URI

POST /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/permissions/action

Table 4-58 Path Parameters

| Parameter | Mandatory | Type | Description |
|-------------------------|-----------|--------|---|
| project_id | Yes | String | Specifies the project ID. |
| vpc_endpoint_service_id | Yes | String | Specifies the ID of the VPC endpoint service. |

Request Parameters

Table 4-59 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Table 4-60 Request body parameters

| Parameter | Mandatory | Type | Description |
|-------------|-----------|------------------|---|
| permissions | Yes | Array of strings | <p>Specifies the permissions. The permission formats are as follows:</p> <ul style="list-style-type: none">• iam:domain::domain_id• organizations:orgPath::org_path <p>iam:domain:: is a fixed format. <i>domain_id</i> indicates the account ID of the user that can be connected. <i>domain_id</i> can contain a maximum of 64 characters, including only letters and digits.</p> <p>organizations:orgPath:: is a fixed format. <i>org_path</i> indicates the organization path of the user that can be connected. <i>org_path</i> can contain a maximum of 1,024 characters, including only letters, digits, forward slashes (/), hyphens (-), and question marks (?). You can also enter an asterisk (*) for <i>domain_id</i> or <i>org_path</i>, which indicates that this VPC endpoint service allows accesses from any VPC endpoint.</p> <p>Examples:</p> <ul style="list-style-type: none">• iam:domain::6e9dfd51d1124e8d8498dce894923a0dd• organizations:orgPath::o-3j59d1231uprgk9yuvlidra7zbzfi578/r-rldb1vmxdw5ahdkknxnd5rgag77m2z/ou-7tuddd8nh99rebxltaws m6qct5z7rkly/* |

| Parameter | Mandatory | Type | Description |
|-----------------|-----------|--------|---|
| permission_type | No | String | <p>Specifies the whitelist type of the VPC endpoint service.</p> <ul style="list-style-type: none">• domainId: indicates the whitelisted ID of the account that can create VPC endpoints to connect to the VPC endpoint service.• orgPath: indicates the whitelisted organization path under which accounts can create VPC endpoints to connect to the VPC endpoint service. |
| action | Yes | String | Specifies the action to be performed, which can be add or remove . |

Response Parameters

Status code: 200

Table 4-61 Response body parameters

| Parameter | Type | Description |
|-----------------|------------------|---|
| permissions | Array of strings | <p>Specifies the permissions.</p> <p>The permission formats are as follows:</p> <ul style="list-style-type: none">• iam:domain::domain_id• organizations:orgPath::org_path <p>iam:domain:: is a fixed format. <i>domain_id</i> indicates the account ID of the user that can be connected.</p> <p><i>domain_id</i> can contain a maximum of 64 characters, including only letters and digits.</p> <p>organizations:orgPath:: is a fixed format. <i>org_path</i> indicates the organization path of the user that can be connected.</p> <p><i>org_path</i> can contain a maximum of 1,024 characters, including only letters, digits, forward slashes (/), hyphens (-), and question marks (?).</p> <p>You can also enter an asterisk (*) for <i>domain_id</i> or <i>org_path</i>, which indicates that this VPC endpoint service allows accesses from any VPC endpoint.</p> <p>Examples:</p> <ul style="list-style-type: none">• iam:domain::6e9dfd51d1124e8d8498dce894923a0dd• organizations:orgPath::o-3j59d1231uprgk9yuvlidra7zbzfi578/r-rldbu1vmxdw5ahdknxnvd5rgag77m2z/ou-7tuddd8nh99rebxltawsm6qct5z7rklv/* |
| permission_type | String | <p>Specifies the whitelist type of the VPC endpoint service.</p> <ul style="list-style-type: none">• domainId: indicates the whitelisted ID of the account that can create VPC endpoints to connect to the VPC endpoint service.• orgPath: indicates the whitelisted organization path under which accounts can create VPC endpoints to connect to the VPC endpoint service. |

Example Requests

- Adding a Whitelist for a VPC Endpoint Service

```
POST https://[endpoint]/v1/[project_id]/vpc-endpoint-services/4189d3c2-8882-4871-a3c2-d380272eed88/permissions/action

{
  "permissions" : [ "iam:domain::fc973eea581490997e82ea11a1d0101" ],
  "action" : "add"
}
```

- Removing a VPC Endpoint Service from the Whitelist

```
POST https://[endpoint]/v1/[project_id]/vpc-endpoint-services/4189d3c2-8882-4871-a3c2-d380272eed88/permissions/action

{
  "permissions" : [ "iam:domain::fc973eea581490997e82ea11a1d0101" ],
  "action" : "remove"
}
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{
  "permissions" : [ "iam:domain::5fc973eea581490997e82ea11a1d0101",
  "iam:domain::5fc973eea581490997e82ea11a1d0102" ]
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2.10 Querying Public VPC Endpoint Services

Function

This API is used to query public VPC endpoint services.

These services are created by O&M personnel and can be visible to and assessed by all users.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|-----------------------------------|--------------|-----------------------------|---------------|----------------------------|--------------|
| vpcep:endpointServices:listPublic | List | endpoint Services * | - | • vpcep:pubEpServices:list | - |

URI

GET /v1/{project_id}/vpc-endpoint-services/public

Table 4-62 Path Parameters

| Parameter | Mandatory | Type | Description |
|------------|-----------|--------|---------------------------|
| project_id | Yes | String | Specifies the project ID. |

Table 4-63 Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|---------|---|
| limit | No | Integer | Specifies the maximum number of public VPC endpoint services displayed on each page. The value ranges from 0 to 1000 and is generally 10, 20, or 50. The default number is 10. |
| offset | No | Integer | Specifies the offset. All VPC endpoint services after this offset will be queried. The offset must be an integer greater than 0 but less than the number of VPC endpoint services. |

| Parameter | Mandatory | Type | Description |
|-----------------------|-----------|--------|---|
| endpoint_service_name | No | String | Specifies the name of the public VPC endpoint service. The name can contain letters and supports fuzzy match. |
| id | No | String | Unique ID of the public VPC endpoint service. |
| sort_key | No | String | Specifies by what the VPC endpoint services are listed. <ul style="list-style-type: none">• create_at: VPC endpoint services are listed by creation time.• update_at: VPC endpoint services are listed by update time. The default value is create_at . |
| sort_dir | No | String | Specifies how VPC endpoint services are sorted. <ul style="list-style-type: none">• desc: indicates the descending order.• asc: indicates the ascending order. The default value is desc . |

Request Parameters

Table 4-64 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Response Parameters

Status code: 200

Table 4-65 Response body parameters

| Parameter | Type | Description |
|-------------------|--|---|
| endpoint_services | Array of EndpointService objects | Specifies VPC endpoint services. |
| total_count | Integer | Specifies the total number of public VPC endpoint services that meet the search criteria. The number is not affected by limit or offset . |

Table 4-66 EndpointService

| Parameter | Type | Description |
|--------------|--------|---|
| id | String | Unique ID of the public VPC endpoint service. |
| owner | String | Specifies the owner of the VPC endpoint service. |
| service_name | String | Specifies the name of the public VPC endpoint service. |
| service_type | String | <p>Specifies the type of the VPC endpoint service.</p> <ul style="list-style-type: none">• gateway: indicates the VPC endpoint services that are configured by the O&M personnel. You can use them directly without creating them by yourselves.• interface: indicates the cloud services configured by the O&M personnel and private services created by yourselves. <p>You can directly use the cloud services configured by the O&M personnel without creating them by yourself.</p> <p>You can create VPC endpoints to connect to gateway and interface VPC endpoint services.</p> |

| Parameter | Type | Description |
|---------------|---------|--|
| created_at | String | Specifies when the VPC endpoint service was created. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| is_charge | Boolean | Specifies whether the VPC endpoint connected to the VPC endpoint service is billed. <ul style="list-style-type: none">• true: The VPC endpoint is billed.• false: The VPC endpoint is not billed. |
| enable_policy | Boolean | Specifies whether the VPC endpoint policy can be customized. <ul style="list-style-type: none">• false: The VPC endpoint policy cannot be customized.• true: The VPC endpoint policy can be customized. The default value is false . |

Example Requests

Querying public VPC endpoint services

```
GET https://{endpoint}/v1/{project_id}/vpc-endpoint-services/public?  
limit={limit}&offset={offset}&endpoint_service_name={endpoint_service_name}&id={endpoint_service_id}&so  
rt_key={sort_key}&sort_dir={sort_dir}
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{  
  "endpoint_services" : [ {  
    "id" : "b0e22f6f-26f4-461c-b140-d873464d4fa0",  
    "owner" : "example",  
    "service_name" : "test123",  
    "service_type" : "interface",  
    "created_at" : "2018-09-10T13:13:23Z",  
    "is_charge" : "true"  
  }, {  
    "id" : "26391a76-546b-42a9-b2fc-496ec68c0e4d",  
    "owner" : "example",  
    "service_name" : "OBS",  
    "service_type" : "gateway",  
    "created_at" : "2019-03-28T09:30:27Z",  
    "is_charge" : "true"  
  } ],  
  "total_count" : 2  
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2.11 Querying Basic Information About a VPC Endpoint Service

Function

This API is used to query basic information about a VPC endpoint service. You can use this API to query the target VPC endpoint service. This API can also be used by other users to query basic information about your VPC endpoint service, without exposing your server information.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|---------------------------------|--------------|-----------------------------|---------------|----------------------------|--------------|
| vpcep:endpointServices:describe | Read | - | - | • vpcep:ep serviceDesc:get | - |

URI

GET /v1/{project_id}/vpc-endpoint-services/describe

Table 4-67 Path Parameters

| Parameter | Mandatory | Type | Description |
|------------|-----------|--------|---------------------------|
| project_id | Yes | String | Specifies the project ID. |

Table 4-68 Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------------------|-----------|--------|--|
| endpoint_service_name | No | String | Specifies the name of the VPC endpoint service. Note: Either this field or the id field must be specified. Otherwise, an error occurs. |
| id | No | String | Specifies the ID of the VPC endpoint service. The ID is the unique identifier of the VPC endpoint service. Note: Either this parameter or endpoint_service_name must be specified. |

Request Parameters

Table 4-69 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Response Parameters

Status code: 200

Table 4-70 Response body parameters

| Parameter | Type | Description |
|---------------------|---------|--|
| id | String | Specifies the unique ID of the VPC endpoint service. |
| service_name | String | Specifies the name of the VPC endpoint service. |
| service_type | String | <p>Specifies the type of the VPC endpoint service. Only your private services can be configured into interface VPC endpoint services.</p> <ul style="list-style-type: none">• gateway: indicates the VPC endpoint services that are configured by the O&M personnel. You can use them directly without creating them by yourselves.• interface: indicates the cloud services configured by the O&M personnel and private services created by yourselves. <p>You cannot configure these cloud services, but can use them.</p> <p>You can create VPC endpoints to connect to gateway and interface VPC endpoint services.</p> |
| created_at | String | <p>Specifies when the VPC endpoint service was created.</p> <p>The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used.</p> |
| is_charge | Boolean | <p>Specifies whether the VPC endpoint connected to the VPC endpoint service is billed.</p> <ul style="list-style-type: none">• true: The VPC endpoint is billed.• false: The VPC endpoint is not billed. |
| public_border_group | String | Specifies the public border group information about the pool corresponding to the VPC endpoint. |
| enable_policy | Boolean | <p>Specifies whether the VPC endpoint policy can be customized.</p> <ul style="list-style-type: none">• false: The VPC endpoint policy cannot be customized.• true: The VPC endpoint policy can be customized. <p>The default value is false.</p> |

Example Requests

Querying basic information about a VPC endpoint service

```
GET https://[endpoint]/v1/[project_id]/vpc-endpoint-services/describe?id=4189d3c2-8882-4871-a3c2-d380272eed83
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{  
  "id" : "9d4c1028-1336-4556-9881-b5d807c1b8a8",  
  "service_name" : "test123",  
  "service_type" : "interface",  
  "created_at" : "2018-09-17T07:28:31Z",  
  "is_charge" : "true"  
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2.12 Changing the Name of a VPC Endpoint Service

Function

This API is used to change the name of a VPC endpoint service.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|-----------------------------------|--------------|-----------------------------|---------------|-----------------------------|--------------|
| vpcep:endpointServices:updateName | Write | endpoint Services * | - | • vpcep:ep services: update | - |

URI

PUT /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/name

Table 4-71 Path Parameters

| Parameter | Mandatory | Type | Description |
|-------------------------|-----------|--------|---|
| project_id | Yes | String | Specifies the tenant ID. |
| vpc_endpoint_service_id | Yes | String | Specifies the ID of the VPC endpoint service. |

Request Parameters

Table 4-72 Request body parameters

| Parameter | Mandatory | Type | Description |
|-----------------------|-----------|--------|---|
| endpoint_service_name | No | String | Specifies the name of the VPC endpoint service. |

Response Parameters

Status code: 200

Table 4-73 Response body parameters

| Parameter | Type | Description |
|-----------------------|--------|---|
| endpoint_service_name | String | Specifies the name of the VPC endpoint service. |

Example Requests

Changing the name of a VPC endpoint service

```
https://{{endpoint}}/v1/{{project_id}}/vpc-endpoint-services/070c4a63-8a62-448e-89ed-f2cbde8e6a3b/name
{
  "endpoint_service_name" : "obs_test"
}
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{
  "endpoint_service_name" : "br-abc-aaa1.obs_test.77e40857-03e9-45ee-a940-4bbb8cef72bf"
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2.13 Updating Descriptions of VPC Endpoint Connections

Function

This API is used to update descriptions of VPC endpoint connections.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|--|--------------|-----------------------------|---------------|----------------------------|--------------|
| vpcep:endpointServices:updateConnectionDescription | Write | endpoint Services * | - | • vpcep:connections:update | - |

URI

PUT /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/connections/
description

Table 4-74 Path Parameters

| Parameter | Mandatory | Type | Description |
|-------------------------|-----------|--------|---|
| project_id | Yes | String | Specifies the tenant ID. |
| vpc_endpoint_service_id | Yes | String | Specifies the ID of the VPC endpoint service. |

Request Parameters

Table 4-75 Request body parameters

| Parameter | Mandatory | Type | Description |
|-------------|-----------|--|---|
| connections | Yes | Array of Connections Desc objects | Specifies the VPC endpoint connections. |

Table 4-76 ConnectionsDesc

| Parameter | Mandatory | Type | Description |
|-------------|-----------|--------|---|
| id | Yes | String | Specifies the VPC endpoint ID in UUID format. |
| description | Yes | String | Specifies the description field. The value can contain characters such as letters and digits, but cannot contain angle brackets (< or >). |

Response Parameters

Status code: 200

Table 4-77 Response body parameters

| Parameter | Type | Description |
|-------------|--|--------------------------------|
| connections | Array of ConnectionEndp oints objects | Specifies the connection list. |

Table 4-78 ConnectionEndpoints

| Parameter | Type | Description |
|------------|---|---|
| id | String | Specifies the unique ID of the VPC endpoint. |
| marker_id | Integer | Specifies the packet ID of the VPC endpoint. |
| created_at | String | Specifies when the VPC endpoint was created. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| updated_at | String | Specifies when the VPC endpoint was updated. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| domain_id | String | Domain ID of a user. |
| error | Array of QueryError objects | Specifies the error message. This field is returned when the VPC endpoint is abnormal, that is, the value of status is failed. |

| Parameter | Type | Description |
|-------------|--------|--|
| status | String | <p>Specifies the status of the VPC endpoint.</p> <ul style="list-style-type: none">• pendingAcceptance: The VPC endpoint is to be accepted.• creating: The VPC endpoint is being created.• accepted: The VPC endpoint has been accepted.• rejected: The VPC endpoint has been rejected.• failed: The VPC endpoint failed to be created.• deleting: The VPC endpoint is being deleted. |
| description | String | Specifies the description of a VPC endpoint connection. |

Table 4-79 QueryError

| Parameter | Type | Description |
|---------------|--------|----------------|
| error_code | String | Error code. |
| error_message | String | Error message. |

Example Requests

Updating the description of a VPC endpoint connection

`https://{endpoint}/v1/{project_id}/vpc-endpoint-services/813d9300-8473-405b-bfcd-f711117bad65/connections/description`

```
{  
  "connections" : [ {  
    "id" : "0df78897-35b0-4a93-ad17-0bc0585f546b",  
    "description" : "Specifies the VPC endpoint 1, which belongs to account [0605767a3300d5762fb7c0186d9e1779]abc_26."  
  }, {  
    "id" : "0d837f75-90d5-4528-bd11-5d974238ebca",  
    "description" : "Specifies the VPC endpoint 2, which belongs to account [7876999999999]abc_26."  
  } ]  
}
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{  
  "connections" : [ {
```

```
"id" : "0d837f75-90d5-4528-bd11-5d974238ebca",
"status" : "accepted",
"description" : "Specifies the VPC endpoint 2, which belongs to account [7876999999999]abc_26.",
"marker_id" : 302008767,
"domain_id" : "05b5408a0a80d2b10f06c0184a774460",
"created_at" : "2022-04-14T02:09:08Z",
"updated_at" : "2022-04-14T07:55:40Z"
}, {
"id" : "0df78897-35b0-4a93-ad17-0bc0585f546b",
"status" : "accepted",
"description" : "Specifies the VPC endpoint 1, which belongs to account
[0605767a3300d5762fb7c0186d9e1779]abc_26.",
"marker_id" : 302001833,
"domain_id" : "05b5408a0a80d2b10f06c0184a774460",
"created_at" : "2022-04-14T01:59:31Z",
"updated_at" : "2022-04-14T07:57:39Z"
} ]
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2.14 Batch Adding Whitelist Records of a VPC Endpoint Service

Function

This API is used to batch add whitelist records for VPC endpoint services of the current user. The description can be added.

Note

Your account is in the whitelist of your own VPC endpoint service by default.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|--|-----------------------|-----------------------------|--|----------------------------|--------------|
| vpcep:endpointServices:createPermissions | Permission management | endpoint Services * | - | • vpcep:permissions:update | - |
| | | - | <ul style="list-style-type: none"> • vpcep:Vpc eEndpoint OrgPath • vpcep:Vpc eEndpoint Owner | | |

URI

POST /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/permissions/batch-create

Table 4-80 Path Parameters

| Parameter | Mandatory | Type | Description |
|-------------------------|-----------|--------|---|
| project_id | Yes | String | Specifies the project ID. |
| vpc_endpoint_service_id | Yes | String | Specifies the ID of the VPC endpoint service. |

Request Parameters

Table 4-81 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Table 4-82 Request body parameters

| Parameter | Mandatory | Type | Description |
|-----------------|-----------|--|--|
| permissions | Yes | Array of EpsAddPermissionRequest objects | Specifies the whitelist records of the VPC endpoint service. |
| permission_type | No | String | Specifies the whitelist type of the VPC endpoint service. <ul style="list-style-type: none">• domainId: indicates the whitelisted ID of the account that can create VPC endpoints to connect to the VPC endpoint service.• orgPath: indicates the whitelisted organization path under which accounts can create VPC endpoints to connect to the VPC endpoint service. |

Table 4-83 EpsAddPermissionRequest

| Parameter | Mandatory | Type | Description |
|-------------|-----------|--------|--|
| permission | Yes | String | <p>The permission format is iam:domain::domain_id or organizations:orgPath::org_path.</p> <ul style="list-style-type: none">• iam:domain:: and organizations:orgPath:: are fixed formats.• <i>domain_id</i> indicates the ID of the account in which VPC endpoints can be created to access the VPC endpoint service. <i>org_path</i> indicates the organization path under which accounts can create VPC endpoints to access the VPC endpoint service. <p><i>domain_id</i> can contain a maximum of 64 characters, including only letters and digits.</p> <p><i>org_path</i> can contain a maximum of 1,024 characters, including only letters, digits, forward slashes (/), and hyphens (-).</p> <p>Example: iam:domain::6e9dfd51d1124e8d8498dce894923a0dd or organizations:orgPath::o-3j59d1231uprgk9yuvlidra7zbzfi578/r-rldbu1vmxdw5ahdkknxnv5rgag77m2z/ou-7tuddd8nh99rebxtaws6qct5z7rklv/*</p> |
| description | Yes | String | Specifies the description of a whitelist record of a VPC endpoint service. |

Response Parameters

Status code: 200

Table 4-84 Response body parameters

| Parameter | Type | Description |
|-------------|--|--|
| permissions | Array of EpsPermission objects | Specifies the whitelist of the VPC endpoint service. |

Table 4-85 EpsPermission

| Parameter | Type | Description |
|------------|--------|---|
| id | String | Specifies primary key IDs of whitelist records of a VPC endpoint service. |
| permission | String | <p>The permission format is iam:domain::domain_id or organizations:orgPath::org_path.</p> <ul style="list-style-type: none">• iam:domain:: and organizations:orgPath:: are fixed formats.• <i>domain_id</i> indicates the ID of the account in which VPC endpoints can be created to access the VPC endpoint service. <i>org_path</i> indicates the organization path under which accounts can create VPC endpoints to access the VPC endpoint service. <p><i>domain_id</i> can contain only letters and digits. <i>org_path</i> can contain only letters, digits, forward slashes (/), and hyphens (-).</p> <p>You can also enter an asterisk (*) for <i>domain_id</i> or <i>org_path</i>, which indicates that this VPC endpoint service allows accesses from any VPC endpoint. Example: <i>iam:domain::6e9dfd51d1124e8d8498dce894923a0dd</i> or <i>organizations:orgPath::o-3j59d1231uprgk9yuvlidra7zbzfi578/r-rldbu1vmxdw5ahdkknxnvd5rgag77m2z/ou-7tuddd8nh99rebxltaws6qct5z7rklv/</i></p> |

| Parameter | Type | Description |
|-----------------|--------|---|
| permission_type | String | <p>Specifies the whitelist type of the VPC endpoint service.</p> <ul style="list-style-type: none">• domainId: indicates the whitelisted ID of the account that can create VPC endpoints to connect to the VPC endpoint service.• orgPath: indicates the whitelisted organization path under which accounts can create VPC endpoints to connect to the VPC endpoint service. |
| description | String | Specifies the description of a whitelist record of a VPC endpoint service. |
| created_at | String | Specifies the time when a whitelist record is created. |

Example Requests

Batch adding whitelist records of a VPC endpoint service

```
POST https://[endpoint]/v1/[project_id]/vpc-endpoint-services/c07132bf-4071-439a-9ff3-2068eb45092f/permissions/batch-create

{
  "permissions" : [
    {
      "permission" : "*",
      "description" : "Specifies APIs for batch adding whitelist records of a VPC endpoint service."
    },
    {
      "permission" : "iam:domain::4dbb0ce8766f44a9bfd08ccf8fc02397",
      "description" : "test"
    }
  ]
}
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{
  "permissions" : [
    {
      "id" : "ab42a58b-6f8e-43b3-9400-aaf0e393ee0d",
      "permission" : "iam:domain::4dbb0ce8766f44a9bfd08ccf8fc02397",
      "description" : "test",
      "created_at" : "2022-06-16T10:03:27Z"
    },
    {
      "id" : "dfaaff1-858d-4631-83c4-be3548a07935",
      "permission" : "*",
      "description" : "",
      "created_at" : "2022-06-16T10:03:27Z"
    }
  ]
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2.15 Batch Deleting Whitelist Records of a VPC Endpoint Service

Function

This API is used to batch delete whitelist records of a VPC endpoint service.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|--|-----------------------|-----------------------------|---------------|---------------------------|--------------|
| vpcep:endpointServices:deletePermissions | Permission management | endpoint Services * | - | • vpcep:permission:update | - |

URI

POST /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/permissions/batch-delete

Table 4-86 Path Parameters

| Parameter | Mandatory | Type | Description |
|-------------------------|-----------|--------|---|
| project_id | Yes | String | Specifies the project ID. |
| vpc_endpoint_service_id | Yes | String | Specifies the ID of the VPC endpoint service. |

Request Parameters

Table 4-87 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Table 4-88 Request body parameters

| Parameter | Mandatory | Type | Description |
|-------------|-----------|--|--|
| permissions | Yes | Array of EpsRemovePermissionRequest objects | Specifies the whitelist of the VPC endpoint service. |

Table 4-89 EpsRemovePermissionRequest

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--------|---|
| id | Yes | String | Specifies primary key IDs of whitelist records of a VPC endpoint service. |

Response Parameters

Status code: 200

Table 4-90 Response body parameters

| Parameter | Type | Description |
|-------------|--|--|
| permissions | Array of EpsPermission objects | Specifies the whitelist of the VPC endpoint service. |

Table 4-91 EpsPermission

| Parameter | Type | Description |
|------------|--------|--|
| id | String | Specifies primary key IDs of whitelist records of a VPC endpoint service. |
| permission | String | <p>The permission format is iam:domain::domain_id or organizations:orgPath::org_path.</p> <ul style="list-style-type: none">• iam:domain:: and organizations:orgPath:: are fixed formats.• <i>domain_id</i> indicates the ID of the account in which VPC endpoints can be created to access the VPC endpoint service. <i>org_path</i> indicates the organization path under which accounts can create VPC endpoints to access the VPC endpoint service. <p><i>domain_id</i> can contain only letters and digits. <i>org_path</i> can contain only letters, digits, forward slashes (/), and hyphens (-).</p> <p>You can also enter an asterisk (*) for <i>domain_id</i> or <i>org_path</i>, which indicates that this VPC endpoint service allows accesses from any VPC endpoint. Example: <i>iam:domain::6e9dfd51d1124e8d8498dce894923a0dd</i> or <i>organizations:orgPath::o-3j59d1231uprgk9yuvlidra7zbzfi578/r-rldbu1vmxdw5ahdkknxnv5rgag77m2z/ou-7tuddd8nh99rebxltaws6qct5z7rklv/</i></p> |

| Parameter | Type | Description |
|-----------------|--------|---|
| permission_type | String | <p>Specifies the whitelist type of the VPC endpoint service.</p> <ul style="list-style-type: none">• domainId: indicates the whitelisted ID of the account that can create VPC endpoints to connect to the VPC endpoint service.• orgPath: indicates the whitelisted organization path under which accounts can create VPC endpoints to connect to the VPC endpoint service. |
| description | String | Specifies the description of a whitelist record of a VPC endpoint service. |
| created_at | String | Specifies the time when a whitelist record is created. |

Example Requests

Batch deleting whitelist records of a VPC endpoint service

```
POST https://[endpoint]/v1/[project_id]/vpc-endpoint-services/c07132bf-4071-439a-9ff3-2068eb45092f/permissions/batch-delete

{
  "permissions" : [ {
    "id" : "b9b6f264-3562-4f62-ba84-c128da20d18d"
  }, {
    "id" : "c07132bf-4071-439a-9ff3-2068eb45092f"
  } ]
}
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{
  "permissions" : [ ]
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.2.16 Updating the Description of a Whitelist Record of a VPC Endpoint Service

Function

This API is used to update the whitelist description of a VPC endpoint service.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|---|--------------|-----------------------------|---------------|----------------------------|--------------|
| vpcep:endpointServices:updatePermissionsDescription | Write | endpoint Services * | - | • vpcep:permissions:update | - |

URI

PUT /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/permissions/{permission_id}

Table 4-92 Path Parameters

| Parameter | Mandatory | Type | Description |
|-------------------------|-----------|--------|---|
| project_id | Yes | String | Specifies the project ID. |
| vpc_endpoint_service_id | Yes | String | Specifies the ID of the VPC endpoint service. |

| Parameter | Mandatory | Type | Description |
|---------------|-----------|--------|---|
| permission_id | Yes | String | Specifies IDs of whitelist records of a VPC endpoint service. |

Request Parameters

Table 4-93 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Table 4-94 Request body parameters

| Parameter | Mandatory | Type | Description |
|------------|-----------|--|--|
| permission | Yes | EpsUpdatePermissionDesc object | Specifies the request body for updating the description of a whitelist record of a VPC endpoint service. |

Table 4-95 [EpsUpdatePermissionDesc](#)

| Parameter | Mandatory | Type | Description |
|-------------|-----------|--------|--|
| description | Yes | String | Specifies the description of a whitelist record of a VPC endpoint service. |

Response Parameters

Status code: 200

Table 4-96 Response body parameters

| Parameter | Type | Description |
|-------------|--|--|
| permissions | Array of EpsPermission objects | Specifies the whitelist of the VPC endpoint service. |

Table 4-97 EpsPermission

| Parameter | Type | Description |
|------------|--------|---|
| id | String | Specifies primary key IDs of whitelist records of a VPC endpoint service. |
| permission | String | <p>The permission format is iam:domain::domain_id or organizations:orgPath::org_path.</p> <ul style="list-style-type: none">• iam:domain:: and organizations:orgPath:: are fixed formats.• <i>domain_id</i> indicates the ID of the account in which VPC endpoints can be created to access the VPC endpoint service. <i>org_path</i> indicates the organization path under which accounts can create VPC endpoints to access the VPC endpoint service. <p><i>domain_id</i> can contain only letters and digits. <i>org_path</i> can contain only letters, digits, forward slashes (/), and hyphens (-).</p> <p>You can also enter an asterisk (*) for <i>domain_id</i> or <i>org_path</i>, which indicates that this VPC endpoint service allows accesses from any VPC endpoint. Example: <i>iam:domain::6e9dfd51d1124e8d8498dce894923a0dd</i> or <i>organizations:orgPath::o-3j59d1231uprgk9yuvlidra7zbzfi578/r-rldbu1vmxdw5ahdkknxnvd5rgag77m2z/ou-7tuddd8nh99rebxltawsmt6qct5z7rklv/</i></p> |

| Parameter | Type | Description |
|-----------------|--------|---|
| permission_type | String | <p>Specifies the whitelist type of the VPC endpoint service.</p> <ul style="list-style-type: none">• domainId: indicates the whitelisted ID of the account that can create VPC endpoints to connect to the VPC endpoint service.• orgPath: indicates the whitelisted organization path under which accounts can create VPC endpoints to connect to the VPC endpoint service. |
| description | String | Specifies the description of a whitelist record of a VPC endpoint service. |
| created_at | String | Specifies the time when a whitelist record is created. |

Example Requests

Updating the description of a whitelist record of a VPC endpoint service

```
PUT https://[endpoint]/v1/[project_id]/vpc-endpoint-services/c07132bf-4071-439a-9ff3-2068eb45092f/permissions/849046d9-7342-44ba-b2d2-367d8de6311b

{
  "permission" : {
    "description" : "Specifies the whitelist record to the VPC endpoint service added."
  }
}
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{
  "permissions" : [ {
    "id" : "849046d9-7342-44ba-b2d2-367d8de6311b",
    "permission" : "*",
    "description" : "Specifies the whitelist record to the VPC endpoint service added.",
    "created_at" : "2022-06-16T09:48:21Z"
  } ]
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.3 VPC Endpoints

4.3.1 Creating a VPC Endpoint

Function

This API is used to create a VPC endpoint for accessing a VPC endpoint service.

This API is asynchronous. If it is successfully called, status code **200** is returned, indicating that the request has been successfully delivered.

It takes 1 to 2 minutes to create a VPC endpoint. You can query whether it has been created by referring to [Querying Details of a VPC Endpoint](#).

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|------------------------|--------------|-----------------------------|--|-------|--------------|
| vpcep:endpoints:create | Write | endpoints * | <ul style="list-style-type: none">• vpcep:Vpc eServiceName• vpcep:Vpc eServiceOrgPath• vpcep:Vpc eServiceOwner | - | |
| | | vpc * | - | | |
| | | routeTable | - | | |

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|--------|--------------|-----------------------------|---|-------|--------------|
| | | subnet | - | | |
| | | - | <ul style="list-style-type: none">• g:Request Tag/<tag-key>• g:TagKeys• g:EnterpriseProjectId | | |

URI

POST /v1/{project_id}/vpc-endpoints

Table 4-98 Path Parameters

| Parameter | Mandatory | Type | Description |
|------------|-----------|--------|---------------------------|
| project_id | Yes | String | Specifies the project ID. |

Request Parameters

Table 4-99 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Table 4-100 Request body parameters

| Parameter | Mandatory | Type | Description |
|---------------------|-----------|---------|--|
| subnet_id | No | String | <p>Specifies the network ID of the subnet in the VPC specified by vpc_id. The ID is in UUID format.</p> <p>This parameter is mandatory when you create a VPC endpoint for connecting to an interface VPC endpoint service.</p> <p>Note:</p> <ul style="list-style-type: none">• The CIDR block of the VPC subnet cannot overlap with 198.19.128.0/17.• The destination address of the custom route in the VPC route table cannot overlap with 198.19.128.0/17. |
| endpoint_service_id | Yes | String | <p>Specifies the ID of the VPC endpoint service.</p> <p>You can obtain the ID of the VPC endpoint service to be connected by querying the section "VPCEP Service Overview".</p> |
| vpc_id | Yes | String | Specifies the ID of the VPC where the VPC endpoint is to be created. |
| enable_dns | No | Boolean | <p>Specifies whether to create a domain name.</p> <ul style="list-style-type: none">• true: A domain name will be created.• false: No domain names will be created. <p>The default value is false.</p> <p>Note:</p> <p>When you create a VPC endpoint for connecting to a gateway VPC endpoint service, no domain names will be created regardless of whether enable_dns is set to true or false.</p> |

| Parameter | Mandatory | Type | Description |
|------------------|-----------|--|--|
| tags | No | Array of TagList objects | Specifies the tag list. If no tag is matched, an empty array is returned. |
| routetables | No | Array of strings | Specifies the route table ID list. This parameter is mandatory when you create a VPC endpoint for connecting to a gateway VPC endpoint service. If this parameter is not configured, the default route table will be used. |
| port_ip | No | String | Specifies the IP address for accessing the associated VPC endpoint service. You can specify IP addresses for accessing the associated VPC endpoint service when creating a VPC endpoint. Only IPv4 addresses are supported. This parameter is mandatory when you create a VPC endpoint for connecting an interface VPC endpoint service. |
| whitelist | No | Array of strings | Specifies whitelists added for controlling access to the VPC endpoint. IPv4 addresses or CIDR blocks can be specified to control access when you create a VPC endpoint. The whitelist is left blank by default. This parameter is available only when you create a VPC endpoint for connecting to an interface VPC endpoint service. |
| enable_whitelist | No | Boolean | Specifies whether access control is enabled. |
| description | No | String | Specifies the description field. The value can contain characters such as letters and digits, but cannot contain angle brackets (< or >). |

Table 4-101 TagList

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--------|--|
| key | No | String | <p>Specifies the tag key.</p> <p>key cannot be left blank. A key can contain 1 to 128 characters.</p> <p>A key can contain UTF-8 letters, digits, spaces, and the following special characters _ . : = + - @</p> <p>Keys cannot start with <code>_sys_</code> because it indicates a system tag.</p> <p>A key cannot start or end with a space.</p> |
| value | No | String | <p>Specifies the tag value.</p> <p>A value can contain 0 to 255 characters.</p> <p>A value can contain UTF-8 letters, digits, spaces, and the following special characters _ . : / = + - @</p> <p>A value can be an empty string.</p> |

Response Parameters

Status code: 200

Table 4-102 Response body parameters

| Parameter | Type | Description |
|-----------|--------|--|
| id | String | Specifies the unique ID of the VPC endpoint. |

| Parameter | Type | Description |
|-----------------------|------------------|---|
| service_type | String | <p>Specifies the type of the VPC endpoint service that the VPC endpoint is used to connect to.</p> <ul style="list-style-type: none">• gateway: indicates VPC endpoint services that are configured by the O&M personnel. You can directly use them.• interface: indicates cloud services configured by the O&M personnel and private services created by yourselves. <p>You can directly use interface VPC endpoint services configured by the O&M personnel.</p> <p>You can query the public VPC endpoint services to view the VPC endpoint services that are configured by the O&M personnel and visible and accessible to all users. You can create interface VPC endpoint services.</p> |
| status | String | <p>Specifies the status of the VPC endpoint.</p> <ul style="list-style-type: none">• pendingAcceptance: The VPC endpoint is to be accepted.• creating: The VPC endpoint is being created.• accepted: The VPC endpoint has been accepted.• rejected: The VPC endpoint has been rejected.• failed: The VPC endpoint failed to be created.• deleting: The VPC endpoint is being deleted. |
| ip | String | Specifies the IP address of the VPC endpoint. |
| active_status | Array of strings | <p>Specifies the account status.</p> <ul style="list-style-type: none">• frozen: The account is frozen.• active: The account is unfrozen. |
| endpoint_service_name | String | Specifies the name of the VPC endpoint service. |
| marker_id | Integer | Specifies the packet ID of the VPC endpoint. |

| Parameter | Type | Description |
|---------------------|--|--|
| endpoint_service_id | String | Specifies the ID of the VPC endpoint service. |
| enable_dns | Boolean | Specifies whether to create a domain name. <ul style="list-style-type: none">• true: A domain name will be created.• false: No domain names will be created. <p>Note: When you create a VPC endpoint for connecting to a gateway VPC endpoint service, no domain names will be created regardless of whether enable_dns is set to true or false.</p> |
| dns_names | Array of strings | Specifies the domain name for accessing the associated VPC endpoint service. This parameter is only available when enable_dns is set to true. |
| subnet_id | String | Specifies the ID of the subnet in the VPC specified by vpc_id . The ID is in UUID format. |
| vpc_id | String | Specifies the ID of the VPC where the VPC endpoint is to be created. |
| created_at | String | Specifies when the VPC endpoint was created. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| updated_at | String | Specifies when the VPC endpoint was updated. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| project_id | String | Specifies the project ID. For details about how to obtain the project ID, see "Obtaining a Project ID". |
| tags | Array of TagList objects | Specifies the tag list. If no tag is matched, an empty array is returned. |

| Parameter | Type | Description |
|--------------------|------------------|---|
| whitelist | Array of strings | <p>Specifies the whitelist for controlling access to the VPC endpoint.</p> <p>If you do not specify this parameter, an empty whitelist will be returned.</p> <p>This parameter is available only when you create a VPC endpoint for connecting to an interface VPC endpoint service.</p> |
| enable_whitelist | Boolean | <p>Specifies whether access control is enabled.</p> <ul style="list-style-type: none">• true: Access control is enabled.• false: Access control is disabled. <p>If you do not specify this parameter, false will be returned.</p> <p>This parameter is available only when you create a VPC endpoint for connecting to an interface VPC endpoint service.</p> |
| routetables | Array of strings | <p>Specifies the route table ID list.</p> <p>If this parameter is not specified, the ID of the default route table of the VPC is returned.</p> <p>This parameter is available when you create a VPC endpoint for connecting to a gateway VPC endpoint service.</p> |
| specification_name | String | Specifies the name of the specifications. |
| description | String | Provides supplementary information about the VPC endpoint. The description can contain letters and digits. Greater than symbols (<) and less than symbols (>) are not allowed. |
| policy_statement | Array of strings | Specifies the policy of the gateway VPC endpoint. This parameter is only available when enable_policy of the VPC endpoint services for OBS and SFS is set to true . |
| enable_status | String | <p>Specifies whether a VPC endpoint is available.</p> <ul style="list-style-type: none">• enable: The VPC endpoint is available.• disable: The VPC endpoint is not available. |

| Parameter | Type | Description |
|---------------------|--------|---|
| endpoint_pool_id | String | (To be discarded) Specifies the ID of the cluster associated with the VPC endpoint. |
| public_border_group | String | Specifies the public border group information about the pool corresponding to the VPC endpoint. |

Table 4-103 TagList

| Parameter | Type | Description |
|-----------|--------|---|
| key | String | Specifies the tag key. key cannot be left blank. A key can contain 1 to 128 characters. A key can contain UTF-8 letters, digits, spaces, and the following special characters _ . : = + - @ Keys cannot start with <u>sys</u> because it indicates a system tag. A key cannot start or end with a space. |
| value | String | Specifies the tag value. A value can contain 0 to 255 characters. A value can contain UTF-8 letters, digits, spaces, and the following special characters _ . : / = + - @ A value can be an empty string. |

Example Requests

Create a VPC endpoint without creating a domain name.

```
POST https://{endpoint}/v1/{project_id}/vpc-endpoints
{
  "subnet_id" : "5d1c1d71-2613-4274-b34e-d82af550f967",
  "vpc_id" : "4e65f8b1-306d-4522-8ecd-aa374000e2a4",
  "endpoint_service_id" : "813d9300-8473-405b-bfcd-f711117bad65",
  "enable_dns" : "false"
}
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{  
  "id" : "492c776f-2cb9-40a2-9735-d7279ab2bbb6",  
  "status" : "accepted",  
  "ip" : "172.16.0.154",  
  "tags" : [ ],  
  "whitelist" : [ ],  
  "marker_id" : 302010104,  
  "active_status" : [ "active" ],  
  "vpc_id" : "0da03835-1dcf-4361-9b87-34139d58dd59",  
  "service_type" : "interface",  
  "project_id" : "0605767a3300d5762fb7c0186d9e1779",  
  "subnet_id" : "fb1b8b7e-f34c-4ff1-b3a7-221acef3b3aa",  
  "enable_dns" : false,  
  "created_at" : "2022-04-28T02:44:50Z",  
  "updated_at" : "2022-04-28T02:56:15Z",  
  "endpoint_service_id" : "8843fac2-bc01-445a-a822-c8124ff3968c",  
  "endpoint_service_name" : "br-abc-aaa1.vm_test.8843fac2-bc01-445a-a822-c8124ff3968c",  
  "enable_whitelist" : false,  
  "specification_name" : "default",  
  "endpoint_pool_id" : "501f4a3b-6f96-4309-97d1-e291b8ca5b96",  
  "enable_status" : "enable",  
  "public_border_group" : "center"  
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.3.2 Querying VPC Endpoints

Function

This API is used to query VPC endpoints.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|----------------------|--------------|-----------------------------|-----------------------|-------|--------------|
| vpcep:endpoints:list | List | endpoints* | - | - | - |
| | | - | g:EnterpriseProjectId | | |

URI

GET /v1/{project_id}/vpc-endpoints

Table 4-104 Path Parameters

| Parameter | Mandatory | Type | Description |
|------------|-----------|--------|---------------------------|
| project_id | Yes | String | Specifies the project ID. |

Table 4-105 Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------------------|-----------|---------|--|
| endpoint_service_name | No | String | Specifies the name of the VPC endpoint service. The name is case insensitive and supports fuzzy match. |
| vpc_id | No | String | Specifies the ID of the VPC where the VPC endpoint is to be created. |
| id | No | String | Specifies the unique ID of the VPC endpoint. |
| limit | No | Integer | Specifies the maximum number of VPC endpoints displayed on each page. The value ranges from 0 to 1,000 and is generally 10, 20, or 50. The default number is 10. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|---------|---|
| offset | No | Integer | Specifies the offset. All VPC endpoint services after this offset will be queried. The offset must be an integer greater than 0 but less than the number of VPC endpoint services. |
| sort_key | No | String | Specifies by what the VPC endpoints are listed. <ul style="list-style-type: none">• create_at: VPC endpoints are listed by creation time.• update_at: VPC endpoints are listed by update time. The default value is create_at . |
| sort_dir | No | String | Specifies how the VPC endpoints are sorted. <ul style="list-style-type: none">• desc: indicates the descending order.• asc: indicates the ascending order. The default value is desc . |

Request Parameters

Table 4-106 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Response Parameters

Status code: 200

Table 4-107 Response body parameters

| Parameter | Type | Description |
|-------------|--|--|
| endpoints | Array of EndpointResponseBody objects | Specifies the VPC endpoints. |
| total_count | Integer | Specifies the total number of VPC endpoints that meet the search criteria. The number is not affected by limit or offset . |

Table 4-108 EndpointResponseBody

| Parameter | Type | Description |
|--------------|--------|---|
| id | String | Specifies the unique ID of the VPC endpoint. |
| service_type | String | <p>Specifies the type of the VPC endpoint service that the VPC endpoint is used to connect to.</p> <ul style="list-style-type: none">• gateway: indicates the VPC endpoint services that are configured by the O&M personnel. You can use them directly without creating them by yourselves.• interface: indicates the cloud services configured by the O&M personnel and private services created by yourselves. <p>You cannot configure these cloud services, but can use them.</p> <p>You can query the public VPC endpoint services to view the VPC endpoint services that are visible and accessible to all users and are configured by the O&M personnel.</p> <p>You can create interface VPC endpoint services.</p> |

| Parameter | Type | Description |
|-----------------------|------------------|--|
| status | String | <p>Specifies the status of the VPC endpoint.</p> <ul style="list-style-type: none">• pendingAcceptance: The VPC endpoint is to be accepted.• creating: The VPC endpoint is being created.• accepted: The VPC endpoint has been accepted.• rejected: The VPC endpoint has been rejected.• failed: The VPC endpoint failed to be created.• deleting: The VPC endpoint is being deleted. |
| active_status | Array of strings | <p>Specifies the account status.</p> <ul style="list-style-type: none">• frozen: The account is frozen.• active: The account is unfrozen. |
| endpoint_service_name | String | Specifies the name of the VPC endpoint service. |
| marker_id | Integer | Specifies the packet ID of the VPC endpoint. |
| endpoint_service_id | String | Specifies the ID of the VPC endpoint service. |
| enable_dns | Boolean | <p>Specifies whether to create a domain name.</p> <ul style="list-style-type: none">• true: A domain name will be created.• false: No domain names will be created. <p>Note: When you create a VPC endpoint for connecting to a gateway VPC endpoint service, no domain names will be created regardless of whether enable_dns is set to true or false.</p> |
| dns_names | Array of strings | <p>Specifies the domain name for accessing the associated VPC endpoint service.</p> <p>This parameter is available when enable_dns is set to true.</p> |

| Parameter | Type | Description |
|------------|------------------------------------|---|
| ip | String | <p>Specifies the IP address for accessing the associated VPC endpoint service.</p> <p>This parameter is returned only under the following conditions:</p> <ul style="list-style-type: none">• You query a VPC endpoint for accessing an interface VPC endpoint service.• Connection approval is enabled for the VPC endpoint service, and the connection has been approved. <p>status of the VPC endpoint can be accepted or rejected. The rejected status only appears when the VPC endpoint is accepted and then rejected.</p> |
| vpc_id | String | Specifies the ID of the VPC where the VPC endpoint is to be created. |
| subnet_id | String | Specifies the ID of the subnet in the VPC specified by vpc_id . The ID is in UUID format. |
| created_at | String | Specifies when the VPC endpoint was created. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| updated_at | String | Specifies when the VPC endpoint was updated. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| project_id | String | Specifies the project ID. For details about how to obtain the project ID, see "Obtaining a Project ID". |
| tags | Array of TagList objects | Specifies the tag list. If no tag is matched, an empty array is returned. |
| error | Array of QueryError objects | Specifies the error message. This field is returned when the VPC endpoint is abnormal, that is, the value of status is failed . |

| Parameter | Type | Description |
|---------------------|---|--|
| whitelist | Array of strings | <p>Specifies the whitelist for controlling access to the VPC endpoint.</p> <p>If you do not specify this parameter, an empty whitelist will be returned.</p> <p>This parameter is available only when you create a VPC endpoint for connecting to an interface VPC endpoint service.</p> |
| enable_whitelist | Boolean | <p>Specifies whether access control is enabled.</p> <ul style="list-style-type: none">• true: Access control is enabled.• false: Access control is disabled. <p>If you do not specify this parameter, access control is disabled.</p> <p>This parameter is available only when you create a VPC endpoint for connecting to an interface VPC endpoint service.</p> |
| routetables | Array of strings | <p>Specifies the route table ID list.</p> <p>If this parameter is not specified, the ID of the default route table of the VPC is returned.</p> <p>This parameter is available when you create a VPC endpoint for connecting to a gateway VPC endpoint service.</p> |
| description | String | Specifies the description field. The value can contain characters such as letters and digits, but cannot contain angle brackets (< or >). |
| policy_statement | Array of PolicyStatement objects | Specifies the policy of the gateway VPC endpoint. This parameter is only available when enable_policy of the VPC endpoint services for OBS and SFS is set to true . |
| endpoint_pool_id | String | (To be discarded) Specifies the ID of the cluster associated with the VPC endpoint. |
| public_border_group | String | Specifies the information about the public border group associated with the VPC endpoint. This parameter is returned only when the VPC endpoint is associated with an edge pool. |

Table 4-109 TagList

| Parameter | Type | Description |
|-----------|--------|--|
| key | String | <p>Specifies the tag key.</p> <p>key cannot be left blank. A key can contain 1 to 128 characters.</p> <p>A key can contain UTF-8 letters, digits, spaces, and the following special characters _ . : = + - @</p> <p>Keys cannot start with <code>_sys_</code> because it indicates a system tag.</p> <p>A key cannot start or end with a space.</p> |
| value | String | <p>Specifies the tag value.</p> <p>A value can contain 0 to 255 characters.</p> <p>A value can contain UTF-8 letters, digits, spaces, and the following special characters _ . : / = + - @</p> <p>A value can be an empty string.</p> |

Table 4-110 QueryError

| Parameter | Type | Description |
|---------------|--------|----------------|
| error_code | String | Error code. |
| error_message | String | Error message. |

Table 4-111 PolicyStatement

| Parameter | Type | Description |
|-----------|------------------|---|
| Effect | String | <ul style="list-style-type: none">• Allow indicates that the VPC endpoint policy can be modified.• Deny indicates that the VPC endpoint policy cannot be modified. |
| Action | Array of strings | Specifies OBS access permissions. |
| Resource | Array of strings | Specifies the OBS object. |

Example Requests

Querying VPC endpoints

```
GET https://{endpoint}/v1/{project_id}/vpc-endpoints?  
endpoint_service_name={endpoint_service_name}&vpc_id={vpc_id}&limit={limit}&offset={offset}&id={id}&sort_key={sort_key}&sort_dir={sort_dir}
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{  
  "endpoints" : [ {  
    "id" : "03184a04-95d5-4555-86c4-e767a371ff99",  
    "status" : "accepted",  
    "ip" : "192.168.0.232",  
    "marker_id" : 16777337,  
    "active_status" : "active",  
    "vpc_id" : "84758cf5-9c62-43ae-a778-3dbd8370c0a4",  
    "service_type" : "interface",  
    "project_id" : "295dacf46a4842fcbf7844dc2dc2489d",  
    "subnet_id" : "68bfbcc1-dff2-47e4-a9d4-332b9bc1b8de",  
    "enable_dns" : "true",  
    "dns_names" : [ "test123" ],  
    "created_at" : "2018-10-18T06:49:46Z",  
    "updated_at" : "2018-10-18T06:49:50Z",  
    "endpoint_service_id" : "5133655d-0e28-4090-b669-13f87b355c78",  
    "endpoint_service_name" : "test123",  
    "endpoint_pool_id" : "ee38223b-aacb-46f0-ba7e-94fa62e35dde",  
    "public_border_group" : "br-abc-aaa1",  
    "whitelist" : [ "127.0.0.1" ],  
    "enable_whitelist" : true  
  }, {  
    "id" : "43b0e3b0-eec9-49da-866b-6687b75f9fe5",  
    "status" : "accepted",  
    "ip" : "192.168.0.115",  
    "marker_id" : 16777322,  
    "active_status" : "active",  
    "vpc_id" : "e251b400-2963-4131-b38a-da81e32026ee",  
    "service_type" : "interface",  
    "project_id" : "295dacf46a4842fcbf7844dc2dc2489d",  
    "subnet_id" : "65528a22-59a1-4972-ba64-88984b3207cd",  
    "enable_dns" : "true",  
    "dns_names" : [ "test123" ],  
    "created_at" : "2018-10-18T06:36:20Z",  
    "updated_at" : "2018-10-18T06:36:24Z",  
    "endpoint_service_id" : "5133655d-0e28-4090-b669-13f87b355c78",  
    "endpoint_service_name" : "test123",  
    "endpoint_pool_id" : "ee38223b-aacb-46f0-ba7e-94fa62e35dde",  
    "whitelist" : [ "127.0.0.1" ],  
    "enable_whitelist" : true  
  } ],  
  "total_count" : 2  
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.3.3 Querying Details of a VPC Endpoint

Function

This API is used to query details of a VPC endpoint.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|---------------------|--------------|-----------------------------|-------------------------|-------|--------------|
| vpcep:endpoints:get | Read | endpoints* | g:ResourceTag/<tag-key> | - | - |

URI

GET /v1/{project_id}/vpc-endpoints/{vpc_endpoint_id}

Table 4-112 Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------------|-----------|--------|---------------------------------------|
| project_id | Yes | String | Specifies the project ID. |
| vpc_endpoint_id | Yes | String | Specifies the ID of the VPC endpoint. |

Request Parameters

Table 4-113 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Response Parameters

Status code: 200

Table 4-114 Response body parameters

| Parameter | Type | Description |
|-----------|--------|--|
| id | String | Specifies the unique ID of the VPC endpoint. |

| Parameter | Type | Description |
|---------------|------------------|---|
| service_type | String | <p>Specifies the type of the VPC endpoint service that the VPC endpoint is used to connect to.</p> <ul style="list-style-type: none">• gateway: indicates the VPC endpoint services that are configured by the O&M personnel. You can use them directly without creating them by yourselves.• interface: indicates the cloud services configured by the O&M personnel and private services created by yourselves. <p>You cannot configure these cloud services, but can use them.</p> <p>You can query the public VPC endpoint services to view the VPC endpoint services that are visible and accessible to all users and are configured by the O&M personnel.</p> <p>You can create interface VPC endpoint services.</p> |
| status | String | <p>Specifies the status of the VPC endpoint.</p> <ul style="list-style-type: none">• pendingAcceptance: The VPC endpoint is to be accepted.• creating: The VPC endpoint is being created.• accepted: The VPC endpoint has been accepted.• rejected: The VPC endpoint has been rejected.• failed: The VPC endpoint failed to be created.• deleting: The VPC endpoint is being deleted. |
| active_status | Array of strings | <p>Specifies the account status.</p> <ul style="list-style-type: none">• frozen: The account is frozen.• active: The account is unfrozen. |
| enable_status | String | <p>Specifies whether a VPC endpoint is available.</p> <ul style="list-style-type: none">• enable: The VPC endpoint is available.• disable: The VPC endpoint is not available. |

| Parameter | Type | Description |
|-----------------------|------------------|---|
| specification_name | String | Specifies the specification name of the VPC endpoint service. |
| endpoint_service_name | String | Specifies the name of the VPC endpoint service. |
| marker_id | Integer | Specifies the packet ID of the VPC endpoint. |
| endpoint_service_id | String | Specifies the ID of the VPC endpoint service. |
| enable_dns | Boolean | <p>Specifies whether to create a domain name.</p> <ul style="list-style-type: none">• true: A domain name will be created.• false: No domain names will be created. <p>Note:</p> <p>When you create a VPC endpoint for connecting to a gateway VPC endpoint service, no domain names will be created regardless of whether enable_dns is set to true or false.</p> |
| dns_names | Array of strings | <p>Specifies the domain name for accessing the associated VPC endpoint service.</p> <p>This parameter is available when enable_dns is set to true.</p> |
| ip | String | <p>Specifies the IP address for accessing the associated VPC endpoint service.</p> <p>This parameter is returned only under the following conditions:</p> <ul style="list-style-type: none">• You query a VPC endpoint for accessing an interface VPC endpoint service.• Connection approval is enabled for the VPC endpoint service, and the connection has been approved. <p>status of the VPC endpoint can be accepted or rejected. The rejected status only appears when the VPC endpoint is accepted and then rejected.</p> |
| vpc_id | String | Specifies the ID of the VPC where the VPC endpoint is to be created. |

| Parameter | Type | Description |
|------------------|--|--|
| subnet_id | String | Specifies the ID of the subnet in the VPC specified by vpc_id . The ID is in UUID format. |
| created_at | String | Specifies when the VPC endpoint was created. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| updated_at | String | Specifies when the VPC endpoint was updated. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| project_id | String | Specifies the project ID. For details about how to obtain the project ID, see "Obtaining a Project ID". |
| tags | Array of TagList objects | Specifies the tag list. If no tag is matched, an empty array is returned. |
| error | QueryError object | Exception information returned during resource query. |
| whitelist | Array of strings | Specifies the whitelist for controlling access to the VPC endpoint. If you do not specify this parameter, an empty whitelist will be returned. This parameter is available only when you create a VPC endpoint for connecting to an interface VPC endpoint service. |
| enable_whitelist | Boolean | Specifies whether access control is enabled. <ul style="list-style-type: none">• true: Access control is enabled.• false: Access control is disabled. If you do not specify this parameter, access control is disabled. This parameter is available only when you create a VPC endpoint for connecting to an interface VPC endpoint service. |

| Parameter | Type | Description |
|---------------------|------------------|--|
| routetables | Array of strings | <p>Specifies the route table ID list.</p> <p>If this parameter is not specified, the ID of the default route table of the VPC is returned.</p> <p>This parameter is available when you create a VPC endpoint for connecting to a gateway VPC endpoint service.</p> |
| description | String | Specifies the description field. The value can contain characters such as letters and digits, but cannot contain angle brackets (< or >). |
| policy_statement | Array of strings | Specifies the policy of the gateway VPC endpoint. This parameter is only available when enable_policy of the VPC endpoint services for OBS and SFS is set to true . |
| endpoint_pool_id | String | (To be discarded) Specifies the ID of the cluster associated with the VPC endpoint. |
| public_border_group | String | Specifies the public border group information about the pool corresponding to the VPC endpoint. |

Table 4-115 TagList

| Parameter | Type | Description |
|-----------|--------|--|
| key | String | <p>Specifies the tag key.</p> <p>key cannot be left blank. A key can contain 1 to 128 characters.</p> <p>A key can contain UTF-8 letters, digits, spaces, and the following special characters _ . : = + - @</p> <p>Keys cannot start with _sys_ because it indicates a system tag.</p> <p>A key cannot start or end with a space.</p> |

| Parameter | Type | Description |
|-----------|--------|--|
| value | String | Specifies the tag value. A value can contain 0 to 255 characters. A value can contain UTF-8 letters, digits, spaces, and the following special characters _ . : / = + - @ A value can be an empty string. |

Table 4-116 QueryError

| Parameter | Type | Description |
|---------------|--------|----------------|
| error_code | String | Error code. |
| error_message | String | Error message. |

Example Requests

Querying details about a VPC endpoint

```
GET https://{endpoint}/v1/{project_id}/vpc-endpoints/4189d3c2-8882-4871-a3c2- d380272eed83
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{
  "id" : "4189d3c2-8882-4871-a3c2-d380272eed83",
  "ip" : "192.168.0.187",
  "service_type" : "interface",
  "marker_id" : 16777337,
  "status" : "accepted",
  "vpc_id" : "4189d3c2-8882-4871-a3c2-d380272eed83",
  "enable_dns" : false,
  "endpoint_service_name" : "test123",
  "endpoint_service_id" : "test123",
  "project_id" : "6e9df51d1124e8d8498dce894923a0d",
  "whitelist" : [ "127.0.0.1" ],
  "enable_whitelist" : true,
  "created_at" : "2022-04-14T09:35:47Z",
  "updated_at" : "2022-04-14T09:36:47Z"
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.3.4 Deleting a VPC Endpoint

Function

This API is used to delete a VPC endpoint.

This API is asynchronous. If it is successfully called, status code **200** is returned, indicating that the request has been successfully delivered.

It takes 1 to 2 minutes to delete a VPC endpoint. You can query whether it has been deleted by referring to [Querying Details of a VPC Endpoint](#).

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|------------------------|--------------|-----------------------------|---|-------|--------------|
| vpcep:endpoints:delete | Write | endpoints * | <ul style="list-style-type: none">• g:ResourceTag/ <tag-key>• vpcep:Vpc eServiceName | - | - |

URI

DELETE /v1/{project_id}/vpc-endpoints/{vpc_endpoint_id}

Table 4-117 Path Parameters

| Parameter | Mandatory | Type | Description |
|------------|-----------|--------|---------------------------|
| project_id | Yes | String | Specifies the project ID. |

| Parameter | Mandatory | Type | Description |
|-----------------|-----------|--------|---------------------------------------|
| vpc_endpoint_id | Yes | String | Specifies the ID of the VPC endpoint. |

Request Parameters

Table 4-118 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Response Parameters

Status code: 204

The server has successfully processed the request.

None

Example Requests

Deleting a VPC endpoint

```
DELETE  
https://{endpoint}/v1/{project_id}/vpc-endpoints/4189d3c2-8882-4871-a3c2-  
d380272eed83
```

Example Responses

None

Status Codes

| Status Code | Description |
|-------------|--|
| 204 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.3.5 Updating a VPC Endpoint

Function

This API is used to update or delete the whitelist of a VPC endpoint.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|------------------------|--------------|-----------------------------|---|-------|--------------|
| vpcep:endpoints:update | Write | endpoints * | <ul style="list-style-type: none">• vpcep:Vpc eServiceName• vpcep:Vpc eServiceOrgPath• vpcep:Vpc eServiceOwner• g:ResourceTag/ <tag-key> | - | - |

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|--------|--------------|-----------------------------|---------------|-------|--------------|
| | | routeTable | - | | |
| | | subnet | - | | |

URI

PUT /v1/{project_id}/vpc-endpoints/{vpc_endpoint_id}

Table 4-119 Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------------|-----------|--------|---|
| project_id | Yes | String | Specifies the project ID. For details about how to obtain the project ID, see "Obtaining a Project ID". |
| vpc_endpoint_id | Yes | String | Specifies the ID of the VPC endpoint. |

Request Parameters

Table 4-120 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Table 4-121 Request body parameters

| Parameter | Mandatory | Type | Description |
|------------------|-----------|------------------|--|
| whitelist | No | Array of strings | <p>Specifies the whitelist updated or deleted for controlling access to VPC endpoints. The value can be an IPv4 address or a CIDR block. Note the following when configuring this parameter:</p> <ul style="list-style-type: none">• If the value is not left blank, the whitelist is updated with new records.• If the value is left blank, all original whitelist records are deleted. <p>The whitelist is left blank by default.</p> |
| enable_whitelist | No | Boolean | <p>Specifies whether access control is enabled.</p> <ul style="list-style-type: none">• true: Access control is enabled.• false: Access control is disabled. <p>The default value is false.</p> |

Response Parameters

Status code: 200

Table 4-122 Response body parameters

| Parameter | Type | Description |
|-----------|--------|--|
| id | String | Specifies the unique ID of the VPC endpoint. |

| Parameter | Type | Description |
|--------------|--------|---|
| service_type | String | <p>Specifies the type of the VPC endpoint service that the VPC endpoint is used to connect to.</p> <ul style="list-style-type: none">• gateway: indicates the VPC endpoint services that are configured by the O&M personnel. You can use them directly without creating them by yourselves.• interface: indicates the cloud services configured by the O&M personnel and private services created by yourselves. <p>You cannot configure these cloud services, but can use them.</p> <p>You can query the public VPC endpoint services to view the VPC endpoint services that are visible and accessible to all users and are configured by the O&M personnel.</p> <p>You can create interface VPC endpoint services.</p> |
| status | String | <p>Specifies the status of the VPC endpoint.</p> <ul style="list-style-type: none">• pendingAcceptance: The VPC endpoint is to be accepted.• creating: The VPC endpoint is being created.• accepted: The VPC endpoint has been accepted.• rejected: The VPC endpoint has been rejected.• failed: The VPC endpoint failed to be created.• deleting: The VPC endpoint is being deleted. |

| Parameter | Type | Description |
|-----------------------|------------------|---|
| ip | String | <p>Specifies the IP address for accessing the associated VPC endpoint service.</p> <p>This parameter is returned only under the following conditions:</p> <ul style="list-style-type: none">• You query a VPC endpoint for accessing an interface VPC endpoint service.• Connection approval is enabled for the VPC endpoint service, and the connection has been approved. <p>status of the VPC endpoint can be accepted or rejected. The rejected status only appears when the VPC endpoint is accepted and then rejected.</p> |
| active_status | Array of strings | <p>Specifies the account status.</p> <ul style="list-style-type: none">• frozen: The account is frozen.• active: The account is unfrozen. |
| endpoint_service_name | String | Specifies the name of the VPC endpoint service. |
| marker_id | Integer | Specifies the packet ID of the VPC endpoint. |
| endpoint_service_id | String | Specifies the ID of the VPC endpoint service. |
| enable_dns | Boolean | <p>Specifies whether to create a domain name.</p> <ul style="list-style-type: none">• true: A domain name will be created.• false: No domain names will be created. <p>Note:</p> <p>When you create a VPC endpoint for connecting to a gateway VPC endpoint service, no domain names will be created regardless of whether enable_dns is set to true or false.</p> |
| dns_names | Array of strings | <p>Specifies the domain name for accessing the associated VPC endpoint service.</p> <p>This parameter is available when enable_dns is set to true.</p> |

| Parameter | Type | Description |
|------------------|--|--|
| subnet_id | String | Specifies the ID of the subnet in the VPC specified by vpc_id . The ID is in UUID format. |
| vpc_id | String | Specifies the ID of the VPC where the VPC endpoint is to be created. |
| created_at | String | Specifies when the VPC endpoint was created. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| updated_at | String | Specifies when the VPC endpoint was updated. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| project_id | String | Specifies the project ID. For details about how to obtain the project ID, see "Obtaining a Project ID". |
| tags | Array of TagList objects | Specifies the tag list. If no tag is matched, an empty array is returned. |
| whitelist | Array of strings | Specifies the whitelist for controlling access to the VPC endpoint. If you do not specify this parameter, an empty whitelist will be returned. This parameter is available only when you create a VPC endpoint for connecting to an interface VPC endpoint service. |
| enable_whitelist | Boolean | Specifies whether access control is enabled. <ul style="list-style-type: none">• true: Access control is enabled.• false: Access control is disabled. If you do not specify this parameter, access control is disabled. This parameter is available only when you create a VPC endpoint for connecting to an interface VPC endpoint service. |

Table 4-123 TagList

| Parameter | Type | Description |
|-----------|--------|--|
| key | String | <p>Specifies the tag key.</p> <p>key cannot be left blank. A key can contain 1 to 128 characters.</p> <p>A key can contain UTF-8 letters, digits, spaces, and the following special characters _ . : = + - @</p> <p>Keys cannot start with <code>_sys_</code> because it indicates a system tag.</p> <p>A key cannot start or end with a space.</p> |
| value | String | <p>Specifies the tag value.</p> <p>A value can contain 0 to 255 characters.</p> <p>A value can contain UTF-8 letters, digits, spaces, and the following special characters _ . : / = + - @</p> <p>A value can be an empty string.</p> |

Example Requests

Updating a VPC endpoint and setting **whitelist** to **192.168.1.1** and **192.168.1.2** and **enable_whitelist** to **true**

```
PUT https://{endpoint}/v1/{project_id}/vpc-endpoints/4189d3c2-8882-4871-a3c2- d380272eed83
{
  "whitelist": [
    [
      "192.168.1.1",
      "192.168.1.2"
    ],
    "enable_whitelist":true,
}
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{
  "id" : "4189d3c2-8882-4871-a3c2-d380272eed83",
  "service_type" : "interface",
  "status" : "accepted",
  "ip" : "10.32.xx.xx",
  "marker_id" : 322312312312,
  "vpc_id" : "4189d3c2-8882-4871-a3c2-d380272eed83",
  "enable_dns" : true,
  "endpoint_service_name" : "test123",
  "endpoint_service_id" : "test123",
  "project_id" : "6e9dfdf51d1124e8d8498dce894923a0d",
  "whitelist" : [ "192.168.1.1", "192.168.1.2" ],
```

```
"enable_whitelist" : true,  
"created_at" : "2022-04-14T09:35:47Z",  
"updated_at" : "2022-04-14T09:36:47Z",  
"tags" : [ {  
    "key" : "test1",  
    "value" : "test1"  
} ]
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.3.6 Modifying Route Tables Associated with a VPC Endpoint

Function

This API is used to modify route tables associated with a VPC endpoint.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|------------------------------------|--------------|-----------------------------|-------------------------|--------------------------|--------------|
| vpcep:endpoints:updatedRouteTables | Write | endpoint * | g:ResourceTag/<tag-key> | • vpcep:endpoints:update | - |
| | | routeTable * | - | | |

URI

PUT /v1/{project_id}/vpc-endpoints/{vpc_endpoint_id}/routetables

Table 4-124 Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------------|-----------|--------|---------------------------------------|
| project_id | Yes | String | Project ID |
| vpc_endpoint_id | Yes | String | Specifies the ID of the VPC endpoint. |

Request Parameters

Table 4-125 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Table 4-126 Request body parameters

| Parameter | Mandatory | Type | Description |
|-------------|-----------|------------------|--------------------------------|
| routetables | Yes | Array of strings | Lists the IDs of route tables. |

Response Parameters

Status code: 200

Table 4-127 Response body parameters

| Parameter | Type | Description |
|-------------|--|---|
| routetables | Array of strings | Specifies the IDs of route tables. If this parameter is not specified, the ID of the route table of the default VPC is returned. This parameter is available when you update VPC endpoints for connecting to gateway VPC endpoint services. |
| error | Array of RoutetableInfoError objects | Specifies the error message returned when the route table of the VPC endpoint subnet fails to be modified. |

Table 4-128 RoutetableInfoError

| Parameter | Type | Description |
|---------------|--|--|
| bind_failed | Array of RoutetableInfoError objects | Failed to bind the route table to the VPC endpoint subnet. |
| unbind_failed | Array of RoutetableInfoError objects | Failed to unbind the route table from the VPC endpoint subnet. |

Table 4-129 RoutetableInfoErrorDetail

| Parameter | Type | Description |
|---------------|--------|-----------------------------|
| id | String | Route table ID. |
| error_message | String | Detailed error information. |

Example Requests

Modifying route tables associated with a VPC endpoint

```
PUT https://{endpoint}/v1/{project_id}/vpc-endpoints/4189d3c2-8882-4871-a3c2- d380272eed83/routetables
{
  "routetables" : [ "705290f3-0d00-41f2-aedc-71f09844e879" ]
}
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{  
  "routetables" : [ "705290f3-0d00-41f2-aedc-71f09844e879" ]  
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.3.7 Modifying the Policy of a VPC Endpoint

Function

This API is used to modify the policy of a VPC endpoint.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|------------------------------|--------------|-----------------------------|-------------------------|--------------------------|--------------|
| vpcep:endpoints:updatePolicy | Write | endpoints * | g:ResourceTag/<tag-key> | • vpcep:endpoints:update | - |

URI

PUT /v1/{project_id}/vpc-endpoints/{vpc_endpoint_id}/policy

Table 4-130 Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------------|-----------|--------|---------------------------------------|
| project_id | Yes | String | Specifies the project ID. |
| vpc_endpoint_id | Yes | String | Specifies the ID of the VPC endpoint. |

Request Parameters

Table 4-131 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Table 4-132 Request body parameters

| Parameter | Mandatory | Type | Description |
|------------------|-----------|---|---|
| policy_statement | Yes | Array of PolicyStatement objects | Specifies the policy of the gateway VPC endpoint. This parameter is only available when enable_policy of the VPC endpoint services for OBS and SFS is set to true . |

Table 4-133 PolicyStatement

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------------------|---|
| Effect | Yes | String | <ul style="list-style-type: none">• Allow indicates that the VPC endpoint policy can be modified.• Deny indicates that the VPC endpoint policy cannot be modified. |
| Action | Yes | Array of strings | Specifies OBS access permissions. |
| Resource | Yes | Array of strings | Specifies the OBS object. |

Response Parameters

Status code: 200

Table 4-134 Response body parameters

| Parameter | Type | Description |
|--------------|--------|---|
| id | String | Specifies the unique ID of the VPC endpoint. |
| service_type | String | <p>Specifies the type of the VPC endpoint service that the VPC endpoint is used to connect to.</p> <ul style="list-style-type: none">• gateway: indicates VPC endpoint services that are configured by the O&M personnel. You can directly use them.• interface: indicates cloud services configured by the O&M personnel and private services created by yourselves. <p>You cannot configure these cloud services, but can use them.</p> <p>You can query the public VPC endpoint services to view the VPC endpoint services that are visible and accessible to all users and are configured by the O&M personnel.</p> <p>You can create interface VPC endpoint services.</p> |

| Parameter | Type | Description |
|-----------------------|------------------|---|
| status | String | <p>Specifies the VPC endpoint status.</p> <ul style="list-style-type: none">• pendingAcceptance: The VPC endpoint is to be accepted.• creating: The VPC endpoint is being created.• accepted: The VPC endpoint has been accepted.• rejected: The VPC endpoint has been rejected.• failed: The VPC endpoint service failed to be created.• deleting: The VPC endpoint service is being deleted. |
| active_status | Array of strings | <p>Specifies the account status.</p> <ul style="list-style-type: none">• frozen: The account is frozen.• active: The account is unfrozen. |
| endpoint_service_name | String | Specifies the name of the VPC endpoint service. |
| marker_id | Integer | Specifies the packet ID of the VPC endpoint. |
| endpoint_service_id | String | Specifies the ID of the VPC endpoint service. |
| enable_dns | boolean | Specifies whether to create a domain name. • true: A domain name is required. • false: A domain name is not required. Note: When you create a VPC endpoint for connecting a gateway VPC endpoint service, no domain name is created if enable_dns is set to true or false. |
| dns_names | Array of strings | Specifies the domain name for accessing the associated VPC endpoint service. This parameter is only available when enable_dns is set to true. |

| Parameter | Type | Description |
|------------|---|--|
| ip | String | <p>Specifies the IP address for accessing the associated VPC endpoint service. This parameter is returned only under the following conditions:</p> <ul style="list-style-type: none">• You query a VPC endpoint for accessing an interface VPC endpoint service.• Connection approval has been enabled for the VPC endpoint service, and the connection has been approved. <p>status of the VPC endpoint can be accepted or rejected. The rejected status only appears when the VPC endpoint is accepted and then rejected.</p> |
| vpc_id | String | Specifies the ID of the VPC where the VPC endpoint is to be created. |
| subnet_id | string | Specifies the ID of the subnet in the VPC based on vpc_id. The ID is in the UUID format. |
| created_at | String | Specifies when the VPC endpoint was created. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| updated_at | String | Specifies when the VPC endpoint was updated. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| project_id | String | Specifies the project ID. For details about how to obtain the project ID, see Obtaining a Project ID . |
| tags | Array of TagList objects | Specifies the tag list. If no tag is matched, an empty array is returned. |
| error | Array of QueryError objects | Specifies the error message. This field is returned when the VPC endpoint is abnormal, that is, the value of status is failed . |

| Parameter | Type | Description |
|---------------------|---|---|
| whitelist | Array of strings | <p>Specifies the whitelist for controlling access to the VPC endpoint.</p> <p>If you do not specify this parameter, an empty whitelist will be returned.</p> <p>This parameter is available only when you create a VPC endpoint for connecting to an interface VPC endpoint service.</p> |
| enable_whitelist | Boolean | <p>Specifies whether access control is enabled.</p> <ul style="list-style-type: none">• true: Access control is enabled.• false: Access control is disabled. <p>If you do not specify this parameter, false will be returned.</p> <p>This parameter is available only when you create a VPC endpoint for connecting to an interface VPC endpoint service.</p> |
| routetables | Array of strings | <p>Specifies the route table ID list.</p> <p>If this parameter is not specified, the ID of the default route table of the VPC is returned.</p> <p>This parameter is available when you create a VPC endpoint for connecting to a gateway VPC endpoint service.</p> |
| description | String | Specifies the description field. The value can contain characters such as letters and digits, but cannot contain angle brackets (< or >). |
| policy_statement | Array of PolicyStatement objects | Specifies the policy of the gateway VPC endpoint. This parameter is only available when enable_policy of the VPC endpoint services for OBS and SFS is set to true . |
| endpoint_pool_id | String | (To be discarded) Specifies the ID of the cluster associated with the VPC endpoint. |
| public_border_group | String | Specifies the information about the public border group associated with the VPC endpoint. This parameter is returned only when the VPC endpoint is associated with an edge pool. |

Table 4-135 TagList

| Parameter | Type | Description |
|-----------|--------|--|
| key | String | <p>Specifies the tag key.</p> <p>key cannot be left blank. A key can contain 1 to 128 characters.</p> <p>A key can contain UTF-8 letters, digits, spaces, and the following special characters _ . : = + - @</p> <p>Keys cannot start with <code>_sys_</code> because it indicates a system tag.</p> <p>A key cannot start or end with a space.</p> |
| value | String | <p>Specifies the tag value.</p> <p>A value can contain 0 to 255 characters.</p> <p>A value can contain UTF-8 letters, digits, spaces, and the following special characters _ . : / = + - @</p> <p>A value can be an empty string.</p> |

Table 4-136 QueryError

| Parameter | Type | Description |
|---------------|--------|----------------|
| error_code | String | Error code. |
| error_message | String | Error message. |

Table 4-137 PolicyStatement

| Parameter | Type | Description |
|-----------|------------------|---|
| Effect | String | <ul style="list-style-type: none">• Allow indicates that the VPC endpoint policy can be modified.• Deny indicates that the VPC endpoint policy cannot be modified. |
| Action | Array of strings | Specifies OBS access permissions. |
| Resource | Array of strings | Specifies the OBS object. |

Example Requests

- Modifying the policy of a gateway VPC endpoint, and setting OBS access permission and OBS objects

```
PUT https://{endpoint}/v1/{project_id}/vpc-endpoints/938c8167-631e-40a4-99f9-493753fb16b/policy
```

```
{  
  "policy_statement" : [ {  
    "Action" : [ "obs:*:" ],  
    "Resource" : [ "obs:***/*", "obs:***:" ],  
    "Effect" : "Allow"  
  } ]  
}
```

- Modifying the policy of a VPC endpoint

```
PUT https://{endpoint}/v1/{project_id}/vpc-endpoints/2af6c328-057a-4146-882b-6828e270e594/policy  
  
{  
  "policy_document" : {  
    "Version" : "5.0",  
    "Statement" : [ {  
      "Effect" : "Allow",  
      "Principal" : "*",  
      "Action" : [ "*" ],  
      "Resource" : [ "*" ]  
    } ]  
  }  
}
```

Example Responses

Status code: 200

The server has successfully processed the request.

- {
 "id" : "938c8167-631e-40a4-99f9-493753fdb16b",
 "status" : "accepted",
 "tags" : [],
 "marker_id" : 302035929,
 "active_status" : ["active"],
 "vpc_id" : "0da03835-1dcf-4361-9b87-34139d58dd59",
 "service_type" : "gateway",
 "project_id" : "0605767a3300d5762fb7c0186d9e1779",
 "routetables" : ["99477d3b-87f6-49d2-8f3b-2ffc72731a38"],
 "created_at" : "2022-08-03T03:03:54Z",
 "updated_at" : "2022-08-03T03:03:57Z",
 "endpoint_service_id" : "4651bc78-5cec-41b7-b448-f77326ebbed0",
 "endpoint_service_name" : "br-abc-aaa1.obs_test.4651bc78-5cec-41b7-b448-f77326ebbed0",
 "policy_statement" : [{
 "Action" : ["obs:*:"],
 "Resource" : ["obs:***/*", "obs:***:"],
 "Effect" : "Allow"
 }],
 "description" : "",
 "endpoint_pool_id" : "b0ad6a4f-55c0-43f1-a26d-278639661fc2"
}

• {
 "id" : "2af6c328-057a-4146-882b-6828e270e594",
 "status" : "accepted",
 "tags" : [],
 "marker_id" : 335620220,
 "active_status" : ["active"],
 "vpc_id" : "a8494c3b-5dc9-46a4-8ca1-17a54f588d17",
 "service_type" : "interface",
 "project_id" : "0df9cbd6cf00f37**0c64b5af21",
 "created_at" : "2022-08-03T03:03:54Z",
 "updated_at" : "2022-08-03T03:03:57Z",
 "endpoint_service_id" : "925b47bd-ffef-4abe-a450-d997f4f4e2be",
 "endpoint_service_name" : "com.myhuaweicloud.cn-southwest-2.swr",
 "policy_document" : {
 "Version" : "5.0",
 "Statement" : [{
 "Effect" : "Allow",
 "Principal" : "*",
 "Action" : ["obs:*:"],
 "Resource" : ["obs:***/*", "obs:***:"]
 }]
 }
}

```
        "Principal" : "*",
        "Action" : [ "*" ],
        "Resource" : [ "*" ]
    }
},
"description" : "",
"endpoint_pool_id" : "15027791-b2b5-4b12-8e01-8dec1b576bf1"
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.3.8 Deleting the Policy of a Gateway VPC Endpoint (To Be Discontinued)

Function

This API is used to delete the policy of a gateway VPC endpoint. This API will not be used anymore and is not recommended.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|-------------------------------|--------------|-----------------------------|-------------------------|--------------------------|--------------|
| vpcep:endpoints:delete Policy | Write | endpoints * | g:ResourceTag/<tag-key> | • vpcep:endpoints:delete | - |

URI

DELETE /v1/{project_id}/vpc-endpoints/{vpc_endpoint_id}/policy

Table 4-138 Path Parameters

| Parameter | Mandatory | Type | Description |
|-----------------|-----------|--------|---------------------------------------|
| project_id | Yes | String | Specifies the project ID. |
| vpc_endpoint_id | Yes | String | Specifies the ID of the VPC endpoint. |

Request Parameters

Table 4-139 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Response Parameters

Status code: 200

Table 4-140 Response body parameters

| Parameter | Type | Description |
|-----------|--------|--|
| id | String | Specifies the unique ID of the VPC endpoint. |

| Parameter | Type | Description |
|-----------------------|------------------|---|
| service_type | String | <p>Specifies the type of the VPC endpoint service that the VPC endpoint is used to connect to.</p> <ul style="list-style-type: none">• gateway: indicates VPC endpoint services that are configured by the O&M personnel. You can directly use them.• interface: indicates cloud services configured by the O&M personnel and private services created by yourselves. <p>You cannot configure these cloud services, but can use them.</p> <p>You can query the public VPC endpoint services to view the VPC endpoint services that are visible and accessible to all users and are configured by the O&M personnel.</p> <p>You can create interface VPC endpoint services.</p> |
| status | String | <p>Specifies the VPC endpoint status.</p> <ul style="list-style-type: none">• pendingAcceptance: The VPC endpoint is to be accepted.• creating: The VPC endpoint is being created.• accepted: The VPC endpoint has been accepted.• rejected: The VPC endpoint has been rejected.• failed: The VPC endpoint service failed to be created.• deleting: The VPC endpoint service is being deleted. |
| active_status | Array of strings | <p>Specifies the account status.</p> <ul style="list-style-type: none">• frozen: The account is frozen.• active: The account is unfrozen. |
| endpoint_service_name | String | Specifies the name of the VPC endpoint service. |
| marker_id | Integer | Specifies the packet ID of the VPC endpoint. |
| endpoint_service_id | String | Specifies the ID of the VPC endpoint service. |

| Parameter | Type | Description |
|------------|------------------|---|
| enable_dns | boolean | Specifies whether to create a domain name. • true: A domain name is required. • false: A domain name is not required. Note: When you create a VPC endpoint for connecting a gateway VPC endpoint service, no domain name is created if enable_dns is set to true or false. |
| dns_names | Array of strings | Specifies the domain name for accessing the associated VPC endpoint service. This parameter is only available when enable_dns is set to true. |
| ip | String | Specifies the IP address for accessing the associated VPC endpoint service. This parameter is returned only under the following conditions: <ul style="list-style-type: none">• You query a VPC endpoint for accessing an interface VPC endpoint service.• Connection approval has been enabled for the VPC endpoint service, and the connection has been approved. status of the VPC endpoint can be accepted or rejected . The rejected status only appears when the VPC endpoint is accepted and then rejected. |
| vpc_id | String | Specifies the ID of the VPC where the VPC endpoint is to be created. |
| subnet_id | string | Specifies the ID of the subnet in the VPC based on vpc_id. The ID is in the UUID format. |
| created_at | String | Specifies when the VPC endpoint was created. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |
| updated_at | String | Specifies when the VPC endpoint was updated. The UTC time format <i>YYYY-MM-DDTHH:MM:SSZ</i> is used. |

| Parameter | Type | Description |
|------------------|--|--|
| project_id | String | Specifies the project ID. For details about how to obtain the project ID, see Obtaining a Project ID . |
| tags | Array of TagList objects | Specifies the tag list. If no tag is matched, an empty array is returned. |
| error | Array of QueryError objects | Specifies the error message. This field is returned when the VPC endpoint is abnormal, that is, the value of status is failed . |
| whitelist | Array of strings | Specifies the whitelist for controlling access to the VPC endpoint. If you do not specify this parameter, an empty whitelist will be returned. This parameter is available only when you create a VPC endpoint for connecting to an interface VPC endpoint service. |
| enable_whitelist | Boolean | Specifies whether access control is enabled. <ul style="list-style-type: none">• true: Access control is enabled.• false: Access control is disabled. If you do not specify this parameter, false will be returned. This parameter is available only when you create a VPC endpoint for connecting to an interface VPC endpoint service. |
| routetables | Array of strings | Specifies the route table ID list. If this parameter is not specified, the ID of the default route table of the VPC is returned. This parameter is available when you create a VPC endpoint for connecting to a gateway VPC endpoint service. |
| description | String | Specifies the description field. The value can contain characters such as letters and digits, but cannot contain angle brackets (< or >). |
| policy_statement | Array of PolicyStatement objects | Specifies the policy of the gateway VPC endpoint. This parameter is only available when enable_policy of the VPC endpoint services for OBS and SFS is set to true . |

| Parameter | Type | Description |
|---------------------|--------|--|
| endpoint_pool_id | String | (To be discarded) Specifies the ID of the cluster associated with the VPC endpoint. |
| public_border_group | String | Specifies the information about the public border group associated with the VPC endpoint. This parameter is returned only when the VPC endpoint is associated with an edge pool. |

Table 4-141 TagList

| Parameter | Type | Description |
|-----------|--------|---|
| key | String | Specifies the tag key. key cannot be left blank. A key can contain 1 to 128 characters. A key can contain UTF-8 letters, digits, spaces, and the following special characters _ . : = + - @ Keys cannot start with <u>sys</u> because it indicates a system tag. A key cannot start or end with a space. |
| value | String | Specifies the tag value. A value can contain 0 to 255 characters. A value can contain UTF-8 letters, digits, spaces, and the following special characters _ . : / = + - @ A value can be an empty string. |

Table 4-142 QueryError

| Parameter | Type | Description |
|---------------|--------|----------------|
| error_code | String | Error code. |
| error_message | String | Error message. |

Table 4-143 PolicyStatement

| Parameter | Type | Description |
|-----------|------------------|---|
| Effect | String | <ul style="list-style-type: none">• Allow indicates that the VPC endpoint policy can be modified.• Deny indicates that the VPC endpoint policy cannot be modified. |
| Action | Array of strings | Specifies OBS access permissions. |
| Resource | Array of strings | Specifies the OBS object. |

Example Requests

Deleting the policy of a gateway VPC endpoint

```
DELETE https://{{endpoint}}/v1/{{project_id}}/vpc-endpoints/938c8167-631e-40a4-99f9-493753fdb16b/policy
```

Example Responses

Status code: 200

The server has successfully processed the request.

```
{  
  "id" : "938c8167-631e-40a4-99f9-493753fdb16b",  
  "status" : "accepted",  
  "tags" : [ ],  
  "jobId" : "endpoint_add_938c8167-631e-40a4-99f9-493753fdb16b",  
  "marker_id" : 302035929,  
  "active_status" : [ "active" ],  
  "vpc_id" : "0da03835-1dcf-4361-9b87-34139d58dd59",  
  "service_type" : "gateway",  
  "project_id" : "0605767a3300d5762fb7c0186d9e1779",  
  "routetables" : [ "99477d3b-87f6-49d2-8f3b-2ffc72731a38" ],  
  "created_at" : "2022-08-03T03:03:54Z",  
  "updated_at" : "2022-08-03T03:03:57Z",  
  "endpoint_service_id" : "4651bc78-5cec-41b7-b448-f77326ebbed0",  
  "endpoint_service_name" : "br-abc-aaa1.obs_test.4651bc78-5cec-41b7-b448-f77326ebbed0",  
  "specification_name" : "default",  
  "enable_status" : "enable",  
  "description" : "",  
  "endpoint_pool_id" : "b0ad6a4f-55c0-43f1-a26d-278639661fc2"  
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.4 Resource Quotas

4.4.1 Query Quotas

Function

This API is used to query the quota of your resources, including the quota of VPC endpoint services and the quota of VPC endpoints.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|-------------------|--------------|-----------------------------|---------------|--------------------|--------------|
| vpcep::listQuotas | Read | - | - | • vpcep:quotas:get | - |

URI

GET /v1/{project_id}/quotas

Table 4-144 Path Parameters

| Parameter | Mandatory | Type | Description |
|------------|-----------|--------|---------------------------|
| project_id | Yes | String | Specifies the project ID. |

Table 4-145 Query Parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--------|--|
| type | No | String | Specifies the resource type. <ul style="list-style-type: none">• endpoint_service: indicates the VPC endpoint service.• endpoint: indicates the VPC endpoint. |

Request Parameters

Table 4-146 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Response Parameters

Status code: 200

Table 4-147 Response body parameters

| Parameter | Type | Description |
|-----------|--|---|
| quotas | ResourcesResponseBody object | Specifies the response body of the API for querying quotas. |

Table 4-148 ResourcesResponseBody

| Parameter | Type | Description |
|-----------|---|------------------------------|
| resources | Array of Quotas objects | Specifies the resource list. |

Table 4-149 Quotas

| Parameter | Type | Description |
|-----------|---------|---|
| type | String | <p>Specifies the resource type. You can query the quota of a specified resource by resource type.</p> <ul style="list-style-type: none">• endpoint_service: indicates the VPC endpoint service.• endpoint: indicates the VPC endpoint. |
| used | Integer | <p>Specifies the number of created resources.</p> <p>The value ranges from 0 to the value of quota.</p> |
| quota | Integer | <p>Specifies the resource quota.</p> <p>The value ranges from the default quota value to the maximum quota value.</p> |

Example Requests

- Querying the VPC endpoint service quotas
GET `https://[endpoint]/v1/[project_id]/quotas?type=endpoint_service`
- Querying the VPC endpoint quotas
GET `https://[endpoint]/v1/[project_id]/quotas?type=endpoint`

Example Responses

Status code: 200

The server has successfully processed the request.

```
{  
  "quotas" : {  
    "resources" : [ {  
      "type" : "endpoint",  
      "used" : 4,  
      "quota" : 150  
    }, {  
      "type" : "endpoint_service",  
      "used" : 10,  
      "quota" : 100  
    } ]  
  }  
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.5 Tags

4.5.1 Querying Resources by Tag

Function

This API is used to query resources of a tenant by tag.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|-------------------------|--------------|-----------------------------|---------------|-----------------------|--------------|
| vpcep::listResourceTags | List | endpoints | - | • vpcep:resource:list | - |
| | | endpoint Services | - | | |

URI

POST /v1/{project_id}/{resource_type}/resource_instances/action

Table 4-150 Path Parameters

| Parameter | Mandatory | Type | Description |
|---------------|-----------|--------|--|
| project_id | Yes | String | Specifies the project ID. |
| resource_type | Yes | String | Specifies the resource type. The value can be: <ul style="list-style-type: none">• endpoint_service: indicates the VPC endpoint service.• endpoint: indicates the VPC endpoint. |

Request Parameters

Table 4-151 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Table 4-152 Request body parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--|--|
| tags | No | Array of TagValuesList objects | <p>Tags are included. A maximum of 10 tag keys are included, and each tag value can have a maximum of 10 values.</p> <p>Each tag value can be an empty array, but the tag structure cannot be missing.</p> <p>Tag keys must be unique.</p> <p>Values of the same tag key must be unique. Specifies all returned tags of the resource.</p> <p>Keys are in the AND relationship while values in the key-value structure are in the OR relationship.</p> <p>If no filtering condition for tags is specified, full data is returned.</p> |
| tags_any | No | Array of TagValuesList objects | <p>Any tags are included. A maximum of 10 tag keys are included, and each tag key can have a maximum of 10 values.</p> <p>Values of each tag key can be an empty array, but the tag structure cannot be missing.</p> <p>Both tag keys and values of the same tag key must be unique.</p> <p>Specifies resources including tags returned. Keys and values in the key-value structure are in the OR relationship.</p> <p>If no filtering condition is specified, full data is returned.</p> |

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--|--|
| not_tags | No | Array of TagValuesList objects | <p>Tags are excluded, a maximum of 10 tag keys are included, and each tag value can have a maximum of 10 values.</p> <p>Each tag value can be an empty array, but the tag structure cannot be missing. Tag keys must be unique. Values of the same tag key must be unique. Specifies resources excluding tags returned. Keys are in the AND relationship while values in the key-value structure are in the OR relationship.</p> <p>If no filtering condition is specified, full data is returned.</p> |
| not_tags_any | No | Array of TagValuesList objects | <p>Any tags are excluded, a maximum of 10 tag keys are included, and each tag value can have a maximum of 10 values.</p> <p>Each tag value can be an empty array, but the tag structure cannot be missing. Tag keys must be unique. Values of the same tag key must be unique. Specifies resources excluding tags returned. Keys are in the AND relationship while values in the key-value structure are in the OR relationship.</p> <p>If no filtering condition is specified, full data is returned.</p> |
| sys_tags | No | Array of TagValuesList objects | Specifies the system tags. |

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--------|---|
| limit | No | String | <p>Specifies the number of records to be queried. This parameter is unavailable when action is set to count. If action is set to filter, the default value is 1000.</p> <p>The maximum value of limit is 1000 and the minimum value is 1.</p> |
| offset | No | String | <p>Specifies the index position and offset. The query starts from the next piece of data indexed by this parameter. This parameter is unavailable when action is set to count.</p> <p>If action is set to filter, the default value is 0, which indicates that the query starts from the first data record.</p> <p>The value must be a non-negative number.</p> |
| action | Yes | String | <p>Specifies the action, which only can be filter and count.</p> <p>If this parameter is set to filter, the query is performed based on the filter criteria.</p> <p>If the parameter is set to count, only the total number of resources need to be returned.</p> |

| Parameter | Mandatory | Type | Description |
|-----------------|-----------|--|--|
| matches | No | Array of Match objects | <p>Specifies the search field. The tag key is the field to be matched, for example, resource_name. The tag value indicates the matched value.</p> <p>The tag key is a fixed dictionary value and cannot be a duplicate key or an unsupported key.</p> <p>Specifies whether fuzzy match is required based on the value of the tag key. For example, if the tag key is resource_name, fuzzy search (case-insensitive) is used by default.</p> <p>If value is an empty string, exact match is used. An empty list is returned because the resource_name for most services cannot be left blank. If the tag key is resource_id, exact match is used.</p> <p>Only resource_name for key is supported. Other key values will be available later.</p> |
| without_any_tag | No | Boolean | The default value is false. The value can be true or false. When withoutAnyTag is set to true, ignore parameter verification on the tags, tagsAny, notTags, and notTagsAny. |

Table 4-153 TagValuesList

| Parameter | Mandatory | Type | Description |
|-----------|-----------|------------------|---|
| key | Yes | String | <p>Specifies the tag key.</p> <p>Each tag key can contain a maximum of 128 Unicode characters but cannot be left blank. (The system does not verify the value of key when searching for resources.)</p> <p>key cannot be an empty string or spaces. Before using key, delete single-byte character (SBC) spaces before and after the key.</p> |
| values | Yes | Array of strings | <p>Specifies the tag values.</p> <p>Each tag value contains a maximum of 255 Unicode characters. Before you verify and use it, delete spaces at the beginning and end of the tag value.</p> <p>The tag value can be an empty array but cannot be left blank. If values are left blank, it indicates any_value (querying any value).</p> <p>Values are in the OR relationship. The system does not verify the character set of values when searching for resources, but only verifies the length.</p> |

Table 4-154 Match

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--------|--|
| key | Yes | String | Indicates the tag key. Only <code>resource_name</code> for key is supported. Other key values will be available later. |
| value | Yes | String | Value. Each value can contain a maximum of 255 Unicode characters. The character set of value is not verified. |

Response Parameters

Status code: 200

Table 4-155 Response body parameters

| Parameter | Type | Description |
|-------------|---|--|
| resources | Array of ResourceInstance objects | Specifies the resource details. |
| total_count | Integer | Specifies the total number of records. |

Table 4-156 ResourceInstance

| Parameter | Type | Description |
|---------------|--|--|
| resource_id | String | Indicates the resource ID, endpoint service ID, or endpoint ID. |
| tags | Array of TagList objects | Indicates the list of tags. |
| resource_name | String | Resource name. If the resource does not have a name, the ID is returned. |

Table 4-157 TagList

| Parameter | Type | Description |
|-----------|--------|---|
| key | String | Specifies the tag key. key cannot be left blank. A key can contain 1 to 128 characters. A key can contain UTF-8 letters, digits, spaces, and the following special characters _ . : = + - @ Keys cannot start with <u>sys</u> because it indicates a system tag. A key cannot start or end with a space. |
| value | String | Specifies the tag value. A value can contain 0 to 255 characters. A value can contain UTF-8 letters, digits, spaces, and the following special characters _ . : / = + - @ A value can be an empty string. |

Example Requests

- Querying VPC endpoints by tag

```
POST https://{endpoint}/v1/{project_id}/endpoint/resource_instances/action
```

When action is set to filter: "offset": "100",
"limit": "100",
"action": "filter",
"matches": [
 {
 "key": "resource_name",
 "value": "resource1"
 }
,
 "not_tags": [
 {
 "key": "key1",
 "values": [
 "*value1",
 "value2"
]
 }
,
 "tags": [
 {
 "key": "key1",
 "values": [
 "*value1",
 "value2"
]
 }
,
 "tags_any": [
 {
 "key": "key1",
 "values": [
 "value1",
 "value2"
]
 }
,
 "not_tags_any": [
 {
 "key": "key1",
 "values": [
 "value1",
 "value2"
]
 }
]
]
]
]
]

- Querying the total number of VPC endpoint services

```
https://{endpoint}/v1/{project_id}/endpoint_service/resource_instances/action
```

When action is set to count:

```
{  
  "action": "count",  
  "not_tags": [  
    {  
      "key": "key1",  
      "values": [  
        "value1",  
        "*value2"  
      ]  
    }  
,  
    "tags": [  
      {  
        "key": "key1",  
        "values": [  
          "value1",  
          "*value2"  
        ]  
      }  
    ]  
  ]  
}
```

```
        "key": "key1",
        "values": [
            "value1",
            "value2"
        ]
    },
    {
        "key": "key2",
        "values": [
            "value1",
            "value2"
        ]
    }
],
"tags_any": [
    {
        "key": "key1",
        "values": [
            "value1",
            "value2"
        ]
    }
],
"not_tags_any": [
    {
        "key": "key1",
        "values": [
            "value1",
            "value2"
        ]
    }
],
"matches": [
    {
        "key": "resource_name",
        "value": "resource1"
    }
]
```

Example Responses

Status code: 200

The server has successfully processed the request.

– When **action** is set to **filter**:

```
{
  "resources": [
    {
      "resource_id": "cdfs_cefs_wesas_12_dsad",
      "resource_name": "resource1",
      "tags": [
        {
          "key": "key1", "value": "value1"
        },
        {
          "key": "key2", "value": "value1"
        }
      ]
    },
    {
      "total_count": 1000
    }
  ]
}
```

Status Codes

| Status Code | Description |
|-------------|--|
| 200 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.5.2 Batch Adding or Deleting Tags to or from a Resource

Function

This API is used to batch add tags to or delete tags from a specified VPC endpoint service or VPC endpoint.

You can add up to 10 tags to a resource.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|---------------------------|--------------|-----------------------------|---------------|---------------------|--------------|
| vpcep::updateResourceTags | Tagging | endpoints | - | • vpcep:tags:update | - |
| | | endpoint Services | - | | |

URI

POST /v1/{project_id}/{resource_type}/{resource_id}/tags/action

Table 4-158 Path Parameters

| Parameter | Mandatory | Type | Description |
|---------------|-----------|--------|--|
| project_id | Yes | String | Specifies the project ID. |
| resource_type | Yes | String | Specifies the resource type. <ul style="list-style-type: none">• endpoint_service: indicates the VPC endpoint service.• endpoint: indicates the VPC endpoint. |
| resource_id | Yes | String | Specifies the resource ID, which can be the ID of a VPC endpoint service or a VPC endpoint. |

Request Parameters

Table 4-159 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Table 4-160 Request body parameters

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--|---|
| tags | No | Array of ResourceTag objects | Specifies the tag list. If no tag is matched, an empty array is returned. |
| action | Yes | String | Specifies the operation to be performed, which only can be: <ul style="list-style-type: none">• create• delete |

Table 4-161 ResourceTag

| Parameter | Mandatory | Type | Description |
|-----------|-----------|--------|--|
| key | Yes | String | Specifies the tag key. A key can contain up to 128 Unicode characters. The key must comply with the tag key configuration requirements. |
| value | No | String | Specifies the tag value. value is mandatory when action is set to create . Each value can contain a maximum of 255 Unicode characters. If value is specified, tags are deleted by key and value. If value is not specified, tags are deleted by key. The tag value must comply with the tag value configuration requirements. |

Response Parameters

Status code: 204

The server has successfully processed the request.

None

Example Requests

- Adding resource tags

```
POST https://{endpoint}/v1/{project_id}/endpoint_service/{resource_id}/tags?action
{
  "action" : "create",
  "tags" : [ {
    "key" : "key1",
    "value" : "value1"
  }, {
    "key" : "key",
    "value" : "value3"
  } ]
}
```

- Deleting resource tags

```
POST https://{endpoint}/v1/{project_id}/endpoint/{resource_id}/tags?action
{
  "action" : "delete",
  "tags" : [ {
    "key" : "key1"
  }, {
    "key" : "key2",
    "value" : "value3"
  } ]
}
```

Example Responses

None

Status Codes

| Status Code | Description |
|-------------|--|
| 204 | The server has successfully processed the request. |

Error Codes

See [Error Codes](#).

4.5.3 Querying Resource Tags

Function

This API is used to query tags of resources of a tenant based on the tenant ID and resource type.

Calling Method

For details, see [Calling APIs](#).

Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions.

- If you are using role/policy-based authorization, see [Permissions Policies and Supported Actions](#) for details on the required permissions.
- If you are using identity policy-based authorization, the following identity policy-based permissions are required.

| Action | Access Level | Resource Type (*: required) | Condition Key | Alias | Dependencies |
|-----------------------|--------------|-----------------------------|---------------|-------------------|--------------|
| vpcep::getProjectTags | Read | endpoints | - | • vpcep:tags:list | - |
| | | endpoint Services | - | | |

URI

GET /v1/{project_id}/{resource_type}/tags

Table 4-162 Path Parameters

| Parameter | Mandatory | Type | Description |
|---------------|-----------|--------|--|
| project_id | Yes | String | Specifies the project ID. |
| resource_type | Yes | String | Specifies the resource type. <ul style="list-style-type: none">• endpoint_service: indicates the VPC endpoint service.• endpoint: indicates the VPC endpoint. |

Request Parameters

Table 4-163 Request header parameters

| Parameter | Mandatory | Type | Description |
|--------------|-----------|--------|--|
| X-Auth-Token | Yes | String | Specifies the user token. It can be obtained by calling the IAM API. The value of X-Subject-Token in the response header is the user token. |
| Content-Type | No | String | Specifies the MIME type of the request body. Default value application/json is recommended. For APIs used to upload objects or images, the MIME type varies depending on the flow type. |

Response Parameters

Status code: 200

Table 4-164 Response body parameters

| Parameter | Type | Description |
|-----------|--|---|
| tags | Array of TagValuesList objects | <p>Tags are included. A maximum of 10 tag keys are included, and each tag value can have a maximum of 10 values.</p> <p>Each tag value can be an empty array, but the tag structure cannot be missing. Tag keys must be unique.</p> <p>Values of the same tag key must be unique. Specifies all returned tags of the resource.</p> <p>Keys are in the AND relationship while values in the key-value structure are in the OR relationship.</p> <p>If no filtering condition for tags is specified, full data is returned.</p> |

Table 4-165 TagValuesList

| Parameter | Type | Description |
|-----------|------------------|---|
| key | String | <p>Specifies the tag key.</p> <p>Each tag key can contain a maximum of 128 Unicode characters but cannot be left blank. (The system does not verify the value of key when searching for resources.)</p> <p>key cannot be an empty string or spaces. Before using key, delete single-byte character (SBC) spaces before and after the key.</p> |
| values | Array of strings | <p>Specifies the tag values.</p> <p>Each tag value contains a maximum of 255 Unicode characters. Before you verify and use it, delete spaces at the beginning and end of the tag value.</p> <p>The tag value can be an empty array but cannot be left blank. If values are left blank, it indicates any_value (querying any value).</p> <p>Values are in the OR relationship. The system does not verify the character set of values when searching for resources, but only verifies the length.</p> |

Example Requests

- Querying tags of a VPC endpoint service
GET `https://{endpoint}/v1/{project_id}/endpoint_service/tags`
- Querying tags of a VPC endpoint
GET `https://{endpoint}/v1/{project_id}/endpoint/tags`

Example Responses

Status code: 200

Indicates the list of tags.

```
{  
  "tags": [  
    {  
      "key": "key1",  
      "values": [ "value1", "value2" ]  
    }  
  ]  
}
```

Status Codes

| Status Code | Description |
|-------------|-----------------------------|
| 200 | Indicates the list of tags. |

Error Codes

See [Error Codes](#).

5 Application Examples

5.1 Configuring a VPC Endpoint for Communication Across VPCs

Scenarios

VPC Endpoint enables you to privately connect your VPC to a VPC endpoint service (a cloud service or your private service) in another VPC, providing higher access efficiency and networking security compared with EIPs.

This section describes how to invoke APIs described in [Creating a VPC Endpoint Service](#) and [Creating a VPC Endpoint](#) to connect a VPC endpoint to a VPC endpoint service. For details, see [Calling APIs](#).

NOTE

The token obtained from IAM is valid for only 24 hours. If you want to use one token for authentication, you can cache it to avoid frequently calling the IAM API.

Prerequisites

You have planned the region where you want to create a VPC endpoint and obtained the endpoint required for API calls. For details, see [VPC Endpoint](#).

Creating a VPC Endpoint Service

The following is an example request of creating an interface VPC endpoint service for an ECS:

NOTE

Before creating a VPC endpoint service, obtain necessary information such as values of parameters **vpc_id** and **port_id**. For details, see [Creating a VPC Endpoint Service](#).

```
{  
  "port_id": "4189d3c2-8882-4871-a3c2-d380272eed88",  
  "vpc_id": "4189d3c2-8882-4871-a3c2-d380272eed80",  
  "approval_enabled":false,
```

```
"service_type":"interface",
"server_type":"VM",
"ports":
  [
    {
      "client_port":8080,
      "server_port":80,
      "protocol":"TCP"
    },
    {
      "client_port":8081,
      "server_port":80,
      "protocol":"TCP"
    }
  ]
```

- **port_id**: indicates the ID for identifying the backend service of a VPC endpoint service. For example, when you create a VPC endpoint service for an ECS, set this parameter to the NIC ID of the ECS IP address.
- **vpc_id**: indicates the ID of the VPC where the backend resource is located.
- **approval_enabled**: indicates whether approval is required when a VPC endpoint connects to a VPC endpoint service. For example, if this parameter is set to **false**, no approval is required.
- **service_type**: indicates the type of the VPC endpoint service. For example, if this parameter is set to **interface**, the created VPC endpoint service is an interface VPC endpoint service.
- **server_type**: indicates the type of the backend resource. For example, if this parameter is set to **VM**, the backend resource is an ECS.
- **ports.client_port**: indicates the port provided by the VPC endpoint, allowing you to access the VPC endpoint service.
- **ports.server_port**: indicates the port provided by the backend resource to provide services.
- **ports.protocol**: indicates the protocol used for the port mapping.

Creating a VPC Endpoint

The following is an example request for creating a VPC endpoint, and creating a private domain name is supported.

NOTE

Before creating a VPC endpoint, obtain necessary information, such as values of parameters **vpc_id** and **subnet_id** and the VPC endpoint service ID returned in the previous step. For details, see [Creating a VPC Endpoint](#).

```
{
  "subnet_id": "4189d3c2-8882-4871-a3c2-d380272eed81",
  "vpc_id": "4189d3c2-8882-4871-a3c2-d380272eed82",
  "endpoint_service_id": "4189d3c2-8882-4871-a3c2-d380272eed83",
  "enable_dns":true
}
```

- **subnet_id**: indicates the ID of the subnet where the VPC endpoint is created.
- **vpc_id**: indicates the ID of the VPC where the VPC endpoint is created.
- **endpoint_service_id**: indicates the ID of the VPC endpoint service.
- **enable_dns**: indicates whether to create a private domain name for the VPC endpoint. For example, if this parameter is set to **true**, a private domain name is created for the VPC endpoint.

After the VPC endpoint is created, instances in the VPC where the VPC endpoint is located can use the VPC endpoint to access the VPC endpoint service whose ID is **4189d3c2-8882-4871-a3c2-d380272eed83**.

6 Permissions Policies and Supported Actions

6.1 Introduction

This section describes fine-grained permissions management for your VPC Endpoint resources. If your Huawei account does not need individual IAM users, you can skip this section.

New IAM users do not have any permissions assigned by default. You need to first add them to one or more groups and attach policies or roles to these groups. Users inherit permissions from the groups to which they are added and can perform specified operations on cloud services based on the permissions.

An account has all of the permissions required to call all APIs, but IAM users must have the required permissions specifically assigned. The permissions required for calling an API are determined by the actions supported by the API. Only users who have been granted permissions allowing the actions can call the API successfully. For example, if an IAM user wants to query VPC endpoint services using an API, the user must have been granted permissions that allow the **vpcep:epservices:list** action.

Supported Actions

VPC Endpoint provides system-defined policies that can be directly used in IAM. You can also create custom policies to supplement system-defined policies for more refined access control. Operations supported by policies are specific to APIs. The following are common concepts related to policies:

- Permissions: statements in a policy that allow or deny certain operations.
- APIs: REST APIs that can be called in a custom policy.
- Actions: specific operations that are allowed or denied in a custom policy.
- IAM projects/Enterprise projects: the authorization scope of a custom policy. A custom policy can be applied to IAM projects or enterprise projects or both. Policies that contain actions for both IAM and enterprise projects can be used and take effect for both IAM and Enterprise Management. Policies that contain actions only for IAM projects can be used and applied to IAM only. For

details about the differences between IAM projects and enterprise projects, see [Differences Between IAM and Enterprise Management](#).

VPC Endpoint supports the following actions that can be defined in custom policies:

- **VPC Endpoint Services**: contains actions supported by all VPC endpoint service APIs, such as the API for creating a VPC endpoint service.
- **VPC Endpoints**: contains actions supported by all VPC endpoint APIs, such as the API for creating a VPC endpoint.
- **Resource Quotas**: contains actions for querying quotas of VPC Endpoint resources.
- **Tags**: contains actions supported by all tag management APIs, such as the API for querying a resource tag.

6.2 VPC Endpoint Services

Table 6-1 Actions for managing VPC endpoint services

| Permission | API | Action | Dependencies | IAM Project | Enterprise Project |
|--|--|-------------------------|--|-------------|--------------------|
| Creating a VPC endpoint service | POST /v1/{project_id}/vpc-endpoint-services | vpcep:epservices:create | vpc:vpcs:get vpc:vpcs:list elb:loadbalancers:list elb:loadbalancers:get ecs:servers:list ecs:servers:get bms:servers:list bms:servers:get | √ | ✗ |
| Querying VPC endpoint services | GET /v1/{project_id}/vpc-endpoint-services | vpcep:epservices:list | - | √ | ✗ |
| Querying details of a VPC endpoint service | GET /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id} | vpcep:epservices:get | - | √ | ✗ |

| Permission | API | Action | Dependencies | IAM Project | Enterprise Project |
|--|--|--------------------------|--------------|-------------|--------------------|
| Modifying a VPC endpoint service | PUT /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id} | vpcep:epservices:update | - | ✓ | ✗ |
| Deleting a VPC endpoint service | DELETE /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id} | vpcep:epservices:delete | - | ✓ | ✗ |
| Querying connections of a VPC endpoint service | GET /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/connections | vpcep:connections:list | - | ✓ | ✗ |
| Accepting or rejecting a connection from a VPC endpoint | POST /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/connections/action | vpcep:connections:update | - | ✓ | ✗ |
| Querying whitelist records of a VPC endpoint service | GET /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/permissions | vpcep:permissions:list | - | ✓ | ✗ |
| Batch adding or deleting whitelist records to or from a VPC endpoint service | POST /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/permissions/action | vpcep:permissions:update | - | ✓ | ✗ |

| Permission | API | Action | Dependencies | IAM Project | Enterprise Project |
|---|--|-----------------------------|--|-------------|--------------------|
| Querying public VPC endpoint services | GET /v1/{project_id}/vpc-endpoint-services/public | vpcep:pubEpservices:list | vpc:vpcs:get vpc:vpcs:list vpc:subnets:get | ✓ | ✗ |
| Querying the basic information about a VPC endpoint service | GET /v1/{project_id}/vpc-endpoint-services/describe | vpcep:epserviceDescribe:get | - | ✓ | ✗ |
| Upgrading a VPC endpoint service | POST /v2/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/upgrade | vpcep:epservices:upgrade | - | ✓ | ✗ |
| Changing the name of a VPC endpoint service | PUT /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/name | vpcep:epservices:update | - | ✓ | ✗ |
| Updating the description of a VPC endpoint connection | PUT /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/connections/description | vpcep:connections:update | - | ✓ | ✗ |
| Batch adding whitelists for a VPC endpoint service | POST /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/permissions/batch-create | vpcep:permissions:update | - | ✓ | ✗ |

| Permission | API | Action | Dependencies | IAM Project | Enterprise Project |
|---|--|--------------------------|--------------|-------------|--------------------|
| Batch deleting whitelists from a VPC endpoint service | POST /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/permissions/batch-delete | vpcep:permissions:update | - | ✓ | ✗ |
| Updating the description of the whitelist of a VPC endpoint service | PUT /v1/{project_id}/vpc-endpoint-services/{vpc_endpoint_service_id}/permissions/{permission_id} | vpcep:permissions:update | - | ✓ | ✗ |

6.3 VPC Endpoints

Table 6-2 Actions for managing VPC endpoints

| Permission | API | Action | Dependent Action | IAM Project | Enterprise Project |
|------------------------------------|---|------------------------|------------------|-------------|--------------------|
| Creating a VPC endpoint | POST /{project_id}/vpc-endpoints | vpcep:endpoints:create | - | ✓ | ✗ |
| Querying VPC endpoints | GET /{project_id}/vpc-endpoints | vpcep:endpoints:list | - | ✓ | ✗ |
| Querying details of a VPC endpoint | GET /v1/{project_id}/vpc-endpoints/{vpc_endpoint_id} | vpcep:endpoints:get | - | ✓ | ✗ |
| Deleting a VPC endpoint | DELETE /v1/{project_id}/vpc-endpoints/{vpc_endpoint_id} | vpcep:endpoints:delete | - | ✓ | ✗ |

| Permission | API | Action | Dependent Action | IAM Project | Enterprise Project |
|--|--|------------------------|------------------|-------------|--------------------|
| Updating a VPC Endpoint | PUT /v1/{project_id}/vpc-endpoints/{vpc_endpoint_id} | vpcep:endpoints:update | - | ✓ | ✗ |
| Changing a route table of a VPC endpoint | PUT /v1/{project_id}/vpc-endpoints/{vpc_endpoint_id}/routetables | vpcep:epRouters:update | - | ✓ | ✗ |
| Modifying the policy of a VPC endpoint | PUT /v1/{project_id}/vpc-endpoints/{vpc_endpoint_id}/policy | vpcep:endpoints:update | - | ✓ | ✗ |
| Deleting the policy of a VPC endpoint | DELETE /v1/{project_id}/vpc-endpoints/{vpc_endpoint_id}/policy | vpcep:endpoints:delete | - | ✓ | ✗ |

6.4 Resource Quotas

Table 6-3 Actions for managing resource quotas

| Permission | API | Action | Dependent Action | IAM Project | Enterprise Project |
|-----------------|-----------------------------|------------------|------------------|-------------|--------------------|
| Querying quotas | GET /v1/{project_id}/quotas | vpcep:quotas:get | - | ✓ | ✗ |

6.5 Tags

Table 6-4 Actions for managing tags

| Permission | API | Action | Dependent Action | IAM Project | Enterprise Project |
|--------------------------------------|---|---------------------|------------------|-------------|--------------------|
| Querying VPCEP resources by tag | POST /v1/{project_id}/{resource_type}/resource_instances/action | vpcep:resource:list | - | ✓ | ✗ |
| Adding or deleting a resource tag | POST /v1/{project_id}/{resource_type}/{resource_id}/tags/action | vpcep:tags:update | - | ✓ | ✗ |
| Querying tags of a tenant's resource | GET /v1/{project_id}/{resource_type}/tags | vpcep:tags:list | - | ✓ | ✗ |

7 Appendix

7.1 Status Code

- Normal

Table 7-1 Return values for successful requests

| Status Code | Returned Value | Description |
|-------------|----------------|--|
| 200 | OK | The results of POST, GET, and PUT operations are returned as expected. |
| 204 | No Content | The results of the DELETE operation are returned as expected. |

- Abnormal

Table 7-2 Return code for failed requests

| Status Code | Returned Value | Description |
|-------------|--------------------|--|
| 400 | Bad Request | The server failed to process the request. |
| 401 | Unauthorized | You must enter a username and password to access the requested page. |
| 403 | Forbidden | You are forbidden to access the requested page. |
| 404 | Not Found | The server could not find the requested page. |
| 405 | Method Not Allowed | You are not allowed to use the method specified in the request. |

| Status Code | Returned Value | Description |
|-------------|-------------------------------|--|
| 406 | Not Acceptable | The response generated by the server could not be accepted by the client. |
| 407 | Proxy Authentication Required | You must use the proxy server for authentication so that the request can be processed. |
| 408 | Request Timeout | The request timed out. |
| 409 | Conflict | The request could not be processed due to a conflict. |
| 500 | Internal Server Error | Failed to complete the request because of an internal service error. |
| 501 | Not Implemented | Failed to complete the request because the server does not support the requested function. |
| 502 | Bad Gateway | Failed to complete the request because the server has received an invalid response. |
| 503 | Service Unavailable | Failed to complete the request because the service is unavailable. |
| 504 | Gateway Timeout | A gateway timeout error occurred. |

7.2 Error Codes

| Status Code | Error Code | Error Message | Description | Solution |
|-------------|---------------|------------------------------------|------------------------------------|--|
| 400 | EndPoint.0002 | Parameter error. | Parameter error. | Check whether the parameter is valid. |
| 400 | EndPoint.0006 | Invalid limit. | Invalid limit. | Enter a valid limit. |
| 400 | EndPoint.0007 | Invalid action. | Invalid action. | Enter a valid action. |
| 400 | EndPoint.0009 | The remote address does not match. | The remote address does not match. | Check whether you have the access permissions. |
| 400 | EndPoint.0010 | Invalid offset. | Invalid offset. | Enter a valid offset. |

| Status Code | Error Code | Error Message | Description | Solution |
|-------------|---------------|--|--|--|
| 400 | EndPoint.0014 | Invalid project ID. | Invalid project ID. | Enter a valid project ID. |
| 400 | EndPoint.0015 | Invalid specification. | Invalid specifications. | Enter valid specifications. |
| 400 | EndPoint.0016 | The number of batch operated resources exceeded the limit. | The number of batch operated resources exceeded the limit. | Reduce the number of resources to be batch operated. |
| 400 | EndPoint.0017 | Invalid sort_key. | Invalid sort key. | Enter a valid sort key. |
| 400 | EndPoint.0018 | Invalid sort_dir. | Invalid sort DIR. | Enter a valid sort DIR. |
| 400 | EndPoint.0019 | Invalid status. | Invalid status. | Enter a valid status. |
| 400 | EndPoint.0020 | Invalid VPC ID. | Invalid VPC ID. | Enter a valid VPC ID. |
| 400 | EndPoint.0021 | Invalid marker_id. | Invalid marker ID. | Enter a valid marker ID. |
| 400 | EndPoint.0022 | The number of requests exceeded the limit. Please try later. | The number of requests exceeded the limit. | Try again later. |
| 400 | EndPoint.0023 | Invalid subnet_id. | Invalid subnet ID. | Enter a valid subnet ID. |
| 400 | EndPoint.1003 | Invalid service name. | Invalid service name. | Enter a valid service name. |
| 400 | EndPoint.1004 | Invalid request. | Invalid request. | Enter a valid request body. |
| 400 | EndPoint.1005 | DNS service Failed: Failed to create a DNS zone. | DNS failure: Failed to create the DNS zone. | Contact technical support. |
| 400 | EndPoint.1008 | Failed to obtain the token. | Failed to obtain the token. | Contact technical support. |
| 400 | Endpoint.1018 | Quota exceeded. | Quota exceeded. | Contact technical support. |

| Status Code | Error Code | Error Message | Description | Solution |
|-------------|---------------|--|--|--|
| 400 | EndPoint.1019 | Invalid route table ID. | Invalid route table ID. | Enter a valid route table ID. |
| 400 | EndPoint.2001 | The VPC does not exist. | The VPC does not exist. | Enter a valid VPC ID for the current tenant. |
| 400 | EndPoint.2002 | The request input parameter is empty. | The request input parameter is left blank. | Enter a valid parameter. |
| 400 | EndPoint.2003 | The endpoint service does not exist. | The endpoint service does not exist. | Enter a valid VPC endpoint service. |
| 400 | EndPoint.2004 | The endpoint service is unavailable. | The VPC endpoint service is unavailable. | Try again later. If the fault persists, contact technical support. |
| 400 | EndPoint.2009 | The specification information does not exist. | The specifications information does not exist. | Enter correct specifications. |
| 400 | EndPoint.2010 | The input parameter subnet ID is empty. | The input parameter subnet_id is left blank. | Enter a valid subnet ID. |
| 400 | EndPoint.2011 | The input parameter VPC ID is empty. | The input parameter vpc_id is left blank. | Enter a valid VPC ID. |
| 400 | EndPoint.2012 | You have no permission to connect to the VPC endpoint service. | You have no permission to connect to the VPC endpoint service. | Check whether you have the access permissions. |
| 400 | EndPoint.2013 | The endpoint does not belong to the endpoint service. | The VPC endpoint does not belong to the VPC endpoint service. | Check whether the VPC endpoint is valid. |

| Status Code | Error Code | Error Message | Description | Solution |
|-------------|---------------|---|---|--|
| 400 | EndPoint.2014 | The endpoint has connected to the endpoint service. | The VPC endpoint has connected to the VPC endpoint service. | Connected. You do not need to connect again. |
| 400 | EndPoint.2015 | The endpoint has been frozen. | The VPC endpoint has been frozen. | Contact technical support. |
| 400 | EndPoint.2016 | The endpoint pool IP address does not exist. | The pool IP address of the VPC endpoint does not exist. | Contact technical support. |
| 400 | EndPoint.2017 | Invalid endpoint ID. | Invalid VPC endpoint ID. | Enter a valid VPC endpoint ID. |
| 400 | EndPoint.2018 | The endpoint is being deleted. | The VPC endpoint is being deleted. | Select an available VPC endpoint. |
| 400 | EndPoint.2019 | The endpoint is being created. | The VPC endpoint is being created. | Try again later. |
| 400 | EndPoint.2020 | qrMac or sgMac does not exist. | qrMac or sgMac is not found. | Contact technical support. |
| 400 | EndPoint.2021 | Failed to query the VPC. | Failed to query the VPC. | Contact technical support. |
| 400 | EndPoint.2022 | Failed to create an endpoint. | Failed to create the VPC endpoint. | Contact technical support. |
| 400 | EndPoint.2023 | CIDR is not found. | CIDR is not found. | Contact technical support. |
| 400 | EndPoint.2024 | shadowVpc or shadowPort does not exist. | shadowVpc or shadowPort is left blank. | Contact technical support. |
| 400 | EndPoint.2025 | The endpoint port does not exist. | The VPC endpoint port is not found. | Contact technical support. |

| Status Code | Error Code | Error Message | Description | Solution |
|-------------|---------------|--|--|--|
| 400 | EndPoint.2026 | VNI is empty. | VNI is left blank. | Contact technical support. |
| 400 | EndPoint.2027 | Invalid action. | Invalid action. | Enter a valid action. |
| 400 | EndPoint.2028 | The endpoint service port or protocol is empty. | The VPC endpoint service port or protocol is left blank. | Enter a valid port number or protocol. |
| 400 | EndPoint.2029 | The requested endpoint service ID is empty. | The requested endpoint service ID is left blank. | Enter a valid VPC endpoint service ID. |
| 400 | EndPoint.2031 | Only one endpoint is allowed. | Only one VPC endpoint is allowed. | A VPC endpoint service can accept or reject only one VPC endpoint. |
| 400 | EndPoint.2033 | The entered parameter enable_dns is invalid. | Invalid enable_dns value. | Enter a valid enable_dns . |
| 400 | EndPoint.2034 | The entered parameter enable_dns is incorrect. | Incorrect enable_dns value. | Enter a correct enable_dns value. |
| 400 | EndPoint.2035 | The system parameter dns.enable is invalid. | Invalid dns.enable value. | Contact technical support. |
| 400 | EndPoint.2037 | The current network does not belong to the VPC. | The current network does not belong to the VPC. | Check whether the parameter is valid. |
| 400 | EndPoint.2038 | The pool does not exist. | The pool does not exist. | Contact technical support. |
| 400 | EndPoint.2039 | The route table is being used by another VPC endpoint. | The route table is being used by another VPC endpoint. | Contact technical support. |

| Status Code | Error Code | Error Message | Description | Solution |
|-------------|---------------|---|--|------------------------------------|
| 400 | EndPoint.2040 | The VPC endpoint has no route table bound. | The VPC endpoint has no route table associated. | Contact technical support. |
| 400 | EndPoint.2041 | Invalid Port IP address. | Invalid NIC IP address. | Enter a valid IP address. |
| 400 | EndPoint.2042 | The Port IP is in use. | The IP address of the NIC is in use. | Enter another IP address. |
| 400 | EndPoint.2043 | The Port IP is not valid for the subnet. | The IP address of the NIC does not belong to the subnet. | Enter a valid IP address. |
| 400 | EndPoint.2044 | Invalid whitelist. | Invalid whitelist. | Enter a valid whitelist. |
| 400 | EndPoint.2045 | The maximum number of whitelist records has been reached. | The maximum number of records in the whitelist has been reached. | Contact technical support. |
| 400 | EndPoint.2046 | Can not modify a specified mac endpoint. | mac of a specified VPC endpoint cannot be modified. | Contact technical support. |
| 400 | EndPoint.2047 | The VPC endpoint in the Failed status cannot be modified. | A VPC endpoint in the Failed state cannot be modified. | Select a valid VPC endpoint. |
| 400 | EndPoint.2048 | The VPC endpoint policy is invalid. | Invalid VPC endpoint policy. | Enter a valid VPC endpoint policy. |
| 400 | EndPoint.2049 | The VPC endpoint has no policy associated. | No policy has been associated with the VPC endpoint. | Contact technical support. |

| Status Code | Error Code | Error Message | Description | Solution |
|-------------|---------------|---|--|----------------------------|
| 400 | EndPoint.2050 | The endpoint has been disabled. | The VPC endpoint has been disabled. | Contact technical support. |
| 400 | EndPoint.2051 | The current endpoint is switching to new pool. | The VPC endpoint is being switched to a new resource pool. | Try again later. |
| 400 | EndPoint.2052 | The current endpoint does not need to be rolled back. | The VPC endpoint failed to be rolled back. | Contact technical support. |
| 400 | EndPoint.3001 | Failed to create a port. | Failed to create the port. | Contact technical support. |
| 400 | EndPoint.3002 | Invalid permission. | Invalid permissions. | Contact technical support. |
| 400 | EndPoint.3003 | Invalid port ID. | Invalid port ID. | Contact technical support. |
| 400 | EndPoint.3004 | Invalid port. | Invalid port. | Contact technical support. |
| 400 | EndPoint.3005 | Failed to delete the endpoint service. | Failed to delete the VPC endpoint service. | Contact technical support. |
| 400 | EndPoint.3006 | The endpoint service is being used. | The VPC endpoint service is being used. | Contact technical support. |
| 400 | EndPoint.3008 | The port does not exist. | The port is not found. | Contact technical support. |
| 400 | EndPoint.3009 | Invalid CIDR. | Invalid CIDR. | Contact technical support. |
| 400 | EndPoint.3010 | Invalid IP address. | Invalid IP address. | Enter a valid IP address. |

| Status Code | Error Code | Error Message | Description | Solution |
|-------------|---------------|---|--|-----------------------------|
| 400 | EndPoint.3011 | Parameter IP is not required to create an endpoint service (interface). | IP is not required to create an interface VPC endpoint service. | Enter a valid request body. |
| 400 | EndPoint.3013 | endpointService interface vlan can't have vpclId . | The request for accessing the VLAN VPC endpoint service cannot contain vpclId . | Enter a valid request body. |
| 400 | EndPoint.3014 | endpointService interface can't have cidr . | The request for accessing the VPC endpoint service (interface) cannot contain cidr . | Enter a valid request body. |
| 400 | EndPoint.3015 | endpointService gateway vlan can't have portId . | The request for accessing the VLAN VPC endpoint service (gateway) cannot contain portId . | Enter a valid request body. |
| 400 | EndPoint.3016 | endpointService gateway vlan can't have ip . | The request for accessing the VLAN VPC endpoint service (gateway) cannot contain ip . | Enter a valid request body. |
| 400 | EndPoint.3017 | Invalid CIDRs. | Invalid CIDRs. | Enter valid CIDRs. |
| 400 | EndPoint.3018 | endpointService gateway vlan can't have vpclId . | The request for accessing the VLAN VPC endpoint service cannot contain vpclId . | Enter a valid request body. |

| Status Code | Error Code | Error Message | Description | Solution |
|-------------|---------------|--|---|-----------------------------------|
| 400 | EndPoint.3021 | Invalid serverType. | Invalid serverType . | Enter a valid serverType . |
| 400 | EndPoint.3022 | Failed to create a network. | Failed to create the network. | Contact technical support. |
| 400 | EndPoint.3023 | Failed to create a subnet. | Failed to create the subnet. | Contact technical support. |
| 400 | EndPoint.3035 | Invalid action. | Invalid action. | Enter a valid action. |
| 400 | EndPoint.3036 | Invalid permissions. | The permission list cannot be left blank. | Enter a valid request body. |
| 400 | EndPoint.3040 | Failed to add a rollback task. | Failed to add the rollback task. | Contact technical support. |
| 400 | EndPoint.3042 | The port ID does not belong to the current VPC. | The port ID does not belong to the current VPC. | Enter a valid request body. |
| 400 | EndPoint.3043 | The service port is invalid. | Invalid service port. | Enter a valid request body. |
| 409 | EndPoint.3044 | The parameter ports conflicted with ports in an existing endpoint service. | This port conflicted with the port of an existing endpoint service. | Enter a valid request body. |
| 400 | EndPoint.3045 | Other properties cannot be modified in the current endpoint service state. | Modifying other properties of the VPC endpoint service in the current state is not supported. | Enter a valid request body. |

| Status Code | Error Code | Error Message | Description | Solution |
|-------------|---------------|--|---|---|
| 400 | EndPoint.3046 | The IP address conflicted with an existing endpoint service. | The IP address conflicted with that of an existing VPC endpoint service. | Enter a valid request body. |
| 400 | EndPoint.3048 | Invalid netType . | Invalid netType . | Enter a valid netType . |
| 400 | EndPoint.3049 | The maximum number of whitelist records has been reached. | The maximum number of whitelist records has been reached. | Delete invalid whitelist records or add an authorized account ID named *. |
| 400 | EndPoint.3051 | Endpoint service vip port id is invalid. | Invalid vip port id . | Enter a valid vip port id . |
| 400 | EndPoint.3052 | portId and ip cannot be modified at the same time. | portId and ip cannot be modified at the same time. | Enter a valid request body. |
| 400 | EndPoint.3053 | vipPortId and ip cannot be modified at the same time. | vipPortId and ip cannot be modified at the same time. | Enter a valid request body. |
| 400 | EndPoint.3054 | portId or vipPortId cannot be modified. | portId or vipPortId cannot be modified. | Enter a valid request body. |
| 400 | EndPoint.3055 | ip cannot be modified. | ip cannot be modified. | Enter a valid request body. |
| 400 | EndPoint.3056 | The maximum of VPC endpoint services using the same IP address has been reached. | The maximum number of VPC endpoint services using the same IP address has been reached. | Contact technical support. |

| Status Code | Error Code | Error Message | Description | Solution |
|-------------|---------------|--|--|--|
| 400 | EndPoint.3057 | cidr cannot be modified. | cidr cannot be modified. | Enter a valid request body. |
| 400 | EndPoint.3058 | The domain name is invalid. | Invalid dns name . | Enter a valid dns name . |
| 400 | EndPoint.3059 | The domain name already exists. | The domain name already exists. | Contact technical support. |
| 400 | EndPoint.3060 | You have no permission to add domain names. | You have no permission to add domain names. | Contact technical support. |
| 400 | EndPoint.3061 | The maximum number of domain names has reached. | The maximum number of domain names has been reached. | Contact technical support. |
| 400 | EndPoint.3062 | Invalid endpoint service ID. | Invalid VPC endpoint service ID. | Enter a valid VPC endpoint service ID. |
| 400 | EndPoint.3063 | Invalid port ID. | Invalid port ID. | Enter a valid port ID. |
| 400 | EndPoint.3066 | The tag cannot be empty. | The tag cannot be left blank. | Enter a valid request body. |
| 400 | EndPoint.3067 | The tag key cannot be duplicated. | The tag key must be unique. | Enter a valid request body. |
| 400 | EndPoint.3068 | Tag keys and values should meet relevant requirements. | Tag keys and values must meet relevant requirements. | Enter a valid request body. |
| 400 | EndPoint.3069 | The maximum number of tags has been reached. | The maximum number of tags has been reached. | Contact technical support. |
| 400 | EndPoint.3070 | Invalid resource type. | Incorrect resource type. | Contact technical support. |

| Status Code | Error Code | Error Message | Description | Solution |
|-------------|---------------|--|---|-----------------------------|
| 400 | EndPoint.3071 | The tag value cannot be duplicated. | Tag values must be unique. | Contact technical support. |
| 400 | EndPoint.3072 | The tag key size is invalid. | Invalid tag key length. | Enter a valid tag key. |
| 400 | EndPoint.3073 | The tag value size is invalid. | Invalid tag value length. | Enter a valid tag value. |
| 400 | EndPoint.3074 | The maximum of ports has been reached. | The maximum number of port mappings has been reached. | Contact technical support. |
| 400 | EndPoint.3075 | The protocol is invalid. | Invalid protocol. | Contact technical support. |
| 400 | EndPoint.3076 | Invalid service name. | Invalid service name. | Enter a valid service name. |
| 400 | EndPoint.4001 | Failed to query the subnet. | Failed to query the subnet. | Contact technical support. |
| 400 | EndPoint.4002 | Failed to create a subnet. | Failed to create the subnet. | Contact technical support. |
| 400 | EndPoint.4003 | Failed to delete the subnet. | Failed to delete the subnet. | Contact technical support. |
| 400 | EndPoint.4005 | Failed to query the network. | Failed to query the network. | Contact technical support. |
| 400 | EndPoint.4006 | Failed to create a network. | Failed to create the network. | Contact technical support. |
| 400 | EndPoint.4007 | Failed to delete the network. | Failed to delete the network. | Contact technical support. |
| 400 | EndPoint.4009 | Failed to query the port. | Failed to query the port. | Contact technical support. |

| Status Code | Error Code | Error Message | Description | Solution |
|-------------|---------------|---|---|----------------------------|
| 400 | EndPoint.4010 | Failed to create a port. | Failed to create the port. | Contact technical support. |
| 400 | EndPoint.4011 | Failed to delete the port. | Failed to delete the port. | Contact technical support. |
| 400 | EndPoint.4013 | Failed to query the proxy. | Failed to query the proxy. | Contact technical support. |
| 400 | EndPoint.4014 | Failed to query the router. | Failed to query the route. | Contact technical support. |
| 400 | EndPoint.4015 | The router is not found. | The route is not found. | Contact technical support. |
| 400 | EndPoint.4016 | Failed to add an interface router. | Failed to add the interface route. | Contact technical support. |
| 400 | EndPoint.4017 | Failed to delete the interface router. | Failed to delete the interface route. | Contact technical support. |
| 400 | EndPoint.4018 | Failed to add an extension router. | Failed to add the extended route. | Contact technical support. |
| 400 | EndPoint.4019 | Failed to delete the extension router. | Failed to delete the extended route. | Contact technical support. |
| 400 | EndPoint.4020 | Failed to query Neutron L3 Agent. | Failed to query Neutron L3 Agent. | Contact technical support. |
| 400 | EndPoint.4025 | The specification is being used. | The specifications are being used. | Contact technical support. |
| 400 | EndPoint.4026 | Failed to query the default route table of the VPC. | Failed to query the default route table of the VPC. | Contact technical support. |

| Status Code | Error Code | Error Message | Description | Solution |
|-------------|---------------|---|---|--|
| 400 | EndPoint.4027 | Failed to query route tables of the VPC. | Failed to query route tables of the VPC. | Contact technical support. |
| 400 | EndPoint.4028 | Failed to add routes to the VPC's route table. | Failed to add routes to the VPC's route table. | Contact technical support. |
| 400 | EndPoint.4029 | Failed to remove routes from the VPC's route table. | Failed to remove routes from the VPC's route table. | Contact technical support. |
| 400 | EndPoint.6070 | The endpoint service is advanced mode already. | The VPC endpoint service is already in the advanced mode. | The VPC endpoint service is already in advanced mode and does not need to be upgraded. |
| 401 | EndPoint.0003 | Authentication failed or authentication information is invalid. | Authentication failed or authentication information is invalid. | Check whether the permissions are enabled. |
| 403 | EndPoint.0004 | Authentication information is incorrect or you have no permissions. | Authentication information is incorrect or you have no permissions. | Check whether the permissions are enabled. |
| 404 | EndPoint.0005 | The requested resource is unavailable. | The requested resource is unavailable. | Check whether the input parameters are valid. |
| 404 | EndPoint.2006 | The requested endpoint does not exist. | The requested VPC endpoint does not exist. | Enter a valid VPC endpoint. |
| 404 | EndPoint.2007 | The endpoint information does not exist. | The VPC endpoint information does not exist. | Enter a valid VPC endpoint and check whether the VPC endpoint is deleted. |

| Status Code | Error Code | Error Message | Description | Solution |
|-------------|---------------|--------------------------------|------------------------------------|--|
| 404 | EndPoint.2008 | The endpoint has been deleted. | The VPC endpoint has been deleted. | Check whether the VPC endpoint is deleted. |
| 404 | EndPoint.2030 | markerId is empty. | markerId is left blank. | Enter a valid marker ID. |
| 404 | EndPoint.4004 | The subnet is not found. | The subnet does not exist. | Check the entered subnet ID. If the fault persists, contact technical support. |
| 404 | EndPoint.4008 | Network is unavailable. | Network is unavailable. | Contact technical support. |
| 404 | EndPoint.4012 | The port is not found. | The port does not exist. | Contact technical support. |
| 404 | EndPoint.4021 | Neutron L3 Agent is not found. | Neutron L3 Agent is not found. | Contact technical support. |
| 404 | EndPoint.4030 | The route table is not found. | The route table does not exist. | Contact technical support. |
| 500 | EndPoint.0001 | System error. Please retry. | System error. Please retry. | Try again. If the fault persists, contact technical support. |
| 504 | EndPoint.0011 | The request body is null. | The request body is left blank. | Enter a valid request body. |
| 504 | EndPoint.0012 | The request header is null. | The request header is left blank. | Enter a request header. |
| 504 | EndPoint.0013 | The request timed out. | The request timed out. | Contact technical support if the problem persists after a retry. |

7.3 Obtaining a Project ID

Scenarios

A project ID is required for some URLs when an API is called. Therefore, you need to obtain a project ID in advance. Two methods are available:

- [Obtain the Project ID by Calling an API](#)
- [Obtain the Project ID from the Console](#)

Obtain the Project ID by Calling an API

You can obtain a project ID by calling the API used to [query projects based on specified criteria](#).

The API used to obtain a project ID is GET `https://{{Endpoint}}/v3/projects`.
{{Endpoint}} is the IAM endpoint and can be obtained from Regions and Endpoints. For details about API authentication, see [Authentication](#).

The following is an example response. The value of **id** is the project ID.

```
{  
  "projects": [  
    {  
      "domain_id": "65ewtrgaggshhk1223245sghjlse684b",  
      "is_domain": false,  
      "parent_id": "65ewtrgaggshhk1223245sghjlse684b",  
      "name": "project_name",  
      "description": "",  
      "links": {  
        "next": null,  
        "previous": null,  
        "self": "https://www.example.com/v3/projects/a4adasfjljaaaakla12334jklga9sasfg"  
      },  
      "id": "a4adasfjljaaaakla12334jklga9sasfg",  
      "enabled": true  
    }  
  ],  
  "links": {  
    "next": null,  
    "previous": null,  
    "self": "https://www.example.com/v3/projects"  
  }  
}
```

Obtain a Project ID from the Console

To obtain a project ID from the console, perform the following operations:

1. Access [My Credentials](#).
2. On the [API Credentials](#) page, check the project ID in the project list.