

VPC Endpoint

User Guide

Issue 01
Date 2024-12-11



Copyright © Huawei Cloud Computing Technologies Co., Ltd. 2024. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Cloud Computing Technologies Co., Ltd.

Trademarks and Permissions



HUAWEI and other Huawei trademarks are the property of Huawei Technologies Co., Ltd.

All other trademarks and trade names mentioned in this document are the property of their respective holders.

Notice

The purchased products, services and features are stipulated by the contract made between Huawei Cloud and the customer. All or part of the products, services and features described in this document may not be within the purchase scope or the usage scope. Unless otherwise specified in the contract, all statements, information, and recommendations in this document are provided "AS IS" without warranties, guarantees or representations of any kind, either express or implied.

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.

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/>

Contents

1 VPC Endpoint Services	1
1.1 VPC Endpoint Service Overview	1
1.2 Creating a VPC Endpoint Service	3
1.3 Viewing a VPC Endpoint Service	7
1.4 Deleting a VPC Endpoint Service	9
1.5 Managing Connections of a VPC Endpoint Service	10
1.6 Managing Whitelist Records of a VPC Endpoint Service	10
1.7 Viewing Port Mappings of a VPC Endpoint Service	11
1.8 Managing Tags of a VPC Endpoint Service	12
2 VPC Endpoints	14
2.1 VPC Endpoint Overview	14
2.2 Buying a VPC Endpoint	16
2.3 Querying and Accessing a VPC Endpoint	21
2.4 Deleting a VPC Endpoint	25
2.5 Configuring Access Control for an Interface VPC Endpoint	25
2.6 Managing Tags of a VPC Endpoint	26
3 Permissions Management	29
3.1 Creating a User and Granting VPC Endpoint Permissions	29
4 Quotas	31

1 VPC Endpoint Services

1.1 VPC Endpoint Service Overview

A VPC endpoint service is a cloud service or a private service that can be accessed through a VPC endpoint.

There are two types of VPC endpoint services: gateway and interface.

- Gateway VPC endpoint services are created only for cloud services.
- Interface VPC endpoint services can be created for both cloud services and your private services. Cloud services are configured as VPC endpoint services by the O&M personnel by default. However, you need to create VPC endpoint services for your private services.

NOTE

Supported cloud services vary in different regions. For details, see the services that can be configured on the management console.

This section describes how to configure a VPC endpoint service (interface type) from your private service and how to manage it.

Table 1-1 Management of VPC endpoint services

Operation	Description	Constraint
<p>Creating a VPC Endpoint Service</p>	<p>Describes how to configure a private service as a VPC endpoint service.</p>	<ul style="list-style-type: none"> ● VPC endpoint services are region-level resources. Select a region and project when you create such a service. ● Each tenant can create a maximum of 20 VPC endpoint services. ● The following private services can be configured into VPC endpoint services: <ul style="list-style-type: none"> – Elastic load balancer: Backend resources of this type suit services that receive high access traffic and demand high reliability and disaster recovery (DR) performance. – ECS: Backend resources of this type serve as servers. – BMS: Backend resources of this type serve as servers. ● One VPC endpoint service corresponds to only one backend resource.
<p>Viewing a VPC Endpoint Service</p>	<p>Describes how to query details about a VPC endpoint service.</p>	<p>None</p>
<p>Deleting a VPC Endpoint Service</p>	<p>Describes how to delete a VPC endpoint service.</p>	<ul style="list-style-type: none"> ● Deleted VPC endpoint services cannot be recovered. Exercise caution when performing this operation. ● Only VPC endpoint services configured from users' private services can be deleted. ● VPC endpoint services in the Accepted or Creating state cannot be deleted.

Operation	Description	Constraint
Managing Connections of a VPC Endpoint Service	Describes how to set connection approval of a VPC endpoint service to determine whether to allow a VPC endpoint to connect to the VPC endpoint service.	You can specify whether to allow a VPC endpoint to connect to a VPC endpoint service only when connection approval is enabled during VPC endpoint service creation.
Managing Whitelist Records of a VPC Endpoint Service	Describes how to manage whitelist records of a VPC endpoint service to control across-account access between a VPC endpoint and a VPC endpoint service.	<ul style="list-style-type: none">• The VPC endpoint and the VPC endpoint service must be deployed in the same region.• Before you configure the whitelist for a VPC endpoint service, obtain the account ID of the associated VPC endpoint.
Viewing Port Mappings of a VPC Endpoint Service	Describes how to view the port mapping between a VPC endpoint and a VPC endpoint service, including the supported protocol, service port, and terminal port.	<ul style="list-style-type: none">• A port mapping needs to be configured when you create a VPC endpoint service.• After a VPC endpoint service is created, you can view its port mappings but cannot modify them.
Managing Tags of a VPC Endpoint Service	Describes how to query, add, edit, and delete tags of a VPC endpoint service.	You can add up to 10 tags to each VPC endpoint service.

1.2 Creating a VPC Endpoint Service

Scenarios

There are two types of VPC endpoint services: gateway and interface.

- Gateway VPC endpoint services are created only for cloud services.
- Interface VPC endpoint services can be created for both cloud services and your private services. Cloud services are configured as VPC endpoint services by the O&M personnel by default. However, you need to create VPC endpoint services for your private services.

This section describes how to configure a private service into an interface VPC endpoint service.

Constraints

- VPC endpoint services are region-level resources. Select a region and project when you create such a service.

- Each tenant can create a maximum of 20 VPC endpoint services.
- The following private services can be configured into VPC endpoint services:
 - **Elastic load balancer**: Backend resources of this type suit services that receive high access traffic and demand high reliability and disaster recovery (DR) performance.
 - **ECS**: Backend resources of this type serve as servers.
 - **BMS**: Backend resources of this type serve as servers.
- One VPC endpoint service corresponds to only one backend resource.

Prerequisites

There is a load balancer in the VPC where you are going to create the VPC endpoint service.

Procedure

1. Go to the [VPC endpoint service list](#) page.
2. Click **Create VPC Endpoint Service**.
The **Create VPC Endpoint Service** page is displayed.
3. Configure parameters by referring to [Table 1-2](#).

Table 1-2 Parameters for creating a VPC endpoint service

Parameter	Description
Region	Specifies the region where the VPC endpoint service is to be deployed. Resources in different regions cannot communicate with each other over an intranet. For lower latency and quicker access, select the nearest region.
Name	This parameter is optional. Specifies the name of the VPC endpoint service. The name can contain a maximum of 16 characters, including letters, digits, underscores (_), and hyphens (-). <ul style="list-style-type: none">• If you do not enter a name, the system generates a name in {region}.{service_id} format.• If you enter a name, the system generates a name in {region}.{Name}.{service_id} format.
VPC	Specifies the VPC where the VPC endpoint service is to be deployed.
Service Type	Specifies the type of the VPC endpoint service. The type can only be Interface .

Parameter	Description
Connection Approval	<p>Specifies whether the connection between a VPC endpoint and a VPC endpoint service requires approval from the owner of the VPC endpoint service.</p> <p>You can enable or disable Connection Approval.</p> <p>When Connection Approval is enabled, any VPC endpoint for connecting to the VPC endpoint service needs to be approved. For details, see Managing Connections of a VPC Endpoint Service.</p>
Port Mapping	<p>Specifies the protocol and ports used for communications between the VPC endpoint service and a VPC endpoint. The protocol is TCP.</p> <ul style="list-style-type: none"> • Service Port: provided by the backend resource bound to the VPC endpoint service. • Terminal Port: provided by the VPC endpoint, allowing you to access the VPC endpoint service. <p>The service and terminal port numbers range from 1 to 65535. A maximum of 50 port mappings can be added at a time.</p> <p>NOTE Accessing a VPC endpoint service from a VPC endpoint is to access the service port from the associated terminal port.</p>
Backend Resource Type	<p>Specifies the backend resource that provides services to be accessed.</p> <p>The following backend resource types are supported:</p> <ul style="list-style-type: none"> • Elastic load balancer: Backend resources of this type suit services that receive high access traffic and demand high reliability and disaster recovery (DR) performance. • ECS: Backend resources of this type serve as servers. • BMS: Backend resources of this type serve as servers. <p>In this example, select Elastic load balancer.</p> <p>NOTE</p> <ul style="list-style-type: none"> • For the security group associated with the backend resource configured for the VPC endpoint service, add an inbound rule, with Source set to 198.19.128.0/17. For details, see Adding a Security Group Rule in the <i>Virtual Private Cloud User Guide</i>. • If you configure a load balancer as the backend resource for the VPC endpoint service, and enable access control for the listener associated with the load balancer, ensure to allow traffic from 198.19.128.0/17.
Load Balancer	<p>When Backend Resource Type is set to Elastic load balancer, select the load balancer that provides services from the drop-down list.</p> <p>NOTE If an elastic load balancer is used as the backend resource, the source IP address received by the VPC endpoint service is not the real address of the client.</p>

Parameter	Description
ECS List	This parameter is available when you select ECS for Backend Resource Type . Select an ECS from the ECS list.
BMS List	This parameter is available when you select BMS for Backend Resource Type . Select a BMS from the BMS list. NOTE The BMS type will be discarded. The ELB type is recommended.
Tag	This parameter is optional. Specifies the VPC endpoint service tag, which consists of a key and a value. You can add up to 20 tags to each VPC endpoint service. Tag keys and values must meet requirements listed in Table 1-3 . NOTE If a predefined tag has been created on TMS, you can directly select the corresponding tag key and value. For details about predefined tags, see Predefined Tag Overview .
Description	Provides supplementary information about the VPC endpoint service.

Table 1-3 Tag requirements for VPC endpoint services

Parameter	Requirement
Tag key	<ul style="list-style-type: none">• Cannot be left blank.• Must be unique for each resource.• Can contain a maximum of 36 characters.• Can contain only letters, digits, hyphens (-), and underscores (_).
Tag value	<ul style="list-style-type: none">• Cannot be left blank.• Can contain a maximum of 43 characters.• Can contain only letters, digits, hyphens (-), and underscores (_).


4. Click **Create Now**.
5. Click **Back to VPC Endpoint Service List** to view the newly-created VPC endpoint service.


1.3 Viewing a VPC Endpoint Service

Scenarios

This section describes how to query details of a VPC endpoint service, including its name, ID, backend resource type, backend resource name, VPC, status, connection approval, service type, and creation time.

Procedure

1. Go to the [VPC endpoint service list](#) page.
2. Locate the VPC endpoint service by entering a filter in the search box in the upper right corner:
 - Search by name or ID.
 - i. Select **Name** or **ID** in the filter box.
 - ii. Enter a keyword in the search box.
 - iii. Click  to start the search.

VPC endpoint services containing the keyword are displayed.
 - Search by tag.
 - i. Click  to the right of **Search by Tag**.
 - ii. Enter a tag and a value.

You can also select a key or value from the drop-down list.

You can use a maximum of 10 tags to search for a VPC endpoint service.
 - iii. Click **Search**.

VPC endpoint services containing the specified tag are displayed.

If you set multiple tags, VPC endpoint services containing all the specified tags will be displayed.
3. In the VPC endpoint service list, locate the VPC endpoint service and click its name to view its details.

[Table 1-4](#) describes the parameters displayed on the VPC endpoint service details page.

Table 1-4 Parameters contained in the details of a VPC endpoint service

Tab	Parameter	Description
Summary	Name	Specifies the name of the VPC endpoint service.
Summary	ID	Specifies the ID of the VPC endpoint service.

Tab	Parameter	Description
Summary	Backend Resource Type	Specifies the type of the backend resource that provides services.
Summary	Backend Resource Name	Specifies the name of the backend resource that provides services to be accessed.
Summary	VPC	Specifies the VPC where the VPC endpoint service is to be deployed.
Summary	Status	Specifies the status of the VPC endpoint service.
Summary	Connection Approval	Specifies whether connection approval is required.
Summary	Service Type	Specifies the type of the VPC endpoint service.
Summary	Created	Specifies when the VPC endpoint service was created.
Connection Management	VPC Endpoint ID	Specifies the ID of the VPC endpoint.
Connection Management	Packet ID	Specifies the identifier of the VPC endpoint ID.
Connection Management	Status	Specifies the status of the VPC endpoint. For details about the statuses of a VPC endpoint, see What Are Statuses of VPC Endpoint Services and VPC Endpoints?
Connection Management	Owner	Specifies the account ID of the VPC endpoint owner.
Connection Management	Created	Specifies the creation time of the VPC endpoint.
Connection Management	Operation	Specifies whether to allow a VPC endpoint to connect to a VPC endpoint service. The option can be Accept or Reject .
Permission Management	Authorized Account ID	Specifies the authorized account ID for connecting to the VPC endpoint. The ID can also be *. If you add an asterisk (*) to the whitelist, it means that all users can access the VPC endpoint service.

Tab	Parameter	Description
Permission Management	Operation	Specifies whether to delete an authorized account from the whitelist.
Port Mapping	Protocol	Specifies the protocol used for communications between the VPC endpoint service and a VPC endpoint.
Port Mapping	Service Port	Specifies the port provided by the backend service bound to the VPC endpoint service.
Port Mapping	Terminal Port	Specifies the port provided by the VPC endpoint, allowing you to access the VPC endpoint service.
Tags	Key	Specifies the tag key of the VPC endpoint service.
Tags	Value	Specifies the tag value of the VPC endpoint service.
Tags	Operation	Specifies the operation to be performed on the VPC endpoint service tag. You can click Edit or Delete .

1.4 Deleting a VPC Endpoint Service

Scenarios

This section describes how you can delete a VPC endpoint service.

NOTE

Deleted VPC endpoint services cannot be recovered. Exercise caution when performing this operation.

Constraints

- The VPC endpoint services configured from your private services can be deleted, but those configured by the system cannot.
- Any VPC endpoint service that has VPC endpoints in **Accepted** or **Creating** state cannot be deleted.

For statuses of a VPC endpoint, see [What Statuses Are Available for a VPC Endpoint Service and VPC Endpoint?](#)

Procedure

1. Go to the [VPC endpoint service list](#) page.
2. In the endpoint service list, locate the target endpoint service and click **Delete** in the **Operation** column.
3. In the **Delete This VPC Endpoint Service** dialog box, click **OK**.

1.5 Managing Connections of a VPC Endpoint Service

Scenarios

To connect a VPC endpoint to a VPC endpoint service that has connection approval enabled, obtain the approval from the owner of the VPC endpoint service.

This section describes how to accept or reject a connection from a VPC endpoint.

Prerequisites

- There is a VPC endpoint available for connecting to the target VPC endpoint service.
- **Connection Approval** of the VPC endpoint service is enabled.

Procedure

1. Go to the [VPC endpoint service list](#) page.
2. In the VPC endpoint service list, locate the VPC endpoint service and click its name.
3. Select the **Connection Management** tab.
4. Accept or reject connection from a VPC endpoint in the list based on service requirements.
 - If you click **Accept**, the VPC endpoint can connect to the VPC endpoint service.
 - If you click **Reject**, the VPC endpoint cannot connect to the VPC endpoint service.

1.6 Managing Whitelist Records of a VPC Endpoint Service

Scenarios

Permission management controls the access of a VPC endpoint in one account to a VPC endpoint service in another.

After a VPC endpoint service is created, you can add or delete an authorized account ID to and from the whitelist of the VPC endpoint service.

- If the whitelist is empty, access from a VPC endpoint in another account is not allowed.

- If an authorized account ID is already in the whitelist, you can use this account to create a VPC endpoint for connecting to the VPC endpoint service.
- If an authorized account ID is not in the whitelist, you cannot use this account to create a VPC endpoint for connecting to the VPC endpoint service.

This section describes how to add or delete a whitelist record for a VPC endpoint service.

Constraints

- The VPC endpoint and the VPC endpoint service must be deployed in the same region.
- Before you configure the whitelist for a VPC endpoint service, obtain the account ID of the associated VPC endpoint.

Add a Whitelist Record

1. Go to the [VPC endpoint service list](#) page.
2. In the VPC endpoint service list, locate the VPC endpoint service and click its name.
3. On the displayed page, select the **Permission Management** tab and click **Add to Whitelist**.
4. Enter an authorized account ID in the required format and click **OK**.

NOTE

- Your account is in the whitelist of your VPC endpoint service by default.
- *domain_id* indicates the ID of the authorized account, for example, **1564ec50ef2a47c791ea5536353ed4b9**
- Adding * to the whitelist means that all users can access the VPC endpoint service.

Delete a Whitelist Record

1. In the VPC endpoint service list, locate the VPC endpoint service and click its name.
2. On the displayed page, click the **Permission Management** tab, locate the account ID, and click **Delete** in the **Operation** column.
To delete multiple whitelist records, select all the target account IDs and click **Delete** in the upper left corner.
3. In the displayed **Delete from Whitelist** dialog box, click **OK**.

1.7 Viewing Port Mappings of a VPC Endpoint Service

Scenarios

You can view the protocol, service port, and terminal port.

Procedure

1. Go to the [VPC endpoint service list](#) page.

2. In the VPC endpoint service list, locate the VPC endpoint service and click its name.
3. On the displayed page, select the **Port Mapping** tab.
The port mappings configured for the VPC endpoint service are displayed.

1.8 Managing Tags of a VPC Endpoint Service

Scenarios

After a VPC endpoint service is created, you can view its tags, or add, edit, or delete a tag.

Tags help identify VPC endpoint services. You can add up to 20 tags to each VPC endpoint service.

NOTE

If a predefined tag has been created on TMS, you can directly select the corresponding tag key and value.

For details about predefined tags, see [Predefined Tag Overview](#).

Add a Tag

Perform the following operations to tag an existing VPC endpoint service:

1. Go to the [VPC endpoint service list](#) page.
2. In the VPC endpoint service list, locate the VPC endpoint service and click its name.
3. On the displayed page, select the **Tags** tab.
4. Click **Add Tag**.
5. In the displayed **Add Tag** dialog box, enter a key and a value.

[Table 1-5](#) describes the tag requirements.

Table 1-5 Tag requirements for VPC endpoint services

Parameter	Requirement
Tag key	<ul style="list-style-type: none">• Cannot be left blank.• Must be unique for each resource.• Can contain a maximum of 36 characters.• Can contain only letters, digits, hyphens (-), and underscores (_).
Tag value	<ul style="list-style-type: none">• Cannot be left blank.• Can contain a maximum of 43 characters.• Can contain only letters, digits, hyphens (-), and underscores (_).

6. Click **OK**.

Edit a Tag

Perform the following operations to edit a tag of a VPC endpoint service:

1. Go to the [VPC endpoint service list](#) page.
2. In the VPC endpoint service list, locate the VPC endpoint service and click its name.
3. On the displayed page, select the **Tags** tab.
4. In the tag list, locate the tag and click **Edit** in the **Operation** column.
5. Enter a new value.

NOTE

You can only edit tag values.

6. Click **OK**.

Delete a Tag

Perform the following operations to delete a tag of a VPC endpoint service:

CAUTION

Deleted tags cannot be recovered. Exercise caution when performing this operation.

1. Go to the [VPC endpoint service list](#) page.
2. In the VPC endpoint service list, locate the VPC endpoint service and click its name.
3. On the displayed page, select the **Tags** tab.
4. In the tag list, locate the tag and click **Delete** in the **Operation** column.
5. Click **OK**.

2 VPC Endpoints

2.1 VPC Endpoint Overview

VPC endpoints are secure and private channels for connecting VPCs to VPC endpoint services.

You can buy a VPC endpoint to connect a resource in your VPC to a VPC endpoint service in another VPC of the same region.

This section describes how to buy and manage a VPC endpoint.

Table 2-1 Management of VPC endpoints

Operation	Description	Constraint
Buying a VPC Endpoint	Describes how to buy a VPC endpoint.	<ul style="list-style-type: none">• VPC endpoints are region-level resources. Select a region and project when you buy such a VPC endpoint.• Each tenant can buy a maximum of 50 VPC endpoints.• When you buy a VPC endpoint, ensure that the associated VPC endpoint service is deployed in the same region as the VPC endpoint.• Only one basic VPC endpoint can be created in a VPC subnet for accessing a VPC endpoint service.• When you create multiple VPC endpoints in a VPC to connect the same VPC endpoint service, you can enable Create a Private Domain Name for only one VPC endpoint. If you want to access multiple VPC endpoints using a private domain name, you need to modify the DNS record set.• VPC endpoints are billed based on the subscription duration.
Querying and Accessing a VPC Endpoint	Describes how to query the summary of a VPC endpoint.	One VPC endpoint supports up to 3,000 concurrent connections.
Deleting a VPC Endpoint	Describes how to delete a VPC endpoint.	Deleted VPC endpoints cannot be recovered. Exercise caution when performing this operation.

Operation	Description	Constraint
Configuring Access Control for an Interface VPC Endpoint	Describes how to enable access control for a VPC endpoint and configure a whitelist of IP addresses or CIDR blocks that are allowed to access the VPC endpoint.	<ul style="list-style-type: none">• Access Control is only available for VPC endpoints for connecting to interface VPC endpoint services.• If Access Control is disabled, any IP address can access the VPC endpoint.• A maximum of 20 whitelist records can be added.
Managing Tags of a VPC Endpoint	Describes how to query, add, edit, and delete VPC endpoint tags.	You can add up to 10 tags to each VPC endpoint.

2.2 Buying a VPC Endpoint

Scenarios

VPC endpoints are secure and private channels for connecting VPCs to VPC endpoint services.

You can buy a VPC endpoint to connect a resource in your VPC to a VPC endpoint service in another VPC of the same region.

A VPC endpoint comes with a VPC endpoint service. VPC endpoints vary depending on the type of the VPC endpoint services that they can access.

- VPC endpoints for accessing interface VPC endpoint services are elastic network interfaces that have private IP addresses.
- VPC endpoints for accessing gateway VPC endpoint services are gateways, with routes configured to distribute traffic to the associated VPC endpoint services.

You can buy an interface or a gateway VPC endpoint based the type of the associated VPC endpoint service.

- [Buying a VPC Endpoint for Accessing Interface VPC Endpoint Services](#)
- [Buying a VPC Endpoint for Accessing Gateway VPC Endpoint Services](#)

Constraints

- VPC endpoints are region-level resources. Select a region and project when you buy such a VPC endpoint.
- Each tenant can buy a maximum of 50 VPC endpoints.
- When you buy a VPC endpoint, ensure that the associated VPC endpoint service is deployed in the same region as the VPC endpoint.
- Only one basic VPC endpoint can be created in a VPC subnet for accessing a VPC endpoint service.

- When you create multiple VPC endpoints in a VPC to connect the same VPC endpoint service, you can enable **Create a Private Domain Name** for only one VPC endpoint. If you want to access multiple VPC endpoints using a private domain name, you need to modify the DNS record set.
- VPC endpoints are billed based on the subscription duration.

Buying a VPC Endpoint for Accessing Interface VPC Endpoint Services

1. Go to the [VPC endpoint list](#) page.
2. On the **VPC Endpoints** page, click **Buy VPC Endpoint**.
3. On the **Buy VPC Endpoint** page, configure the parameters.

Table 2-2 VPC endpoint parameters

Parameter	Description
Region	Specifies the region where the VPC endpoint is to be located. Resources in different regions cannot communicate with each other over an intranet. For lower latency and quicker access, select the nearest region.
Billing Mode	Specifies the billing mode of the VPC endpoint. VPC endpoints can be used or deleted at any time. VPC endpoints support only pay-per-use billing based on the usage duration.
Service Category	There are two options: <ul style="list-style-type: none">• Cloud services: Select this value if the target VPC endpoint service is a cloud service.• Find a service by name: Select this value if the target VPC endpoint service is a private service of your own.
Service List	This parameter is available only when you select Cloud services for Service Category . The VPC endpoint service has been created by the O&M personnel and you can directly use it.
VPC Endpoint Service Name	This parameter is available only when you select Find a service by name for Service Category . In the VPC endpoint service list, locate the VPC endpoint service, copy its name in the Name column, paste it to the VPC Endpoint Service Name text box, and click Verify . <ul style="list-style-type: none">• If "Service name found." is displayed, proceed with subsequent operations.• If "Service name not found." is displayed, check whether the region is the same as that of the VPC endpoint service or whether the name entered is correct.

Parameter	Description
Create a Private Domain Name	If you want to access a VPC endpoint using a domain name, select Create a Private Domain Name . This parameter is mandatory when the VPC endpoint will be used to access an interface VPC endpoint service.
VPC	Specifies the VPC where the VPC endpoint is to be deployed.
Subnet	This parameter is available when you want to access an interface VPC endpoint service. Specifies the subnet where the VPC endpoint is to be located.
Private IP Address	This parameter is available when you want to access an interface VPC endpoint service. Specifies the private IP address of the VPC endpoint. You can select Automatically assign or Manually specify .
Access Control	This parameter is available when you want to access an interface VPC endpoint service. It controls IP addresses and CIDR blocks that are allowed to access the VPC endpoint. <ul style="list-style-type: none">• If Access Control is enabled, only IP addresses or CIDR blocks in the whitelist are allowed to access the VPC endpoint.• If Access Control is disabled, any IP address or CIDR block can access the VPC endpoint.
Whitelist	This parameter is available when you want to access an interface endpoint service and Access Control is enabled. Lists the IP addresses or CIDR blocks that are allowed to access the VPC endpoint. You can add a maximum of 20 records. 0.0.0.0 and CIDR blocks in x.x.x.x/0 format are not supported.
Tag	This parameter is optional. Specifies the VPC endpoint tag, which consists of a key and a value. You can add up to 20 tags to each VPC endpoint. Tag keys and values must meet requirements listed in Table 2-3 . NOTE If a predefined tag has been created on TMS, you can directly select the corresponding tag key and value. For details about predefined tags, see Predefined Tag Overview .
Description	Provides supplementary information about the VPC endpoint service.

Table 2-3 Tag requirements for VPC endpoints

Parameter	Requirement
Tag key	<ul style="list-style-type: none">• Cannot be left blank.• Must be unique for each resource.• Can contain a maximum of 36 characters.• Can contain only letters, digits, hyphens (-), and underscores (_).
Tag value	<ul style="list-style-type: none">• Cannot be left blank.• Can contain a maximum of 43 characters.• Can contain only letters, digits, hyphens (-), and underscores (_).

4. Confirm the specifications and click **Next**.
 - If all of the specifications are correct, click **Submit**.
 - If any of the specifications are incorrect, click **Previous** to return to the previous page and modify the parameters as needed, and click **Submit**.

Buying a VPC Endpoint for Accessing Gateway VPC Endpoint Services

1. Go to the [VPC endpoint list](#) page.
2. On the **VPC Endpoints** page, click **Buy VPC Endpoint**.
3. On the **Buy VPC Endpoint** page, configure the parameters.

Table 2-4 VPC endpoint parameters

Parameter	Description
Region	Specifies the region where the VPC endpoint is to be located. Resources in different regions cannot communicate with each other over an intranet. For lower latency and quicker access, select the nearest region.
Billing Mode	Specifies the billing mode of the VPC endpoint. VPC endpoints can be used or deleted at any time and support only pay-per-use billing based on the usage duration.
Service Category	There are two options: <ul style="list-style-type: none">• Cloud services: Select this value if the target VPC endpoint service is a cloud service.• Find a service by name: Select this value if the target VPC endpoint service is a private service of your own.

Parameter	Description
Service List	<p>This parameter is available only when you select Cloud services for Service Category.</p> <p>In the VPC endpoint service list, select the VPC endpoint service whose type is gateway.</p> <p>The VPC endpoint service has been created by the O&M personnel and you can directly use it.</p>
VPC Endpoint Service Name	<p>This parameter is available only when you select Find a service by name for Service Category.</p> <p>Enter the VPC endpoint service name recorded in 5 and click Verify.</p> <ul style="list-style-type: none">• If "Service name found." is displayed, proceed with subsequent operations.• If "Service name not found." is displayed, check whether the region is the same as that of the VPC endpoint service or whether the name entered is correct.
VPC	Specifies the VPC where the VPC endpoint is to be deployed.
Route Table	<p>This parameter is available only when you create a VPC endpoint for connecting to a gateway VPC endpoint service.</p> <p>NOTE</p> <p>This parameter is available only in the regions where the route table function is enabled.</p> <p>Select all route tables. Or, the access to OBS may fail.</p> <p>Select a route table required for the VPC where the VPC endpoint is to be located.</p> <p>For details about how to add a route, see Adding a Custom Route in the <i>Virtual Private Cloud User Guide</i>.</p>
Tag	<p>This parameter is optional.</p> <p>Specifies the VPC endpoint tag, which consists of a key and a value. You can add up to 20 tags to each VPC endpoint.</p> <p>Tag keys and values must meet requirements listed in Table 2-5.</p> <p>NOTE</p> <p>If a predefined tag has been created on TMS, you can directly select the corresponding tag key and value.</p> <p>For details about predefined tags, see Predefined Tag Overview.</p>
Description	Provides supplementary information about the VPC endpoint service.

Table 2-5 Tag requirements for VPC endpoints

Parameter	Requirement
Tag key	<ul style="list-style-type: none">• Cannot be left blank.• Must be unique for each resource.• Can contain a maximum of 36 characters.• Can contain only letters, digits, hyphens (-), and underscores (_).
Tag value	<ul style="list-style-type: none">• Cannot be left blank.• Can contain a maximum of 43 characters.• Can contain only letters, digits, hyphens (-), and underscores (_).

4. Confirm the specifications and click **Next**.
 - If all of the specifications are correct, click **Submit**.
 - If any of the specifications are incorrect, click **Previous** to return to the previous page and modify the parameters as needed, and click **Submit**.

2.3 Querying and Accessing a VPC Endpoint

Scenarios


After a VPC endpoint is bought, you can query its details and access it.

Constraints


One VPC endpoint supports up to 3,000 concurrent connections.

Querying a VPC Endpoint

Perform the following operations to query details about a VPC endpoint, including its ID, associated VPC endpoint service name, VPC, and status.

1. Go to the [VPC endpoint list](#) page.
2. On the displayed page, locate the VPC endpoint by entering a keyword in the search box in the upper right corner:
 - Search by VPC endpoint service name or VPC endpoint ID.
 - i. Select **ID** or **VPC Endpoint Service Name** in the filter box.
 - ii. Enter a keyword in the search box.
 - iii. Click  to start the search.

VPC endpoints containing the keyword are displayed in the VPC endpoint list.

- Search by tag.
 - i. Click  to the right of **Search by Tag**.
 - ii. Enter a tag and a value.
You can also select a key or value from the drop-down list.
You can use a maximum of 10 tags to search for a VPC endpoint.
 - iii. Click **Search**.
VPC endpoints containing the specified tag are displayed in the VPC endpoint list.
If you set multiple tags, VPC endpoints containing all the specified tags will be displayed.
- 3. In the VPC endpoint list, click the ID of the target VPC endpoint to view its details.

After an interface VPC endpoint is created, a private IP address is assigned together with a private domain name if you select **Create a Private Domain Name**.

Table 2-6 Parameters contained in the details of a VPC endpoint

Tab	Parameter	Description
Summary	ID	Specifies the ID of the VPC endpoint.
Summary	VPC	Specifies the VPC where the VPC endpoint is deployed.
Summary	VPC Endpoint Service Name	Specifies the name of the VPC endpoint service that the VPC endpoint is used to access.
Summary	Private IP Address	Specifies the IP address for accessing the VPC endpoint.
Summary	Private Domain Name	Specifies the private domain name for accessing the VPC endpoint.
Summary	Status	Specifies the status of the VPC endpoint.
Summary	Type	Specifies the type of the VPC endpoint service that the VPC endpoint is used to access.
Summary	Created	Specifies the creation time of the VPC endpoint.

Tab	Parameter	Description
Summary	Access Control	<p>Specifies whether the whitelist is enabled for IP addresses to access this VPC endpoint.</p> <ul style="list-style-type: none">• If Access Control is enabled, only IP addresses or CIDR blocks in the whitelist are allowed to access the VPC endpoint.• If Access Control is disabled, any IP address or CIDR block can access the VPC endpoint. <p>NOTE Access control can be enabled only for VPC endpoints for connecting to an interface VPC endpoint service.</p>
Access Control	IP Address or CIDR Block	<p>It controls IP addresses and CIDR blocks that are allowed to access the VPC endpoint.</p> <p>NOTE The Access Control tab is displayed only for VPC endpoints for connecting to interface VPC endpoint services.</p>
Access Control	Operation	<p>Specifies the operation to be performed on whitelist records of the VPC endpoint. Only deletion is supported.</p>
Route Table	Name	<p>Specifies the name of the route table.</p> <p>NOTE The Route Tables tab is displayed only for the VPC endpoint for connecting to a gateway VPC endpoint service in some specific regions.</p>
Route Tables	VPC	<p>Specifies the VPC that the route table belongs to.</p>
Route Tables	Type	<p>Specifies the type of the route table, which can be Default and Custom.</p>
Route Tables	Associated Subnets	<p>Specifies the number of subnets associated with the route table.</p>

Tab	Parameter	Description
Route Tables	Operation	Specifies the operation to be performed on the route table. The operation can be Disassociate or Associate . NOTE If a VPC endpoint is associated with only one route table, disassociation is not supported.
Tags	Key	Specifies the tag key of the VPC endpoint.
Tags	Value	Specifies the tag value of the VPC endpoint.
Tags	Operation	Specifies the operation to be performed on the VPC endpoint tag. You can click Edit or Delete .

Accessing a VPC Endpoint via Its Private IP Address

Perform the following operations to access a VPC endpoint via its private IP address:

1. In the VPC where the VPC endpoint is deployed, log in to the backend resource, for example, an ECS.
2. Select a command based on the backend resource type and run the command to access the VPC endpoint. The command format is as follows:

Command Private IP address:Port number

The following is a command example:

```
curl Private IP address:Port number
```


Accessing a VPC Endpoint via Its Private Domain Name

You can access a VPC endpoint via its private domain name if you select **Create a Private Domain Name** when buying the VPC endpoint.

The system automatically creates a private zone for the generated domain name and adds an A record set for the private zone to resolve the domain name into the private IP address of the VPC endpoint.

You can view the corresponding private zone and its resolution records on the DNS console.

Viewing the record set of the private domain name

1. Log in to the management console.
2. Hover the cursor over  in the upper left corner. In the service list, choose **Networking > Domain Name Service**.

The DNS console is displayed.

3. Go to the [VPC endpoint list](#) page.
4. In the private zone list, click the name of the target private zone.
The **Record Sets** page is displayed.
5. In the record set list, locate the A record set and view its information.
When **Status** changes to **Normal**, the resolution takes effect.

Accessing a VPC endpoint via its private domain name

1. In the VPC where the VPC endpoint is deployed, log in to the backend resource, for example, an ECS.
2. Select a command based on the backend resource type and run the command to access the VPC endpoint. The command format is as follows:

Command Private domain name:Port number

The following is a command example:

```
curl Private domain name:Port number
```

2.4 Deleting a VPC Endpoint

Scenarios

This section describes how to delete a VPC endpoint.

NOTE

Deleted VPC endpoints cannot be recovered. Exercise caution when performing this operation.

Procedure

1. Go to the [VPC endpoint list](#) page.
2. In the endpoint list, locate the target endpoint and click **Delete** in the **Operation** column.
3. In the **Delete VPC Endpoint** dialog box, click **OK**.

2.5 Configuring Access Control for an Interface VPC Endpoint

Scenarios

To control IP addresses and CIDR blocks that can access a VPC endpoint, configure a whitelist. You can add or delete a whitelist record, or disable access control if you no longer need it.

For details about how to configure access control and whitelist when you are buying a VPC endpoint, see [Buying a VPC Endpoint](#).

This section describes how to enable and configure access control after a VPC endpoint is purchased.

Constraints

- **Access Control** is only available for VPC endpoints for connecting to interface VPC endpoint services.
- If **Access Control** is disabled, any IP address can access the VPC endpoint.
- A maximum of 20 whitelist records can be added.

Enable Access Control and Add a Whitelist Record

1. Go to the [VPC endpoint list](#) page.
2. In the VPC endpoint list, locate the VPC endpoint and click its ID.
3. On the displayed page, click the **Access Control** tab.
4. On the **Access Control** tab, click **Add to Whitelist**.
5. Enter the authorized IP addresses or CIDR blocks.

NOTE

A maximum of 20 whitelist records can be added for each VPC endpoint.

The asterisk (*) indicates all IP addresses or CIDR blocks can access the VPC endpoint.
The current account is added to the whitelist by default.

6. Click **OK**.

Delete a Whitelist Record

1. Go to the [VPC endpoint list](#) page.
2. In the VPC endpoint list, locate the VPC endpoint and click its ID.
3. Select the **Access Control** tab.
4. In the whitelist, locate the IP address or CIDR block and click **Delete** in the **Operation** column.
To delete whitelist records, select all the target IP addresses or CIDR blocks and click **Delete** in the upper left corner.
5. In the displayed **Delete from Whitelist** dialog box, click **OK**.

2.6 Managing Tags of a VPC Endpoint

Scenarios

After a VPC endpoint is created, you can view its tags, or add, edit, or delete a tag.

Tags help identify VPC endpoints. You can add up to 20 tags to each VPC endpoint.

NOTE

If a predefined tag has been created on TMS, you can directly select the corresponding tag key and value.

For details about predefined tags, see [Predefined Tag Overview](#).

Add a Tag

Perform the following operations to tag an existing VPC endpoint:

1. Go to the [VPC endpoint list](#) page.
2. In the VPC endpoint list, locate the VPC endpoint and click its ID.
3. On the displayed page, select the **Tags** tab.
4. Click **Add Tag**.
5. In the displayed **Add Tag** dialog box, enter a key and a value.

[Table 2-7](#) describes the tag requirements.

Table 2-7 Tag requirements for VPC endpoints

Parameter	Requirement
Tag key	<ul style="list-style-type: none">• Cannot be left blank.• Must be unique for each resource.• Can contain a maximum of 36 characters.• Can contain only letters, digits, hyphens (-), and underscores (_).
Tag value	<ul style="list-style-type: none">• Cannot be left blank.• Can contain a maximum of 43 characters.• Can contain only letters, digits, hyphens (-), and underscores (_).

6. Click **OK**.

Edit a Tag

Perform the following operations to edit a tag of a VPC endpoint:

1. Go to the [VPC endpoint list](#) page.
2. In the VPC endpoint list, locate the VPC endpoint and click its ID.
3. On the displayed page, select the **Tags** tab.
4. In the tag list, locate the tag and click **Edit** in the **Operation** column.
5. Enter a new value.

 **NOTE**

You can only edit tag values.

6. Click **OK**.

Delete a Tag

You can delete tags added to a VPC endpoint. Deleted tags cannot be restored. Exercise caution when performing this operation.

1. Go to the [VPC endpoint list](#) page.
2. In the VPC endpoint list, locate the VPC endpoint and click its ID.
3. On the displayed page, select the **Tags** tab.
4. In the tag list, locate the tag and click **Delete** in the **Operation** column.
5. Click **OK**.

3 Permissions Management

3.1 Creating a User and Granting VPC Endpoint Permissions

Use [IAM](#) to implement fine-grained permissions control over your VPC Endpoint resources. With IAM, you can:

- Create IAM users for employees based on your enterprise's organizational structure. Each IAM user has their own security credentials for accessing VPC Endpoint resources.
- Grant only the permissions required for users to perform a specific task.
- Entrust a HUAWEI ID or a cloud service to perform efficient O&M on your VPC Endpoint resources.

If your HUAWEI ID does not need individual IAM users, skip this section.

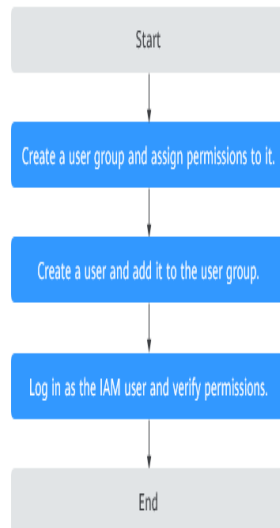
This section describes the process flow for granting permissions (see [Figure 3-1](#)).

Prerequisites

You must learn about permissions (see [Permissions](#)) supported by VPC Endpoint and choose policies or roles according to your requirements. To grant permissions for other services, learn about all [System Permissions](#) supported by IAM.

Process Flow

Figure 3-1 Process for granting VPC Endpoint permissions



1. **Create a user group and assign it permissions.**
On the IAM console, create a user group and attach the **VPCEndpoint Administrator** policy to the group.
2. **Create an IAM user and add it to the created user group.**
Create an IAM user and add it to the user group created in 1.
3. **Log in as the IAM user** and verify permissions.
In the authorized region, perform the following operations:
 - On the **Service List** page, choose **VPC Endpoint**. Click **Buy VPC Endpoint** in the upper right corner. If you can buy a VPC endpoint, the **VPCEndpoint Administrator** policy has already taken effect.
 - Choose another service from **Service List**. If a message appears indicating that you have insufficient permissions to access the service, the **VPCEndpoint Administrator** policy has already taken effect.


4 Quotas

What Is Quota?

Quotas can limit the number or amount of resources available to users, such as the maximum number of ECS or EVS disks that can be created.

If the existing resource quota cannot meet your service requirements, you can apply for a higher quota.

How Do I View My Quotas?

1. Log in to the management console.
2. Click  in the upper left corner and select the desired region and project.
3. In the upper right corner of the page, choose **Resources > My Quotas**.
The **Service Quota** page is displayed.
4. View the used and total quota of each type of resources on the displayed page.
If a quota cannot meet service requirements, apply for a higher quota.

How Do I Apply for a Higher Quota?

1. Log in to the management console.
2. In the upper right corner of the page, choose **Resources > My Quotas**.
The **Service Quota** page is displayed.
3. Click **Increase Quota** in the upper right corner of the page.
4. On the **Create Service Ticket** page, configure parameters as required.
In the **Problem Description** area, fill in the content and reason for adjustment.
5. After all necessary parameters are configured, select **I have read and agree to the Ticket Service Protocol and Privacy Statement** and click **Submit**.