Direct Connect

API Reference

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HUAWEI

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1 Before You Start

Welcome to Direct Connect API Reference. Direct Connect allows you to connect your on-premises data center to the cloud over a dedicated network connection that features stable performance, high transmission speed, low network latency, and secure data transmission. Direct Connect allows you to maximize legacy IT facilities and leverage cloud services to build a flexible, scalable hybrid cloud computing environment.

This document describes how to use application programming interfaces (APIs) to perform operations on Direct Connect resources, such as creating, querying, modifying, or deleting connections. For details about all supported operations, see **API Overview**.

Before you access Direct Connect by calling APIs, get yourself familiar with product concepts. For details, see **Service Overview**.

API Calling

Direct Connect supports Representational State Transfer (REST) APIs that can be called using HTTPS. For details, see **Calling APIs**.

Endpoints

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions. For Direct Connect endpoints, see **Regions and Endpoints**.

Constraints

The number of Direct Connect resources that you can create is determined by your quotas. To view or increase the quotas, see **Notes and Limitations** in the *Direct Connect User Guide*.

For more constraints, see API description.

Glossary

- 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 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**.

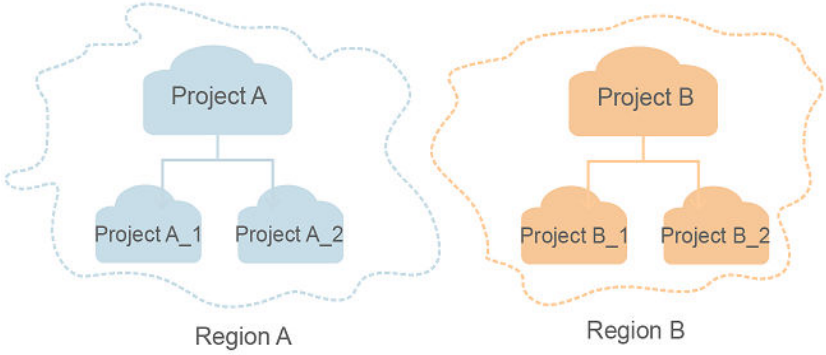
- AZ

  An Availability Zone (AZ) comprises of one or more physical data centers equipped with independent ventilation, fire, water, and electricity facilities. Compute, 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 to group and physically isolate resources (including computing, storage, and network resources) across regions. 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 add resources to subprojects. Then you can assign users the permissions required to access only the resources in the specific subprojects.

  Figure 1-1 Project isolating model

- Enterprise project

  Enterprise projects group and manage resources across regions. Resources in different enterprise projects are logically isolated. An enterprise project can

contain resources of multiple regions, and resources can be added to or removed from enterprise projects.

For details about enterprise projects and about how to obtain enterprise project IDs, see ***Enterprise Management User Guide***.

2 API Overview

Direct Connect provides Huawei-developed REST APIs.

These APIs allow you to use all Direct Connect functions, for example, performing operations on connections, virtual gateways, virtual interfaces, quotas, and tags.

Table 2-1 describes the APIs provided by Direct Connect.

Table 2-1 Direct Connect APIs

Resource	APIs
Connections	APIs for querying connection details, updating a connection, deleting a connection, querying the connection list, querying the hosted connection list, creating a hosted connection, querying hosted connection details, updating a hosted connection, and deleting a hosted connection
Virtual gateways	APIs for querying virtual gateway details, updating a virtual gateway, deleting a virtual gateway, querying the virtual gateway list, and creating a virtual gateway
Virtual interfaces	APIs for querying virtual interface details, updating a virtual interface, deleting a virtual interface, querying the virtual interface list, creating a virtual interface, updating a virtual interface peer, deleting a virtual interface peer, and creating a virtual interface peer
Tags	APIs for querying project tags, querying resource tags, adding a resource tag, batch adding or deleting resource tags, deleting a resource tag, and querying resources by tag
Quotas	API for querying resource quotas
Global DC gateway	APIs for querying global DC gateway details, updating a global DC gateway, deleting a global DC gateway, querying the list of global DC gateways, and creating a global DC gateway

Resource	APIs
Peer link	APIs for querying the peer link details, updating a peer link, deleting a peer link, querying the peer link list, and creating a peer link
Connect gateway	APIs for querying connect gateway details, updating a connect gateway, deleting a connect gateway, querying the connect gateway list, and creating a connect gateway
Global EIP	APIs for binding global EIPs, unbinding global EIPs, and querying the list of bound global EIPs
Global DC gateway route table	APIs for updating a global DC gateway route table and querying the details about a global DC gateway route table

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. The obtained token can then be used to authenticate the calling of other APIs.

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 **CN-Hong Kong** is **iam.ap-southeast-1.myhuaweicloud.com**.
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**.

Parameter	Description
query-string	Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of *Parameter name*=*Parameter value*. 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 **CN-Hong Kong** region, obtain the endpoint of IAM (**iam.ap-southeast-1.myhuaweicloud.com**) 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.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
```

Figure 3-1 Example URI

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.

Method	Description
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.ap-southeast-1.myhuaweicloud.com/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 *Hostname:Port number*. 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

Parameter	Description	Mandatory	Example Value
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.	e9993fc787d94b6c886cbaa340f9c0f4
X-Auth-Token	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). After the request is processed, the value of **X-Subject-Token** in the response header is the token value.	No This field is mandatory for token authentication.	The following is part of an example token: MIIPAgYJKoZIhvcNAQcCo...ggg1BBIINPXsidG9rZ

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.ap-southeast-1.myhuaweicloud.com/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.ap-southeast-1.myhuaweicloud.com/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. In the response to the API used to obtain a user token, **X-Subject-Token** is the desired user token. This token can then be used to authenticate the calling of other APIs.

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.

In AK/SK authentication, AK/SK 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 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 **API Request Signing Guide**.

NOTE

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

Token Authentication

NOTE

The validity period of a token is 24 hours. When using a token for authentication, cache it to prevent frequently calling the IAM API used to obtain a user token.

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 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 to which the IAM user belongs
                    }
                }
            }
        },
        "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 **ABCDEFJ....**, **X-Auth-Token: ABCDEFJ....** can be added to a request as follows:

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
Content-Type: application/json
X-Auth-Token: ABCDEFJ....
```

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 **Common Status Codes**.

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 3-2 shows the response header fields for the API used to **create an IAM user**. The **X-Subject-Token** header field is the desired user token. This token can then be used to authenticate the calling of other APIs.

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 3-2 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_[redacted]_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 is 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 Connections

4.1.1 Querying the Connection List

Function

This API is used to query the connection list.

Debugging

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/direct-connects

Table 4-1 Path parameters

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

Table 4-2 Query parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the number of records returned on each page. Value range: **1–2000** Minimum: **1** Maximum: **2000** Default: **2000**
marker	No	String	Specifies the ID of the last resource record on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with **limit**. Minimum: **0** Maximum: **36**
fields	No	Array	Specifies the list of fields to be displayed. Array length: **1–5**
sort_key	No	String	Specifies the field for sorting. Default: **id** Minimum: **0** Maximum: **36**
sort_dir	No	Array	Specifies the sorting order of returned results. The value can be **asc** (default) or **desc**.
hosting_id	No	Array	Specifies operations connection ID by which hosted connections are queried. Array length: **0–5**
enterprise_project_id	No	Array	Filters resource instances by enterprise project ID. Array length: **1–10**
id	No	Array	Specifies the resource ID by which instances are queried. Array length: **1–5**

Parameter	Mandatory	Type	Description
name	No	Array	Specifies the resource name by which instances are queried. You can specify multiple names. Array length: **1–5**

Request Parameters

Table 4-3 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-4 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
direct_connects	Array of **DirectConnect** objects	Specifies the connection list.
page_info	**PageInfo** object	Specifies the pagination query information.

Table 4-5 DirectConnect

Parameter	Type	Description
id	String	Specifies the connection ID.

Parameter	Type	Description
tenant_id	String	Specifies the project ID.
name	String	Specifies the connection name. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the connection. Minimum: **0** Maximum: **128**
port_type	String	Specifies the type of the port used by the connection. The value can be **1G**, **10G**, **40G**, or **100G**. Enumeration values: • **1G** • **10G** • **40G** • **100G**
bandwidth	Integer	Specifies the connection bandwidth, in Mbit/s. Minimum: **2** Maximum: **100000**
location	String	Specifies information about the Direct Connect location. Minimum: **0** Maximum: **255**
peer_location	String	Specifies the location of the on-premises facility at the other end of the connection, specific to the street or data center name. Minimum: **0** Maximum: **255**
device_id	String	Specifies the ID of the device connected to the connection. Minimum: **0** Maximum: **36**

Parameter	Type	Description
type	String	Specifies the type of a connection. The value can be **standard** (a standard connection), **hosting** (an operations connection) or **hosted** (a hosted connection). Default: **standard** Enumeration values: • **standard** • **hosting** • **hosted**
hosting_id	String	Specifies the ID of the operations connection on which the hosted connection is created.
charge_mode	String	Specifies the billing mode. The value can be **prepayment**, **bandwidth**, or **traffic**. Enumeration values: • **prepayment** • **bandwidth** • **traffic**
provider	String	Specifies the line carrier of a connection. It can be China Telecom, China Unicom, China Mobile, and other carriers that provide the lines.
admin_state_up	Boolean	Specifies the administrative status. The value can be **true** or **false**. Default: **true**
vlan	Integer	Specifies the VLAN allocated to the hosted connection. Minimum: **0** Maximum: **3999**

Parameter	Type	Description
status	String	Specifies the connection status. • **ACTIVE**: The connection is in the normal state. • **DOWN**: The port for the connection is in the down state, which may cause line faults. • **BUILD**: Operations related to the connection are being performed. • **ERROR**: The connection configuration is incorrect. Contact customer service to rectify the fault. • **PENDING_DELETE**: The connection is being deleted. • **DELETED**: The connection has been deleted. • **APPLY**: A request for a connection is submitted. • **DENY**: A site survey is rejected because the customer fails to meet the requirements. • **PENDING_PAY**: The order for the connection is to be paid. • **PAID**: The order for the connection has been paid. • **PENDING_SURVEY**: A site survey is required for the connection. • **LEASED_LINE_DELIVERY**: The carrier is deploying the line. Enumeration values: • **BUILD** • **PAID** • **APPLY** • **PENDING_SURVEY** • **ACTIVE** • **DOWN** • **ERROR** • **PENDING_DELETE** • **DELETED** • **DENY** • **PENDING_PAY** • **LEASED_LINE_DELIVERY**
apply_time	String	Specifies when the connection was requested. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*.

Parameter	Type	Description
create_time	String	Specifies when the connection was created. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*.
provider_status	String	Specifies the carrier status. The status can be **ACTIVE** or **DOWN**. Enumeration values: • **ACTIVE** • **DOWN**
peer_port_type	String	Specifies the peer port type.
peer_provider	String	Specifies the carrier of the leased line.
order_id	String	Specifies the connection order ID, which is used to support duration-based billing and identify user orders.
product_id	String	Specifies the product ID corresponding to the connection's order. The product ID is used to specify billing policies such as duration-based packages.
spec_code	String	Specifies the product specifications corresponding to the connection's order. The specifications are used to specify billing policies such as duration-based packages.
period_type	Integer	Specifies whether a connection in a specified order is billed by year or month.
period_num	Integer	Specifies the required service duration of a yearly/monthly connection.
vgw_type	String	Specifies the gateway type required by a connection. Default: **default** Enumeration values: • **default**
lag_id	String	Specifies the ID of the LAG that the connection belongs to.
signed_agreement_status	String	Specifies the signing status of the Direct Connect Disclaimers. Enumeration values: • **signed**
signed_agreement_time	String	Specifies when the Direct Connect Disclaimers were signed.

Parameter	Type	Description
enterprise_project_id	String	Specifies the ID of the enterprise project that the connection belongs to. Minimum: **36** Maximum: **36**
tags	Array of **Tag** objects	Specifies the tags. Array length: **0–10**
locales	**LocalesBody** object	Specifies the region of the connection.
support_feature	Array of strings	Lists the features supported by the connection.
ies_id	String	Specifies the edge site ID.
reason	String	Displays error information if the status of a line is **Error**.
email	String	Specifies the customer email information.
onestop_product_id	String	Specifies the product ID if the connection is a full-service connection. This parameter is used in line sales scenarios.
building_line_product_id	String	Specifies the product ID of the line resource used in the equipment room. This parameter is used in line sales scenarios.
last_onestop_product_id	String	Specifies the product ID of a full-service connection before the change. This parameter is used in line sales scenarios and used to save the last record when the line bandwidth is changed.
last_building_line_product_id	String	Specifies the product ID of the line resource used in the equipment room before the change. This parameter is used in line sales scenarios and used to save the last record when the line bandwidth is changed.
modified_bandwidth	Integer	Specifies the new bandwidth after the line bandwidth is changed.
change_mode	Integer	Specifies the status of a renewal change.
onestopdc_status	String	Specifies the status of a full-service connection.
public_border_group	String	Specifies the public border group of the AZ, indicating whether the site is a HomeZones site.

Parameter	Type	Description
auto_renew	Integer	Specifies whether to automatically renew a yearly/monthly subscription.
ratio_95peak	Integer	Specifies the percentage of the minimum bandwidth for 95th percentile billing. Minimum: **0** Maximum: **100**

Table 4-6 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Table 4-7 LocalesBody

Parameter	Type	Description
en_us	String	Specifies the region name in English. Minimum: **0** Maximum: **255**
zh_cn	String	Specifies the region name in Chinese. Minimum: **0** Maximum: **255**

Table 4-8 PageInfo

Parameter	Type	Description
previous_marker	String	Specifies the marker of the previous page. The value is the resource UUID. Minimum: **0** Maximum: **36**
current_count	Integer	Specifies the number of resources in the current list. Minimum: **0** Maximum: **2000**
next_marker	String	Specifies the marker of the next page. The value is the resource UUID. If this parameter is left empty, the resource is on the last page. Minimum: **0** Maximum: **36**

Example Requests

Querying the connection list

```
GET https://{dc_endpoint}/v3/6fbe9263116a4b68818cf1edce16bc4f/dcaas/direct-connects
```

Example Responses

Status code: 200

OK

- The connection list is queried.

```
{
  "request_id" : "9a4f4dfc4fb2fc101e65bba07d908535",
  "direct_connects" : [ {
    "bandwidth" : 100,
    "create_time" : "2018-10-19T09:53:26.000Z",
    "port_type" : "10G",
    "id" : "6ecd9cf3-ca64-46c7-863f-f2eb1b9e838a",
    "apply_time" : "2018-10-19T09:53:26.000Z",
    "peer_location" : "",
    "peer_port_type" : null,
    "peer_provider" : null,
    "location" : "ExampleLocation",
    "provider" : "ExampleProvider",
    "type" : "standard",
    "status" : "BUILD",
    "description" : "",
    "provider_status" : "ACTIVE",
    "order_id" : "",
    "vlan" : null,
    "device_id" : "172.16.40.2",
    "name" : "direct connect1",
    "admin_state_up" : true,
    "tenant_id" : "6fbe9263116a4b68818cf1edce16bc4f",
    "hosting_id" : null,
    "product_id" : "",
```



```
  "vgw_type" : "default",
  "spec_code" : "100ge",
  "charge_mode" : null,
  "support_feature" : [ ],
  "ies_id" : null,
  "reason" : null,
  "email" : "cloud@example.com",
  "onestop_product_id" : null,
  "building_line_product_id" : null,
  "last_building_line_product_id" : null,
  "last_onestop_product_id" : null,
  "modified_bandwidth" : null,
  "change_mode" : null,
  "onestopdc_status" : null,
  "public_border_group" : "center",
  "auto_renew" : 0,
  "ratio_95peak" : null
 } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class ListDirectConnectsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ListDirectConnectsRequest request = new ListDirectConnectsRequest();
        request.withLimit(<limit>);
        request.withMarker("<marker>");
        request.withFields();
        request.withSortKey("<sort_key>");
        request.withSortDir();
        request.withHostingId();
        request.withEnterpriseProjectId();
        request.withId();
```



```
        request.withName();
        try {
            ListDirectConnectsResponse response = client.listDirectConnects(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListDirectConnectsRequest()
        request.limit = <limit>
        request.marker = "<marker>"
        request.fields =
        request.sort_key = "<sort_key>"
        request.sort_dir =
        request.hosting_id =
        request.enterprise_project_id =
        request.id =
        request.name =
        response = client.list_direct_connects(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
```

```
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListDirectConnectsRequest{}
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    sortKeyRequest:= "<sort_key>"
    request.SortKey = &sortKeyRequest
    response, err := client.ListDirectConnects(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.1.2 Querying Details About a Connection

Function

This API is used to query details about a connection.

Debugging

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/direct-connects/{direct_connect_id}

Table 4-9 Path parameters

Parameter	Mandatory	Type	Description
direct_connect_id	Yes	String	Specifies the connection ID. Minimum: **36** Maximum: **36**
project_id	Yes	String	Specifies the project ID.

Table 4-10 Query parameters

Parameter	Mandatory	Type	Description
fields	No	Array	Specifies the list of fields to be displayed. Array length: **1–5**

Request Parameters

Table 4-11 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-12 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
direct_connect	**DirectConnect** object	Specifies the connection.

Table 4-13 DirectConnect

Parameter	Type	Description
id	String	Specifies the connection ID.
tenant_id	String	Specifies the project ID.
name	String	Specifies the connection name. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the connection. Minimum: **0** Maximum: **128**
port_type	String	Specifies the type of the port used by the connection. The value can be **1G**, **10G**, **40G**, or **100G**. Enumeration values: • **1G** • **10G** • **40G** • **100G**
bandwidth	Integer	Specifies the connection bandwidth, in Mbit/s. Minimum: **2** Maximum: **100000**
location	String	Specifies information about the Direct Connect location. Minimum: **0** Maximum: **255**
peer_location	String	Specifies the location of the on-premises facility at the other end of the connection, specific to the street or data center name. Minimum: **0** Maximum: **255**

Parameter	Type	Description
device_id	String	Specifies the ID of the device connected to the connection. Minimum: **0** Maximum: **36**
type	String	Specifies the type of a connection. The value can be **standard** (a standard connection), **hosting** (an operations connection) or **hosted** (a hosted connection). Default: **standard** Enumeration values: • **standard** • **hosting** • **hosted**
hosting_id	String	Specifies the ID of the operations connection on which the hosted connection is created.
charge_mode	String	Specifies the billing mode. The value can be **prepayment**, **bandwidth**, or **traffic**. Enumeration values: • **prepayment** • **bandwidth** • **traffic**
provider	String	Specifies the line carrier of a connection. It can be China Telecom, China Unicom, China Mobile, and other carriers that provide the lines.
admin_state_up	Boolean	Specifies the administrative status. The value can be **true** or **false**. Default: **true**
vlan	Integer	Specifies the VLAN allocated to the hosted connection. Minimum: **0** Maximum: **3999**

Parameter	Type	Description
status	String	Specifies the connection status. • **ACTIVE**: The connection is in the normal state. • **DOWN**: The port for the connection is in the down state, which may cause line faults. • **BUILD**: Operations related to the connection are being performed. • **ERROR**: The connection configuration is incorrect. Contact customer service to rectify the fault. • **PENDING_DELETE**: The connection is being deleted. • **DELETED**: The connection has been deleted. • **APPLY**: A request for a connection is submitted. • **DENY**: A site survey is rejected because the customer fails to meet the requirements. • **PENDING_PAY**: The order for the connection is to be paid. • **PAID**: The order for the connection has been paid. • **PENDING_SURVEY**: A site survey is required for the connection. • **LEASED_LINE_DELIVERY**: The carrier is deploying the line. Enumeration values: • **BUILD** • **PAID** • **APPLY** • **PENDING_SURVEY** • **ACTIVE** • **DOWN** • **ERROR** • **PENDING_DELETE** • **DELETED** • **DENY** • **PENDING_PAY** • **LEASED_LINE_DELIVERY**
apply_time	String	Specifies when the connection was requested. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*.

Parameter	Type	Description
create_time	String	Specifies when the connection was created. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*.
provider_status	String	Specifies the carrier status. The status can be **ACTIVE** or **DOWN**. Enumeration values: • **ACTIVE** • **DOWN**
peer_port_type	String	Specifies the peer port type.
peer_provider	String	Specifies the carrier of the leased line.
order_id	String	Specifies the connection order ID, which is used to support duration-based billing and identify user orders.
product_id	String	Specifies the product ID corresponding to the connection's order. The product ID is used to specify billing policies such as duration-based packages.
spec_code	String	Specifies the product specifications corresponding to the connection's order. The specifications are used to specify billing policies such as duration-based packages.
period_type	Integer	Specifies whether a connection in a specified order is billed by year or month.
period_num	Integer	Specifies the required service duration of a yearly/monthly connection.
vgw_type	String	Specifies the gateway type required by a connection. Default: **default** Enumeration values: • **default**
lag_id	String	Specifies the ID of the LAG that the connection belongs to.
signed_agreement_status	String	Specifies the signing status of the Direct Connect Disclaimers. Enumeration values: • **signed**
signed_agreement_time	String	Specifies when the Direct Connect Disclaimers were signed.

Parameter	Type	Description
enterprise_project_id	String	Specifies the ID of the enterprise project that the connection belongs to. Minimum: **36** Maximum: **36**
tags	Array of **Tag** objects	Specifies the tags. Array length: **0–10**
locales	**LocalesBody** object	Specifies the region of the connection.
support_feature	Array of strings	Lists the features supported by the connection.
ies_id	String	Specifies the edge site ID.
reason	String	Displays error information if the status of a line is **Error**.
email	String	Specifies the customer email information.
onestop_product_id	String	Specifies the product ID if the connection is a full-service connection. This parameter is used in line sales scenarios.
building_line_product_id	String	Specifies the product ID of the line resource used in the equipment room. This parameter is used in line sales scenarios.
last_onestop_product_id	String	Specifies the product ID of a full-service connection before the change. This parameter is used in line sales scenarios and used to save the last record when the line bandwidth is changed.
last_building_line_product_id	String	Specifies the product ID of the line resource used in the equipment room before the change. This parameter is used in line sales scenarios and used to save the last record when the line bandwidth is changed.
modified_bandwidth	Integer	Specifies the new bandwidth after the line bandwidth is changed.
change_mode	Integer	Specifies the status of a renewal change.
onestopdc_status	String	Specifies the status of a full-service connection.
public_border_group	String	Specifies the public border group of the AZ, indicating whether the site is a HomeZones site.

Parameter	Type	Description
auto_renew	Integer	Specifies whether to automatically renew a yearly/monthly subscription.
ratio_95peak	Integer	Specifies the percentage of the minimum bandwidth for 95th percentile billing. Minimum: **0** Maximum: **100**

Table 4-14 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Table 4-15 LocalesBody

Parameter	Type	Description
en_us	String	Specifies the region name in English. Minimum: **0** Maximum: **255**
zh_cn	String	Specifies the region name in Chinese. Minimum: **0** Maximum: **255**

Example Requests

Querying a connection

```
GET https://{dc_endpoint}/v3/6fbe9263116a4b68818cf1edce16bc4f/dcaas/direct-connects/6ecd9cf3-ca64-46c7-863f-f2eb1b9e838a
```


Example Responses

Status code: 200

OK

- The details of the connection are queried.


```
{
  "direct_connect" : {
    "bandwidth" : 100,
    "create_time" : "2018-10-19T09:53:26.000Z",
    "port_type" : "10G",
    "id" : "6ecd9cf3-ca64-46c7-863f-f2eb1b9e838a",
    "apply_time" : "2018-10-19T09:53:26.000Z",
    "peer_location" : "",
    "peer_port_type" : null,
    "peer_provider" : null,
    "location" : "ExampleLocation",
    "provider" : "ExampleProvider",
    "type" : "standard",
    "status" : "BUILD",
    "description" : "",
    "provider_status" : "ACTIVE",
    "order_id" : "",
    "vlan" : null,
    "device_id" : "172.16.40.2",
    "name" : "direct connect1",
    "admin_state_up" : true,
    "tenant_id" : "6fbe9263116a4b68818cf1edce16bc4f",
    "hosting_id" : null,
    "product_id" : "",
    "vgw_type" : "default",
    "spec_code" : "100ge",
    "charge_mode" : null,
    "support_feature" : [ ],
    "ies_id" : null,
    "reason" : null,
    "email" : "cloud@example.com",
    "onestop_product_id" : null,
    "building_line_product_id" : null,
    "last_building_line_product_id" : null,
    "last_onestop_product_id" : null,
    "modified_bandwidth" : null,
    "change_mode" : null,
    "onestopdc_status" : null,
    "public_border_group" : "center",
    "auto_renew" : 0,
    "ratio_95peak" : null
  }
}
```


SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;
```



```
import java.util.List;
import java.util.ArrayList;

public class ShowDirectConnectSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowDirectConnectRequest request = new ShowDirectConnectRequest();
        request.withFields();
        try {
            ShowDirectConnectResponse response = client.showDirectConnect(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowDirectConnectRequest()
```



```
        request.fields =
        response = client.show_direct_connect(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowDirectConnectRequest{}
    response, err := client.ShowDirectConnect(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.1.3 Updating a Connection

Function

This API is used to update a connection, such as its name and description.

Debugging

For details, see **Calling APIs**.

URI

PUT /v3/{project_id}/dcaas/direct-connects/{direct_connect_id}

Table 4-16 Path parameters

Parameter	Mandatory	Type	Description
direct_connect_id	Yes	String	Specifies the connection ID. Minimum: **36** Maximum: **36**
project_id	Yes	String	Specifies the project ID.

Request Parameters

Table 4-17 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-18 Request body parameters

Parameter	Mandatory	Type	Description
direct_connect	No	**UpdateDirectConnect** object	Specifies the connection to be updated.

Table 4-19 UpdateDirectConnect

Parameter	Mandatory	Type	Description
name	No	String	Specifies the connection name. Minimum: **0** Maximum: **64**
description	No	String	Provides supplementary information about the connection. Minimum: **0** Maximum: **128**
bandwidth	No	Integer	Specifies the bandwidth of the hosted connection, in Mbit/s. Minimum: **2** Maximum: **100000**
peer_location	No	String	Specifies the location of the on-premises facility at the other end of the connection, specific to the street or data center name. Minimum: **0** Maximum: **255**
status	No	String	Specifies the resource status. The value can be **PENDING_PAY** or **APPLY**. Enumeration values: • **PENDING_PAY** • **APPLY**
provider_status	No	String	Specifies the carrier status. The value can be **ACTIVE** or **DOWN**. Enumeration values: • **ACTIVE** • **DOWN**

Response Parameters

Status code: 200

Table 4-20 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
direct_connect	**DirectConnect** object	Specifies the connection.

Table 4-21 DirectConnect

Parameter	Type	Description
id	String	Specifies the connection ID.
tenant_id	String	Specifies the project ID.
name	String	Specifies the connection name. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the connection. Minimum: **0** Maximum: **128**
port_type	String	Specifies the type of the port used by the connection. The value can be **1G**, **10G**, **40G**, or **100G**. Enumeration values: • **1G** • **10G** • **40G** • **100G**
bandwidth	Integer	Specifies the connection bandwidth, in Mbit/s. Minimum: **2** Maximum: **100000**
location	String	Specifies information about the Direct Connect location. Minimum: **0** Maximum: **255**

Parameter	Type	Description
peer_location	String	Specifies the location of the on-premises facility at the other end of the connection, specific to the street or data center name. Minimum: **0** Maximum: **255**
device_id	String	Specifies the ID of the device connected to the connection. Minimum: **0** Maximum: **36**
type	String	Specifies the type of a connection. The value can be **standard** (a standard connection), **hosting** (an operations connection) or **hosted** (a hosted connection). Default: **standard** Enumeration values: • **standard** • **hosting** • **hosted** • **onestop_standard** • **onestop_hosted**
hosting_id	String	Specifies the ID of the operations connection on which the hosted connection is created.
charge_mode	String	Specifies the billing mode. The value can be **prepayment**, **bandwidth**, or **traffic**. Enumeration values: • **prepayment** • **bandwidth** • **traffic**
provider	String	Specifies the line carrier of a connection. It can be China Telecom, China Unicom, China Mobile, and other carriers that provide the lines.
admin_state_up	Boolean	Specifies the administrative status. The value can be **true** (default) or **false**.
vlan	Integer	Specifies the VLAN allocated to the hosted connection. Minimum: **0** Maximum: **3999**

Parameter	Type	Description
status	String	Specifies the connection status. • **ACTIVE**: The connection is in the normal state. • **DOWN**: The port for the connection is in the down state, which may cause line faults. • **BUILD**: Operations related to the connection are being performed. • **ERROR**: The connection configuration is incorrect. Contact customer service to rectify the fault. • **PENDING_DELETE**: The connection is being deleted. • **DELETED**: The connection has been deleted. • **APPLY**: A request for a connection is submitted. • **DENY**: A site survey is rejected because the customer fails to meet the requirements. • **PENDING_PAY**: The order for the connection is to be paid. • **PAID**: The order for the connection has been paid. • **PENDING_SURVEY**: A site survey is required for the connection. • **LEASED_LINE_DELIVERY**: The carrier is deploying the line. Enumeration values: • **BUILD** • **PAID** • **APPLY** • **PENDING_SURVEY** • **ACTIVE** • **DOWN** • **ERROR** • **PENDING_DELETE** • **DELETED** • **DENY** • **PENDING_PAY** • **LEASED_LINE_DELIVERY**
apply_time	String	Specifies when the connection was requested. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*.

Parameter	Type	Description
create_time	String	Specifies when the connection was created. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*.
provider_status	String	Specifies the carrier status. The status can be **ACTIVE** or **DOWN**. Enumeration values: • **ACTIVE** • **DOWN**
peer_port_type	String	Specifies the peer port type.
peer_provider	String	Specifies the carrier of the leased line.
order_id	String	Specifies the connection order ID, which is used to support duration-based billing and identify user orders.
product_id	String	Specifies the product ID corresponding to the connection's order. The product ID is used to specify billing policies such as duration-based packages.
spec_code	String	Specifies the product specifications corresponding to the connection's order. The specifications are used to specify billing policies such as duration-based packages.
period_type	Integer	Specifies whether a connection in a specified order is billed by year or month.
period_num	Integer	Specifies the required service duration of a yearly/monthly connection.
vgw_type	String	Specifies the gateway type required by a connection. Default: **default** Enumeration values: • **default**
lag_id	String	Specifies the ID of the LAG that the connection belongs to.
signed_agreement_status	String	Specifies the signing status of the Direct Connect Disclaimers. Enumeration values: • **signed**
signed_agreement_time	String	Specifies when the Direct Connect Disclaimers were signed.

Parameter	Type	Description
enterprise_project_id	String	Specifies the ID of the enterprise project that the connection belongs to. Minimum: **36** Maximum: **36**
tags	Array of **Tag** objects	Specifies the tags. Array length: **0–10**
locales	**LocalesBody** object	Specifies the region of the connection.
support_feature	Array of strings	Lists the features supported by the connection.
ies_id	String	Specifies the edge site ID.
reason	String	Displays error information if the status of a line is **Error**.
email	String	Specifies the customer email information.
onestop_product_id	String	Specifies the product ID if the connection is a full-service connection. This parameter is used in line sales scenarios.
building_line_product_id	String	Specifies the product ID of the line resource used in the equipment room. This parameter is used in line sales scenarios.
last_onestop_product_id	String	Specifies the product ID of a full-service connection before the change. This parameter is used in line sales scenarios and used to save the last record when the line bandwidth is changed.
last_building_line_product_id	String	Specifies the product ID of the line resource used in the equipment room before the change. This parameter is used in line sales scenarios and used to save the last record when the line bandwidth is changed.
modified_bandwidth	Integer	Specifies the new bandwidth after the line bandwidth is changed.
change_mode	Integer	Specifies the status of a renewal change.
onestopdc_status	String	Specifies the status of a full-service connection.
public_border_group	String	Specifies the public border group of the AZ, indicating whether the site is a HomeZones site.

Parameter	Type	Description
auto_renew	Integer	Specifies whether to automatically renew a yearly/monthly subscription.
ratio_95peak	Integer	Specifies the percentage of the minimum bandwidth for 95th percentile billing. Minimum: **0** Maximum: **100**

Table 4-22 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Table 4-23 LocalesBody

Parameter	Type	Description
en_us	String	Specifies the region name in English. Minimum: **0** Maximum: **255**
zh_cn	String	Specifies the region name in Chinese. Minimum: **0** Maximum: **255**

Example Requests

Updating the name and description of a connection

```
PUT https://{dc_endpoint}/v3/6fbe9263116a4b68818cf1edce16bc4f/dcaas/direct-connects/6ecd9cf3-ca64-46c7-863f-f2eb1b9e838a
```



```
{
  "direct_connect" : {
    "description" : "",
    "name" : "direct connect1"
  }
}
```

Example Responses

Status code: 200

OK

- The connection is updated.

```
{
  "request_id" : "9a4f4dfc4fb2fc101e65bba07d908535",
  "direct_connect" : {
    "bandwidth" : 100,
    "create_time" : "2018-10-19T09:53:26.000Z",
    "port_type" : "10G",
    "id" : "6ecd9cf3-ca64-46c7-863f-f2eb1b9e838a",
    "apply_time" : "2018-10-19T09:53:26.000Z",
    "peer_location" : "",
    "peer_port_type" : null,
    "peer_provider" : null,
    "location" : "ExampleLocation",
    "provider" : "ExampleProvider",
    "type" : "standard",
    "status" : "BUILD",
    "description" : "",
    "provider_status" : "ACTIVE",
    "order_id" : "",
    "vlan" : null,
    "device_id" : "172.16.40.2",
    "name" : "direct connect1",
    "admin_state_up" : true,
    "tenant_id" : "6fbe9263116a4b68818cf1edce16bc4f",
    "hosting_id" : null,
    "product_id" : "",
    "vgw_type" : "default",
    "spec_code" : "100ge",
    "charge_mode" : null,
    "support_feature" : [ ],
    "ies_id" : null,
    "reason" : null,
    "email" : "cloud@example.com",
    "onestop_product_id" : null,
    "building_line_product_id" : null,
    "last_building_line_product_id" : null,
    "last_onestop_product_id" : null,
    "modified_bandwidth" : null,
    "change_mode" : null,
    "onestopdc_status" : null,
    "public_border_group" : "center",
    "auto_renew" : 0,
    "ratio_95peak" : null
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Updating the name and description of a connection


```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class UpdateDirectConnectSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateDirectConnectRequest request = new UpdateDirectConnectRequest();
        UpdateDirectConnectRequestBody body = new UpdateDirectConnectRequestBody();
        UpdateDirectConnect directConnectbody = new UpdateDirectConnect();
        directConnectbody.withName("direct connect1")
            .withDescription("");
        body.withDirectConnect(directConnectbody);
        request.withBody(body);
        try {
            UpdateDirectConnectResponse response = client.updateDirectConnect(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Updating the name and description of a connection

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
```

```
variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdateDirectConnectRequest()
        directConnectbody = UpdateDirectConnect(
            name="direct connect1",
            description=""
        )
        request.body = UpdateDirectConnectRequestBody(
            direct_connect=directConnectbody
        )
        response = client.update_direct_connect(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Updating the name and description of a connection

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateDirectConnectRequest{}
    nameDirectConnect:= "direct connect1"
    descriptionDirectConnect:= ""
    directConnectbody := &model.UpdateDirectConnect{
        Name: &nameDirectConnect,
```

```
        Description: &descriptionDirectConnect,
    }
    request.Body = &model.UpdateDirectConnectRequestBody{
        DirectConnect: directConnectbody,
    }
    response, err := client.UpdateDirectConnect(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.1.4 Deleting a Connection

Function

This API is used to delete a connection.

This API is only used to delete pay-per-use connections. You can only unsubscribe them yearly/monthly connections.

Debugging

For details, see **Calling APIs**.

URI

DELETE /v3/{project_id}/dcaas/direct-connects/{direct_connect_id}

Table 4-24 Path parameters

Parameter	Mandatory	Type	Description
direct_connect_id	Yes	String	Specifies the connection ID. Minimum: **36** Maximum: **36**

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

Request Parameters

Table 4-25 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

None

Example Requests

Deleting a connection

```
DELETE https://{dc_endpoint}/v3/6fbe9263116a4b68818cf1edce16bc4f/dcaas/direct-connects/6ecd9cf3-ca64-46c7-863f-f2eb1b9e838a
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;
```



```
public class DeleteDirectConnectSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteDirectConnectRequest request = new DeleteDirectConnectRequest();
        try {
            DeleteDirectConnectResponse response = client.deleteDirectConnect(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteDirectConnectRequest()
        response = client.delete_direct_connect(request)
        print(response)
    except exceptions.ClientRequestException as e:
```



```
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteDirectConnectRequest{}
    response, err := client.DeleteDirectConnect(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	No Content

Error Codes

See **Error Codes**.

4.1.5 Creating a Hosted Connection

Function

This API is used by partners to create a hosted connection for their users. The creator must have the partner qualification and have an operations connection.

Debugging

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/dcaas/hosted-connects

Table 4-26 Path parameters

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

Request Parameters

Table 4-27 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-28 Request body parameters

Parameter	Mandatory	Type	Description
hosted_connect	Yes	**CreateHostedDirectConnect** object	Specifies the hosted connection to be created.

Table 4-29 CreateHostedDirectConnect

Parameter	Mandatory	Type	Description
name	No	String	Specifies the hosted connection name. Minimum: **0** Maximum: **64**
description	No	String	Provides supplementary information about the hosted connection. Minimum: **0** Maximum: **128**
bandwidth	Yes	Integer	Specifies the bandwidth of the hosted connection, in Mbit/s. Minimum: **2** Maximum: **400000**
hosting_id	Yes	String	Specifies the ID of the operations connection on which the hosted connection is created.
vlan	Yes	Integer	Specifies the VLAN allocated to the hosted connection. Minimum: **0** Maximum: **3999**
resource_tenant_id	Yes	String	Specifies the project ID of the specified tenant for whom a hosted connection is to be created. Minimum: **0** Maximum: **32**
peer_location	No	String	Specifies the location of the on-premises facility at the other end of the connection, specific to the street or data center name. Minimum: **0** Maximum: **255**

Response Parameters

Status code: 201

Table 4-30 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
hosted_connect	**HostedDirectConnect** object	Specifies the hosted connection.

Table 4-31 HostedDirectConnect

Parameter	Type	Description
id	String	Specifies the hosted connection ID. Minimum: **36** Maximum: **36**
tenant_id	String	Specifies the project ID.
name	String	Specifies the connection name. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the connection. Minimum: **0** Maximum: **128**
bandwidth	Integer	Specifies the connection bandwidth, in Mbit/s. Minimum: **2** Maximum: **400000**
location	String	Specifies information about the Direct Connect location. Minimum: **0** Maximum: **255**
peer_location	String	Specifies the location of the on-premises facility at the other end of the connection, specific to the street or data center name. Minimum: **0** Maximum: **255**
hosting_id	String	Specifies the ID of the operations connection on which the hosted connection is created.
provider	String	Specifies the provider of the leased line.

Parameter	Type	Description
admin_state_up	Boolean	Specifies the administrative status. The value can be **true** or **false**. Default: **true**
vlan	Integer	Specifies the VLAN allocated to the hosted connection. Minimum: **0** Maximum: **3999**
status	String	Specifies the operating status. • **BUILD**: The hosted connection has been created. • **ACTIVE**: The hosted connection is normal. • **DOWN**: The port used by the hosted connection is down, indicating that there may be line faults. • **ERROR**: The hosted connection is abnormal. • **PENDING_DELETE**: The hosted connection is being deleted. • **PENDING_UPDATE**: The hosted connection is being updated. • **PENDING_CREATE**: The hosted connection is being created. Enumeration values: • **BUILD** • **ACTIVE** • **DOWN** • **ERROR** • **PENDING_DELETE** • **PENDING_UPDATE** • **PENDING_CREATE**
apply_time	String	Specifies when the connection was requested. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*.
create_time	String	Specifies when the connection was created. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*.
provider_status	String	Specifies the carrier status. The status can be **ACTIVE** or **DOWN**. Enumeration values: • **ACTIVE** • **DOWN**

Parameter	Type	Description
port_type	String	Specifies the type of the port used by the connection. The value can be **1G**, **10G**, **40G**, or **100G**. Enumeration values: • **1G** • **10G** • **40G** • **100G**
type	String	Specifies the type of the connection. The value is **hosted**. Default: **hosted**

Example Requests

Creating a hosting connection with the bandwidth set to 10 Mbit/s and VLAN to 441

```
POST https://{dc_endpoint}/v3/6fbe9263116a4b68818cf1edce16bc4f/dcaas/hosted-connects

{
  "hosted_connect" : {
    "name" : "client-dc-faf1",
    "description" : "Hosted Connect",
    "resource_tenant_id" : "0605768a3300d5762f82c01180692873",
    "hosting_id" : "2cfb53be-b05f-40d5-a2f8-3a59ac383836",
    "vlan" : 441,
    "bandwidth" : 10
  }
}
```

Example Responses

Status code: 201

Created

- The hosted connection is created.

```
{
  "hosted_connect" : {
    "id" : "0278b472-ffa5-4eb3-8c0d-979d479f8ef6",
    "name" : "client-dc-faf1",
    "description" : "Hosted Connect",
    "tenant_id" : "0605768a3300d5762f82c01180692873",
    "hosting_id" : "2cfb53be-b05f-40d5-a2f8-3a59ac383836",
    "vlan" : 441,
    "bandwidth" : 10,
    "location" : "ExampleLocation",
    "peer_location" : "",
    "provider" : "ExampleProvider",
    "type" : "hosted",
    "port_type" : "10G",
    "provider_status" : "ACTIVE",
    "status" : "ACTIVE",
    "apply_time" : "2022-07-13T08:25:38.000Z",
    "admin_state_up" : true,
```



```
    "create_time" : "2022-07-13T08:25:38.000Z"
  },
  "request_id" : "a59a3776faa1d055f8124dc7b0977a90"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Creating a hosting connection with the bandwidth set to 10 Mbit/s and VLAN to 441

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class CreateHostedDirectConnectSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateHostedDirectConnectRequest request = new CreateHostedDirectConnectRequest();
        CreateHostedDirectConnectRequestBody body = new CreateHostedDirectConnectRequestBody();
        CreateHostedDirectConnect hostedConnectbody = new CreateHostedDirectConnect();
        hostedConnectbody.withName("client-dc-faf1")
            .withDescription("Hosted Connect")
            .withBandwidth(10)
            .withHostingId("2cfb53be-b05f-40d5-a2f8-3a59ac383836")
            .withVlan(441)
            .withResourceTenantId("0605768a3300d5762f82c01180692873");
        body.withHostedConnect(hostedConnectbody);
        request.withBody(body);
        try {
            CreateHostedDirectConnectResponse response = client.createHostedDirectConnect(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
```



```
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Creating a hosting connection with the bandwidth set to 10 Mbit/s and VLAN to 441

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateHostedDirectConnectRequest()
        hostedConnectbody = CreateHostedDirectConnect(
            name="client-dc-faf1",
            description="Hosted Connect",
            bandwidth=10,
            hosting_id="2cfb53be-b05f-40d5-a2f8-3a59ac383836",
            vlan=441,
            resource_tenant_id="0605768a3300d5762f82c01180692873"
        )
        request.body = CreateHostedDirectConnectRequestBody(
            hosted_connect=hostedConnectbody
        )
        response = client.create_hosted_direct_connect(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Creating a hosting connection with the bandwidth set to 10 Mbit/s and VLAN to 441

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
```

```
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateHostedDirectConnectRequest{}
    nameHostedConnect:= "client-dc-faf1"
    descriptionHostedConnect:= "Hosted Connect"
    hostedConnectbody := &model.CreateHostedDirectConnect{
        Name: &nameHostedConnect,
        Description: &descriptionHostedConnect,
        Bandwidth: int32(10),
        HostingId: "2cfb53be-b05f-40d5-a2f8-3a59ac383836",
        Vlan: int32(441),
        ResourceTenantId: "0605768a3300d5762f82c01180692873",
    }
    request.Body = &model.CreateHostedDirectConnectRequestBody{
        HostedConnect: hostedConnectbody,
    }
    response, err := client.CreateHostedDirectConnect(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
201	Created

Error Codes

See **Error Codes**.

4.1.6 Querying the Hosted Connection List

Function

This API is used to query hosted connections created by partners.

Debugging

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/hosted-connects

Table 4-32 Path parameters

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

Table 4-33 Query parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the number of records returned on each page. Value range: **1–2000** Minimum: **1** Maximum: **2000** Default: **2000**
marker	No	String	Specifies the ID of the last resource record on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with **limit**. Minimum: **0** Maximum: **36**
fields	No	Array	Specifies the list of fields to be displayed. Array length: **1–5**
sort_dir	No	Array	Specifies the sorting order of returned results. The value can be **asc** (default) or **desc**.

Parameter	Mandatory	Type	Description
sort_key	No	String	Specifies the field for sorting. Default: **id** Minimum: **0** Maximum: **36**
hosting_id	No	Array	Specifies operations connection ID by which hosted connections are queried. Array length: **0–5**
id	No	Array	Specifies the resource ID by which instances are queried. Array length: **1–5**
name	No	Array	Specifies the resource name by which instances are queried. You can specify multiple names. Array length: **1–5**

Request Parameters

Table 4-34 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-35 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID of the current operation.
hosted_connects	Array of **HostedDirectConnect** objects	Specifies the hosted connection.
page_info	**PageInfo** object	Specifies the pagination query information.

Table 4-36 HostedDirectConnect

Parameter	Type	Description
id	String	Specifies the hosted connection ID. Minimum: **36** Maximum: **36**
tenant_id	String	Specifies the project ID.
name	String	Specifies the connection name. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the connection. Minimum: **0** Maximum: **128**
bandwidth	Integer	Specifies the connection bandwidth, in Mbit/s. Minimum: **2** Maximum: **400000**
location	String	Specifies information about the Direct Connect location. Minimum: **0** Maximum: **255**
peer_location	String	Specifies the location of the on-premises facility at the other end of the connection, specific to the street or data center name. Minimum: **0** Maximum: **255**

Parameter	Type	Description
hosting_id	String	Specifies the ID of the operations connection on which the hosted connection is created.
provider	String	Specifies the provider of the leased line.
admin_state_up	Boolean	Specifies the administrative status. The value can be **true** or **false**. Default: **true**
vlan	Integer	Specifies the VLAN allocated to the hosted connection. Minimum: **0** Maximum: **3999**
status	String	Specifies the operating status. • **BUILD**: The hosted connection has been created. • **ACTIVE**: The hosted connection is normal. • **DOWN**: The port used by the hosted connection is down, indicating that there may be line faults. • **ERROR**: The hosted connection is abnormal. • **PENDING_DELETE**: The hosted connection is being deleted. • **PENDING_UPDATE**: The hosted connection is being updated. • **PENDING_CREATE**: The hosted connection is being created. Enumeration values: • **BUILD** • **ACTIVE** • **DOWN** • **ERROR** • **PENDING_DELETE** • **PENDING_UPDATE** • **PENDING_CREATE**
apply_time	String	Specifies when the connection was requested. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*.
create_time	String	Specifies when the connection was created. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*.

Parameter	Type	Description
provider_status	String	Specifies the carrier status. The status can be **ACTIVE** or **DOWN**. Enumeration values: • **ACTIVE** • **DOWN**
port_type	String	Specifies the type of the port used by the connection. The value can be **1G**, **10G**, **40G**, or **100G**. Enumeration values: • **1G** • **10G** • **40G** • **100G**
type	String	Specifies the type of the connection. The value is **hosted**. Default: **hosted**

Table 4-37 PageInfo

Parameter	Type	Description
previous_marker	String	Specifies the marker of the previous page. The value is the resource UUID. Minimum: **0** Maximum: **36**
current_count	Integer	Specifies the number of resources in the current list. Minimum: **0** Maximum: **2000**
next_marker	String	Specifies the marker of the next page. The value is the resource UUID. If this parameter is left empty, the resource is on the last page. Minimum: **0** Maximum: **36**

Example Requests

Querying the hosted connection list

```
POST https://{dc_endpoint}/v3/6fbe9263116a4b68818cf1edce16bc4f/dcaas/hosted-connects
```


Example Responses

Status code: 200

OK

- The hosted connection list is queried.

```
{
  "request_id" : "a59a3776faa1d055f8124dc7b0977a90",
  "hosted_connects" : [ {
    "id" : "0278b472-ffa5-4eb3-8c0d-979d479f8ef6",
    "name" : "client-dc-faf1",
    "description" : "Hosted Connect",
    "tenant_id" : "0605768a3300d5762f82c01180692873",
    "hosting_id" : "2cfb53be-b05f-40d5-a2f8-3a59ac383836",
    "vlan" : 441,
    "bandwidth" : 10,
    "location" : "ExampleLocation",
    "peer_location" : "",
    "provider" : "ExampleProvider",
    "type" : "hosted",
    "port_type" : "10G",
    "provider_status" : "ACTIVE",
    "status" : "ACTIVE",
    "apply_time" : "2022-07-13T08:25:38.000Z",
    "admin_state_up" : true,
    "create_time" : "2022-07-13T08:25:38.000Z"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class ListHostedDirectConnectsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
```



```
            .withRegion(DcRegion.valueOf("<YOUR REGION>"))
            .build();
        ListHostedDirectConnectsRequest request = new ListHostedDirectConnectsRequest();
        request.withLimit(<limit>);
        request.withMarker("<marker>");
        request.withFields();
        request.withSortDir();
        request.withSortKey("<sort_key>");
        request.withHostingId();
        request.withId();
        request.withName();
        try {
            ListHostedDirectConnectsResponse response = client.listHostedDirectConnects(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListHostedDirectConnectsRequest()
        request.limit = <limit>
        request.marker = "<marker>"
        request.fields =
        request.sort_dir =
        request.sort_key = "<sort_key>"
        request.hosting_id =
        request.id =
        request.name =
        response = client.list_hosted_direct_connects(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
```



```
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListHostedDirectConnectsRequest{}
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    sortKeyRequest:= "<sort_key>"
    request.SortKey = &sortKeyRequest
    response, err := client.ListHostedDirectConnects(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.1.7 Querying Details About a Hosted Connection

Function

This API is used by partners to query a hosted connection.

Debugging

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/hosted-connects/{hosted_connect_id}

Table 4-38 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
hosted_connect_id	Yes	String	Specifies the hosted connection ID. Minimum: **36** Maximum: **36**

Table 4-39 Query parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the number of records returned on each page. Value range: **1–2000** Minimum: **1** Maximum: **2000** Default: **2000**
marker	No	String	Specifies the ID of the last resource record on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with **limit**. Minimum: **0** Maximum: **36**

Parameter	Mandatory	Type	Description
fields	No	Array	Specifies the list of fields to be displayed. Array length: **1–5**
sort_dir	No	Array	Specifies the sorting order of returned results. The value can be **asc** (default) or **desc**.
sort_key	No	String	Specifies the field for sorting. Default: **id** Minimum: **0** Maximum: **36**
hosting_id	No	Array	Specifies operations connection ID by which hosted connections are queried. Array length: **0–5**

Request Parameters

Table 4-40 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-41 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.

Parameter	Type	Description
hosted_connect	HostedDirectConnect object	Specifies the hosted connection.

Table 4-42 HostedDirectConnect

Parameter	Type	Description
id	String	Specifies the hosted connection ID. Minimum: **36** Maximum: **36**
tenant_id	String	Specifies the project ID.
name	String	Specifies the connection name. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the connection. Minimum: **0** Maximum: **128**
bandwidth	Integer	Specifies the connection bandwidth, in Mbit/s. Minimum: **2** Maximum: **400000**
location	String	Specifies information about the Direct Connect location. Minimum: **0** Maximum: **255**
peer_location	String	Specifies the location of the on-premises facility at the other end of the connection, specific to the street or data center name. Minimum: **0** Maximum: **255**
hosting_id	String	Specifies the ID of the operations connection on which the hosted connection is created.
provider	String	Specifies the provider of the leased line.
admin_state_up	Boolean	Specifies the administrative status. The value can be **true** or **false**. Default: **true**

Parameter	Type	Description
vlan	Integer	Specifies the VLAN allocated to the hosted connection. Minimum: **0** Maximum: **3999**
status	String	Specifies the operating status. • **BUILD**: The hosted connection has been created. • **ACTIVE**: The hosted connection is normal. • **DOWN**: The port used by the hosted connection is down, indicating that there may be line faults. • **ERROR**: The hosted connection is abnormal. • **PENDING_DELETE**: The hosted connection is being deleted. • **PENDING_UPDATE**: The hosted connection is being updated. • **PENDING_CREATE**: The hosted connection is being created. Enumeration values: • **BUILD** • **ACTIVE** • **DOWN** • **ERROR** • **PENDING_DELETE** • **PENDING_UPDATE** • **PENDING_CREATE**
apply_time	String	Specifies when the connection was requested. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*.
create_time	String	Specifies when the connection was created. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*.
provider_status	String	Specifies the carrier status. The status can be **ACTIVE** or **DOWN**. Enumeration values: • **ACTIVE** • **DOWN**

Parameter	Type	Description
port_type	String	Specifies the type of the port used by the connection. The value can be **1G**, **10G**, **40G**, or **100G**. Enumeration values: • **1G** • **10G** • **40G** • **100G**
type	String	Specifies the type of the connection. The value is **hosted**. Default: **hosted**

Example Requests

Querying details about a hosted connection created by a partner

```
GET https://{dc_endpoint}/v3/6fbe9263116a4b68818cf1edce16bc4f/dcaas/hosted-connects/0278b472-ffa5-4eb3-8c0d-979d479f8ef6
```

Example Responses

Status code: 200

OK

- The details of the hosted connection are queried.

```
{
  "hosted_connect" : {
    "id" : "0278b472-ffa5-4eb3-8c0d-979d479f8ef6",
    "name" : "client-dc-faf1",
    "description" : "",
    "tenant_id" : "0605768a3300d5762f82c01180692873",
    "hosting_id" : "2cfb53be-b05f-40d5-a2f8-3a59ac383836",
    "vlan" : 441,
    "bandwidth" : 10,
    "location" : "ExampleLocation",
    "peer_location" : "",
    "provider" : "ExampleProvider",
    "type" : "hosted",
    "port_type" : "10G",
    "provider_status" : "ACTIVE",
    "status" : "ACTIVE",
    "apply_time" : "2022-07-13T08:25:38.000Z",
    "admin_state_up" : true,
    "create_time" : "2022-07-13T08:25:38.000Z"
  },
  "request_id" : "a59a3776faa1d055f8124dc7b0977a90"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class ShowHostedDirectConnectSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowHostedDirectConnectRequest request = new ShowHostedDirectConnectRequest();
        request.withLimit(<limit>);
        request.withMarker("<marker>");
        request.withFields();
        request.withSortDir();
        request.withSortKey("<sort_key>");
        request.withHostingId();
        try {
            ShowHostedDirectConnectResponse response = client.showHostedDirectConnect(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
```



```
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowHostedDirectConnectRequest()
        request.limit = <limit>
        request.marker = "<marker>"
        request.fields =
        request.sort_dir =
        request.sort_key = "<sort_key>"
        request.hosting_id =
        response = client.show_hosted_direct_connect(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowHostedDirectConnectRequest{}
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    sortKeyRequest:= "<sort_key>"
```



```
    request.SortKey = &sortKeyRequest
    response, err := client.ShowHostedDirectConnect(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.1.8 Updating a Hosted Connection

Function

This API is used by partners to update a hosted connection.

Debugging

For details, see **Calling APIs**.

URI

PUT /v3/{project_id}/dcaas/hosted-connects/{hosted_connect_id}

Table 4-43 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
hosted_connect_id	Yes	String	Specifies the hosted connection ID. Minimum: **36** Maximum: **36**

Request Parameters

Table 4-44 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-45 Request body parameters

Parameter	Mandatory	Type	Description
hosted_connect	No	**UpdateHostedDirectConnect** object	Specifies the hosted connection to be updated.

Table 4-46 UpdateHostedDirectConnect

Parameter	Mandatory	Type	Description
name	No	String	Specifies the connection name. Minimum: **0** Maximum: **64**
description	No	String	Provides supplementary information about the connection. Minimum: **0** Maximum: **128**
bandwidth	No	Integer	Specifies the bandwidth of the hosted connection, in Mbit/s. Minimum: **2** Maximum: **400000**

Parameter	Mandatory	Type	Description
peer_location	No	String	Specifies the location of the on-premises facility at the other end of the connection, specific to the street or data center name. Minimum: **0** Maximum: **255**

Response Parameters

Status code: 200

Table 4-47 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
hosted_connect	**HostedDirectConnect** object	Specifies the hosted connection.

Table 4-48 HostedDirectConnect

Parameter	Type	Description
id	String	Specifies the hosted connection ID. Minimum: **36** Maximum: **36**
tenant_id	String	Specifies the project ID.
name	String	Specifies the connection name. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the connection. Minimum: **0** Maximum: **128**
bandwidth	Integer	Specifies the connection bandwidth, in Mbit/s. Minimum: **2** Maximum: **400000**

Parameter	Type	Description
location	String	Specifies information about the Direct Connect location. Minimum: **0** Maximum: **255**
peer_location	String	Specifies the location of the on-premises facility at the other end of the connection, specific to the street or data center name. Minimum: **0** Maximum: **255**
hosting_id	String	Specifies the ID of the operations connection on which the hosted connection is created.
provider	String	Specifies the provider of the leased line.
admin_state_up	Boolean	Specifies the administrative status. The value can be **true** or **false**. Default: **true**
vlan	Integer	Specifies the VLAN allocated to the hosted connection. Minimum: **0** Maximum: **3999**

Parameter	Type	Description
status	String	Specifies the operating status. • **BUILD**: The hosted connection has been created. • **ACTIVE**: The hosted connection is normal. • **DOWN**: The port used by the hosted connection is down, indicating that there may be line faults. • **ERROR**: The hosted connection is abnormal. • **PENDING_DELETE**: The hosted connection is being deleted. • **PENDING_UPDATE**: The hosted connection is being updated. • **PENDING_CREATE**: The hosted connection is being created. Enumeration values: • **BUILD** • **ACTIVE** • **DOWN** • **ERROR** • **PENDING_DELETE** • **PENDING_UPDATE** • **PENDING_CREATE**
apply_time	String	Specifies when the connection was requested. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*.
create_time	String	Specifies when the connection was created. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*.
provider_status	String	Specifies the carrier status. The status can be **ACTIVE** or **DOWN**. Enumeration values: • **ACTIVE** • **DOWN**

Parameter	Type	Description
port_type	String	Specifies the type of the port used by the connection. The value can be **1G**, **10G**, **40G**, or **100G**. Enumeration values: • **1G** • **10G** • **40G** • **100G**
type	String	Specifies the type of the connection. The value is **hosted**. Default: **hosted**

Example Requests

Updating the name and description of a hosted connection

```
PUT https://{dc_endpoint}/v3/6fbe9263116a4b68818cf1edce16bc4f/dcaas/hosted-connects/0278b472-ffa5-4eb3-8c0d-979d479f8ef6

{
  "hosted_connect" : {
    "name" : "client-dc-faf1",
    "description" : ""
  }
}
```

Example Responses

Status code: 200

OK

- The hosted connection is updated.

```
{
  "hosted_connect" : {
    "id" : "0278b472-ffa5-4eb3-8c0d-979d479f8ef6",
    "name" : "client-dc-faf1",
    "description" : "",
    "tenant_id" : "0605768a3300d5762f82c01180692873",
    "hosting_id" : "2cfb53be-b05f-40d5-a2f8-3a59ac383836",
    "vlan" : 441,
    "bandwidth" : 10,
    "location" : "ExampleLocation",
    "peer_location" : "",
    "provider" : "ExampleProvider",
    "type" : "hosted",
    "port_type" : "10G",
    "provider_status" : "ACTIVE",
    "status" : "ACTIVE",
    "apply_time" : "2022-07-13T08:25:38.000Z",
    "admin_state_up" : true,
    "create_time" : "2022-07-13T08:25:38.000Z"
  },
  "request_id" : "a59a3776faa1d055f8124dc7b0977a90"
}
```


SDK Sample Code

The SDK sample code is as follows.

Java

Updating the name and description of a hosted connection

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class UpdateHostedDirectConnectSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateHostedDirectConnectRequest request = new UpdateHostedDirectConnectRequest();
        UpdateHostedDirectConnectRequestBody body = new UpdateHostedDirectConnectRequestBody();
        UpdateHostedDirectConnect hostedConnectbody = new UpdateHostedDirectConnect();
        hostedConnectbody.withName("client-dc-faf1")
            .withDescription("");
        body.withHostedConnect(hostedConnectbody);
        request.withBody(body);
        try {
            UpdateHostedDirectConnectResponse response = client.updateHostedDirectConnect(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Updating the name and description of a hosted connection

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdateHostedDirectConnectRequest()
        hostedConnectbody = UpdateHostedDirectConnect(
            name="client-dc-faf1",
            description=""
        )
        request.body = UpdateHostedDirectConnectRequestBody(
            hosted_connect=hostedConnectbody
        )
        response = client.update_hosted_direct_connect(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Updating the name and description of a hosted connection

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
```



```
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateHostedDirectConnectRequest{}
    nameHostedConnect:= "client-dc-faf1"
    descriptionHostedConnect:= ""
    hostedConnectbody := &model.UpdateHostedDirectConnect{
        Name: &nameHostedConnect,
        Description: &descriptionHostedConnect,
    }
    request.Body = &model.UpdateHostedDirectConnectRequestBody{
        HostedConnect: hostedConnectbody,
    }
    response, err := client.UpdateHostedDirectConnect(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.1.9 Deleting a Hosted Connection

Function

This API is used by partners to delete a hosted connection.

Debugging

For details, see **Calling APIs**.

URI

DELETE /v3/{project_id}/dcaas/hosted-connects/{hosted_connect_id}

Table 4-49 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
hosted_connect_id	Yes	String	Specifies the hosted connection ID. Minimum: **36** Maximum: **36**

Request Parameters

Table 4-50 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

None

Example Requests

Deleting a hosted connection

```
DELETE https://{dc_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/dcaas/hosted-connects/94c2b814-99dc-939a-e811-ae84c61ea3ff
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;
```



```
import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class DeleteHostedDirectConnectSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteHostedDirectConnectRequest request = new DeleteHostedDirectConnectRequest();
        try {
            DeleteHostedDirectConnectResponse response = client.deleteHostedDirectConnect(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
```

```
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteHostedDirectConnectRequest()
        response = client.delete_hosted_direct_connect(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteHostedDirectConnectRequest{}
    response, err := client.DeleteHostedDirectConnect(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	No Content

Error Codes

See **Error Codes**.

4.2 Virtual Gateways

4.2.1 Creating a Virtual Gateway

Function

This API is used to create a virtual gateway.

Debugging

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/dcaas/virtual-gateways

Table 4-51 Path parameters

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

Request Parameters

Table 4-52 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-53 Request body parameters

Parameter	Mandatory	Type	Description
virtual_gateway	No	**CreateVirtualGateway** object	Specifies the virtual gateway to be created.

Table 4-54 CreateVirtualGateway

Parameter	Mandatory	Type	Description
vpc_id	Yes	String	Specifies the ID of the VPC that the virtual gateway is associated with.
name	No	String	Specifies the virtual gateway name. Minimum: **0** Maximum: **64**
description	No	String	Provides supplementary information about the virtual gateway. Minimum: **0** Maximum: **128**
local_ep_group	Yes	Array of strings	Specifies the IPv4 subnets of the associated VPC that can be accessed over the virtual gateway.
local_ep_group_ipv6	No	Array of strings	Specifies the IPv6 subnets of the associated VPC that can be accessed over the virtual gateway. This is a reserved field.
bgp_asn	No	Integer	Specifies the local BGP autonomous system number (ASN) of the virtual gateway. Minimum: **1** Maximum: **4294967295**
enterprise_project_id	No	String	Specifies the ID of the enterprise project that the virtual gateway belongs to. Minimum: **36** Maximum: **36**

Parameter	Mandatory	Type	Description
tags	No	Array of **Tag** objects	Specifies the tags. Array length: **0–10**

Table 4-55 Tag

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	No	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Response Parameters

Status code: 201

Table 4-56 Response body parameters

Parameter	Type	Description
virtual_gateway	**VirtualGateway** object	Specifies the virtual gateway.
request_id	String	Specifies the request ID.

Table 4-57 VirtualGateway

Parameter	Type	Description
id	String	Specifies the virtual gateway ID.
vpc_id	String	Specifies the ID of the VPC connected using the virtual gateway.

Parameter	Type	Description
tenant_id	String	Specifies the project ID. Minimum: **32** Maximum: **32**
name	String	Specifies the virtual gateway name. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the virtual gateway. Minimum: **0** Maximum: **128**
type	String	Specifies the virtual gateway type. The value can only be **default**. Default: **default**
local_ep_group	Array of strings	Specifies the IPv4 subnets of the associated VPC that can be accessed over the virtual gateway.
local_ep_group_ipv6	Array of strings	Specifies the IPv6 subnets of the associated VPC that can be accessed over the virtual gateway. This is a reserved field.
admin_state_up	Boolean	Specifies the administrative status. The value can be **true** or **false**. Default: **true**
status	String	Specifies the operating status. The value can be **ACTIVE**, **DOWN**, **BUILD**, **ERROR**, **PENDING_CREATE**, **PENDING_UPDATE**, or **PENDING_DELETE**.
bgp_asn	Integer	Specifies the local BGP ASN of the virtual gateway. Minimum: **1** Maximum: **4294967295**
enterprise_project_id	String	Specifies the ID of the enterprise project that the virtual gateway belongs to. Minimum: **36** Maximum: **36**
device_id	String	Specifies the ID of the device that the virtual interface belongs to.
redundant_device_id	String	Specifies the ID of the redundant device.

Parameter	Type	Description
public_border_group	String	Specifies the public border group of the AZ, indicating whether the site is a HomeZones site.
tags	Array of **Tag** objects	Specifies the tags. Array length: **0–10**

Table 4-58 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Example Requests

- Creating a virtual gateway that will be used to access a VPC, with the local BGP ASN set to 64512 and the IPv4 subnet to 192.168.1.0/24

```
POST https://{dc_endpoint}/v3/0605768a3300d5762f82c01180692873/dcaas/virtual-gateways

{
  "virtual_gateway" : {
    "name" : "vgw-c7b22",
    "description" : "",
    "vpc_id" : "6592c28e-95d7-4b0a-9f61-004fdf03420c",
    "bgp_asn" : 64512,
    "local_ep_group" : [ "192.168.1.0/24" ]
  }
}
```

Example Responses

Status code: 201

Created

- The virtual gateway for accessing the VPC is created

```
{
  "virtual_gateway" : {
    "id" : "20082c1b-3c99-48d8-8e8c-116af5d7e9f0",
```



```
  "name" : "vgw-c7b22",
  "description" : "",
  "tenant_id" : "0605768a3300d5762f82c01180692873",
  "vpc_id" : "6592c28e-95d7-4b0a-9f61-004fdf03420c",
  "device_id" : "26.151.63.100",
  "redundant_device_id" : "26.152.128.20",
  "type" : "default",
  "status" : "ACTIVE",
  "admin_state_up" : true,
  "bgp_asn" : 64512,
  "local_ep_group" : [ "192.168.1.0/24" ],
  "enterprise_project_id" : "0",
  "public_border_group" : "center"
 }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

- Creating a virtual gateway that will be used to access a VPC, with the local BGP ASN set to 64512 and the IPv4 subnet to 192.168.1.0/24

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class CreateVirtualGatewaySolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateVirtualGatewayRequest request = new CreateVirtualGatewayRequest();
        CreateVirtualGatewayRequestBody body = new CreateVirtualGatewayRequestBody();
        List<String> listVirtualGatewayLocalEpGroup = new ArrayList<>();
        listVirtualGatewayLocalEpGroup.add("192.168.1.0/24");
        CreateVirtualGateway virtualGatewaybody = new CreateVirtualGateway();
        virtualGatewaybody.withVpcId("6592c28e-95d7-4b0a-9f61-004fdf03420c")
            .withName("vgw-c7b22")
            .withDescription("")
            .withLocalEpGroup(listVirtualGatewayLocalEpGroup)
```



```
            .withBgpAsn(64512);
        body.withVirtualGateway(virtualGatewaybody);
        request.withBody(body);
        try {
            CreateVirtualGatewayResponse response = client.createVirtualGateway(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

- Creating a virtual gateway that will be attached to an enterprise router and set the BGP ASN to 64512

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class CreateVirtualGatewaySolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateVirtualGatewayRequest request = new CreateVirtualGatewayRequest();
        CreateVirtualGatewayRequestBody body = new CreateVirtualGatewayRequestBody();
        CreateVirtualGateway virtualGatewaybody = new CreateVirtualGateway();
        virtualGatewaybody.withName("vgw-er")
            .withDescription("")
            .withBgpAsn(64512);
        body.withVirtualGateway(virtualGatewaybody);
        request.withBody(body);
        try {
            CreateVirtualGatewayResponse response = client.createVirtualGateway(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
```



```
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

- Creating a virtual gateway that will be used to access a VPC, with the local BGP ASN set to 64512 and the IPv4 subnet to 192.168.1.0/24

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateVirtualGatewayRequest()
        listLocalEpGroupVirtualGateway = [
            "192.168.1.0/24"
        ]
        virtualGatewaybody = CreateVirtualGateway(
            vpc_id="6592c28e-95d7-4b0a-9f61-004fdf03420c",
            name="vgw-c7b22",
            description="",
            local_ep_group=listLocalEpGroupVirtualGateway,
            bgp_asn=64512
        )
        request.body = CreateVirtualGatewayRequestBody(
            virtual_gateway=virtualGatewaybody
        )
        response = client.create_virtual_gateway(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

- Creating a virtual gateway that will be attached to an enterprise router and set the BGP ASN to 64512

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *
```



```
if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateVirtualGatewayRequest()
        virtualGatewaybody = CreateVirtualGateway(
            name="vgw-er",
            description="",
            bgp_asn=64512
        )
        request.body = CreateVirtualGatewayRequestBody(
            virtual_gateway=virtualGatewaybody
        )
        response = client.create_virtual_gateway(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

- Creating a virtual gateway that will be used to access a VPC, with the local BGP ASN set to 64512 and the IPv4 subnet to 192.168.1.0/24

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())
```



```
    request := &model.CreateVirtualGatewayRequest{}
    var listLocalEpGroupVirtualGateway = []string{
        "192.168.1.0/24",
    }
    nameVirtualGateway:= "vgw-c7b22"
    descriptionVirtualGateway:= ""
    bgpAsnVirtualGateway:= int32(64512)
    virtualGatewaybody := &model.CreateVirtualGateway{
        VpcId: "6592c28e-95d7-4b0a-9f61-004fdf03420c",
        Name: &nameVirtualGateway,
        Description: &descriptionVirtualGateway,
        LocalEpGroup: listLocalEpGroupVirtualGateway,
        BgpAsn: &bgpAsnVirtualGateway,
    }
    request.Body = &model.CreateVirtualGatewayRequestBody{
        VirtualGateway: virtualGatewaybody,
    }
    response, err := client.CreateVirtualGateway(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

- Creating a virtual gateway that will be attached to an enterprise router and set the BGP ASN to 64512

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateVirtualGatewayRequest{}
    nameVirtualGateway:= "vgw-er"
    descriptionVirtualGateway:= ""
    bgpAsnVirtualGateway:= int32(64512)
    virtualGatewaybody := &model.CreateVirtualGateway{
        Name: &nameVirtualGateway,
        Description: &descriptionVirtualGateway,
        BgpAsn: &bgpAsnVirtualGateway,
    }
    request.Body = &model.CreateVirtualGatewayRequestBody{
        VirtualGateway: virtualGatewaybody,
```



```
    }
    response, err := client.CreateVirtualGateway(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
201	Created

Error Codes

See **Error Codes**.

4.2.2 Querying the Virtual Gateway List

Function

This API is used to query the virtual gateway list.

Debugging

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/virtual-gateways

Table 4-59 Path parameters

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

Table 4-60 Query parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the number of records returned on each page. Value range: **1–2000** Minimum: **1** Maximum: **2000** Default: **2000**
marker	No	String	Specifies the ID of the last resource record on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with **limit**. Minimum: **0** Maximum: **36**
fields	No	Array	Specifies the list of fields to be displayed. Array length: **1–5**
sort_dir	No	Array	Specifies the sorting order of returned results. The value can be **asc** (default) or **desc**.
sort_key	No	String	Specifies the field for sorting. Default: **id** Minimum: **0** Maximum: **36**
id	No	Array	Specifies the resource ID by which instances are queried. Array length: **1–5**
enterprise_project_id	No	Array	Filters resource instances by enterprise project ID. Array length: **1–10**
vpc_id	No	Array	Specifies the VPC ID by which virtual gateways are queried.

Request Parameters

Table 4-61 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-62 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
virtual_gateways	Array of **VirtualGateway** objects	Specifies the virtual gateway list.
page_info	**PageInfo** object	Specifies the pagination query information.

Table 4-63 VirtualGateway

Parameter	Type	Description
id	String	Specifies the virtual gateway ID.
vpc_id	String	Specifies the ID of the VPC connected using the virtual gateway.
tenant_id	String	Specifies the project ID. Minimum: **32** Maximum: **32**

Parameter	Type	Description
name	String	Specifies the virtual gateway name. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the virtual gateway. Minimum: **0** Maximum: **128**
type	String	Specifies the virtual gateway type. The value can only be **default**. Default: **default**
local_ep_group	Array of strings	Specifies the IPv4 subnets of the associated VPC that can be accessed over the virtual gateway.
local_ep_group_ipv6	Array of strings	Specifies the IPv6 subnets of the associated VPC that can be accessed over the virtual gateway. This is a reserved field.
admin_state_up	Boolean	Specifies the administrative status. The value can be **true** or **false**. Default: **true**
status	String	Specifies the operating status. The value can be **ACTIVE**, **DOWN**, **BUILD**, **ERROR**, **PENDING_CREATE**, **PENDING_UPDATE**, or **PENDING_DELETE**.
bgp_asn	Integer	Specifies the local BGP ASN of the virtual gateway. Minimum: **1** Maximum: **4294967295**
enterprise_project_id	String	Specifies the ID of the enterprise project that the virtual gateway belongs to. Minimum: **36** Maximum: **36**
device_id	String	Specifies the ID of the device that the virtual interface belongs to.
redundant_device_id	String	Specifies the ID of the redundant device.
public_border_group	String	Specifies the public border group of the AZ, indicating whether the site is a HomeZones site.

Parameter	Type	Description
tags	Array of **Tag** objects	Specifies the tags. Array length: **0–10**

Table 4-64 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Table 4-65 PageInfo

Parameter	Type	Description
previous_marker	String	Specifies the marker of the previous page. The value is the resource UUID. Minimum: **0** Maximum: **36**
current_count	Integer	Specifies the number of resources in the current list. Minimum: **0** Maximum: **2000**
next_marker	String	Specifies the marker of the next page. The value is the resource UUID. If this parameter is left empty, the resource is on the last page. Minimum: **0** Maximum: **36**

Example Requests

Querying the virtual gateway list


```
GET https://{dc_endpoint}/v3/0605768a3300d5762f82c01180692873/dcaas/virtual-gateways
```

Example Responses

Status code: 200

OK

- The list of virtual gateways associated with VPCs is queried.

```
{
  "virtual_gateways" : [ {
    "id" : "20082c1b-3c99-48d8-8e8c-116af5d7e9f0",
    "name" : "vgw-c7b22",
    "description" : "",
    "tenant_id" : "0605768a3300d5762f82c01180692873",
    "vpc_id" : "6592c28e-95d7-4b0a-9f61-004fdf03420c",
    "device_id" : "26.151.63.100",
    "redundant_device_id" : "26.152.128.20",
    "type" : "default",
    "status" : "ACTIVE",
    "admin_state_up" : true,
    "bgp_asn" : 64512,
    "local_ep_group" : [ "192.168.1.0/24" ],
    "enterprise_project_id" : "0",
    "public_border_group" : "center"
  } ],
  "request_id" : "765f7aaf8f2edd0e719de564ef72e2de"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class ListVirtualGatewaysSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
```



```
            .withRegion(DcRegion.valueOf("<YOUR REGION>"))
            .build();
        ListVirtualGatewaysRequest request = new ListVirtualGatewaysRequest();
        request.withVpcId();
        request.withLimit(<limit>);
        request.withMarker("<marker>");
        request.withFields();
        request.withSortDir();
        request.withSortKey("<sort_key>");
        request.withId();
        request.withEnterpriseProjectId();
        try {
            ListVirtualGatewaysResponse response = client.listVirtualGateways(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListVirtualGatewaysRequest()
        request.vpc_id =
        request.limit = <limit>
        request.marker = "<marker>"
        request.fields =
        request.sort_dir =
        request.sort_key = "<sort_key>"
        request.id =
        request.enterprise_project_id =
        response = client.list_virtual_gateways(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
```



```
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListVirtualGatewaysRequest{}
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    sortKeyRequest:= "<sort_key>"
    request.SortKey = &sortKeyRequest
    response, err := client.ListVirtualGateways(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.2.3 Querying Details About a Virtual Gateway

Function

This API is used to query details about a specific virtual gateway.

Debugging

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/virtual-gateways/{virtual_gateway_id}

Table 4-66 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
virtual_gateway_id	Yes	String	Specifies the virtual gateway ID.

Table 4-67 Query parameters

Parameter	Mandatory	Type	Description
fields	No	Array	Specifies the list of fields to be displayed. Array length: **1–5**

Request Parameters

Table 4-68 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-69 Response body parameters

Parameter	Type	Description
virtual_gateway	**VirtualGateway** object	Specifies the virtual gateway.
request_id	String	Specifies the request ID.

Table 4-70 VirtualGateway

Parameter	Type	Description
id	String	Specifies the virtual gateway ID.
vpc_id	String	Specifies the ID of the VPC connected using the virtual gateway.
tenant_id	String	Specifies the project ID. Minimum: **32** Maximum: **32**
name	String	Specifies the virtual gateway name. Minimum: **0** Maximum: **64**

Parameter	Type	Description
description	String	Provides supplementary information about the virtual gateway. Minimum: **0** Maximum: **128**
type	String	Specifies the virtual gateway type. The value can only be **default**. Default: **default**
local_ep_group	Array of strings	Specifies the IPv4 subnets of the associated VPC that can be accessed over the virtual gateway.
local_ep_group_ipv6	Array of strings	Specifies the IPv6 subnets of the associated VPC that can be accessed over the virtual gateway. This is a reserved field.
admin_state_up	Boolean	Specifies the administrative status. The value can be **true** or **false**. Default: **true**
status	String	Specifies the operating status. The value can be **ACTIVE**, **DOWN**, **BUILD**, **ERROR**, **PENDING_CREATE**, **PENDING_UPDATE**, or **PENDING_DELETE**.
bgp_asn	Integer	Specifies the local BGP ASN of the virtual gateway. Minimum: **1** Maximum: **4294967295**
enterprise_project_id	String	Specifies the ID of the enterprise project that the virtual gateway belongs to. Minimum: **36** Maximum: **36**
device_id	String	Specifies the ID of the device that the virtual interface belongs to.
redundant_device_id	String	Specifies the ID of the redundant device.
public_border_group	String	Specifies the public border group of the AZ, indicating whether the site is a HomeZones site.
tags	Array of **Tag** objects	Specifies the tags. Array length: **0–10**

Table 4-71 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Example Requests

Querying a virtual gateway

```
GET https://{dc_endpoint}/v3/0605768a3300d5762f82c01180692873/dcaas/virtual-gateways/
20082c1b-3c99-48d8-8e8c-116af5d7e9f0
```

Example Responses

Status code: 200

OK

- The details of the virtual gateway associated with a VPC are queried.

```
{
  "virtual_gateway" : {
    "id" : "20082c1b-3c99-48d8-8e8c-116af5d7e9f0",
    "name" : "vgw-c7b22",
    "description" : "",
    "tenant_id" : "0605768a3300d5762f82c01180692873",
    "vpc_id" : "6592c28e-95d7-4b0a-9f61-004fdf03420c",
    "device_id" : "26.151.63.100",
    "redundant_device_id" : "26.152.128.20",
    "type" : "default",
    "status" : "ACTIVE",
    "admin_state_up" : true,
    "bgp_asn" : 64512,
    "local_ep_group" : [ "192.168.1.0/24" ],
    "enterprise_project_id" : "0",
    "public_border_group" : "center"
  },
  "request_id" : "765f7aaf8f2edd0e719de564ef72e2de"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class ShowVirtualGatewaySolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowVirtualGatewayRequest request = new ShowVirtualGatewayRequest();
        request.withFields();
        try {
            ShowVirtualGatewayResponse response = client.showVirtualGateway(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
```

```
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowVirtualGatewayRequest()
        request.fields =
        response = client.show_virtual_gateway(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowVirtualGatewayRequest{}
    response, err := client.ShowVirtualGateway(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.2.4 Updating a Virtual Gateway

Function

This API is used to update a virtual gateway.

Debugging

For details, see **Calling APIs**.

URI

PUT /v3/{project_id}/dcaas/virtual-gateways/{virtual_gateway_id}

Table 4-72 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
virtual_gateway_id	Yes	String	Specifies the virtual gateway ID.

Request Parameters

Table 4-73 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-74 Request body parameters

Parameter	Mandatory	Type	Description
virtual_gateway	No	**UpdateVirtualGateway** object	Specifies the virtual gateway to be updated.

Table 4-75 UpdateVirtualGateway

Parameter	Mandatory	Type	Description
name	No	String	Specifies the virtual gateway name. Minimum: **0** Maximum: **64**
description	No	String	Provides supplementary information about the virtual gateway. Minimum: **0** Maximum: **128**
local_ep_group	No	Array of strings	Specifies the IPv4 subnets of the associated VPC that can be accessed over the virtual gateway. Array length: **1–200**

Parameter	Mandatory	Type	Description
local_ep_group_ipv6	No	Array of strings	Specifies the IPv6 subnets of the associated VPC that can be accessed over the virtual gateway. Array length: **1–50**

Response Parameters

Status code: 200

Table 4-76 Response body parameters

Parameter	Type	Description
virtual_gateway	**VirtualGateway** object	Specifies the virtual gateway.
request_id	String	Specifies the request ID.

Table 4-77 VirtualGateway

Parameter	Type	Description
id	String	Specifies the virtual gateway ID.
vpc_id	String	Specifies the ID of the VPC connected using the virtual gateway.
tenant_id	String	Specifies the project ID. Minimum: **32** Maximum: **32**
name	String	Specifies the virtual gateway name. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the virtual gateway. Minimum: **0** Maximum: **128**
type	String	Specifies the virtual gateway type. The value can only be **default**. Default: **default**

Parameter	Type	Description
local_ep_group	Array of strings	Specifies the IPv4 subnets of the associated VPC that can be accessed over the virtual gateway.
local_ep_group_ipv6	Array of strings	Specifies the IPv6 subnets of the associated VPC that can be accessed over the virtual gateway. This is a reserved field.
admin_state_up	Boolean	Specifies the administrative status. The value can be **true** or **false**. Default: **true**
status	String	Specifies the operating status. The value can be **ACTIVE**, **DOWN**, **BUILD**, **ERROR**, **PENDING_CREATE**, **PENDING_UPDATE**, or **PENDING_DELETE**.
bgp_asn	Integer	Specifies the local BGP ASN of the virtual gateway. Minimum: **1** Maximum: **4294967295**
enterprise_project_id	String	Specifies the ID of the enterprise project that the virtual gateway belongs to. Minimum: **36** Maximum: **36**
device_id	String	Specifies the ID of the device that the virtual interface belongs to.
redundant_device_id	String	Specifies the ID of the redundant device.
public_border_group	String	Specifies the public border group of the AZ, indicating whether the site is a HomeZones site.
tags	Array of **Tag** objects	Specifies the tags. Array length: **0–10**

Table 4-78 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Example Requests

Updating the name and description of a virtual gateway and changing its IPv4 subnet to 192.168.3.0/24

```
PUT https://{dc_endpoint}/v3/0605768a3300d5762f82c01180692873/dcaas/virtual-gateways/
20082c1b-3c99-48d8-8e8c-116af5d7e9f0

{
  "virtual_gateway" : {
    "name" : "update-vgw-c7b22",
    "description" : "",
    "local_ep_group" : [ "192.168.3.0/24" ]
  }
}
```

Example Responses

Status code: 200

OK

- The virtual gateway associated with a VPC is updated.

```
{
  "virtual_gateway" : {
    "id" : "20082c1b-3c99-48d8-8e8c-116af5d7e9f0",
    "name" : "update-vgw-c7b22",
    "description" : "",
    "tenant_id" : "0605768a3300d5762f82c01180692873",
    "vpc_id" : "6592c28e-95d7-4b0a-9f61-004fdf03420c",
    "device_id" : "26.151.63.100",
    "redundant_device_id" : "26.152.128.20",
    "type" : "default",
    "status" : "ACTIVE",
    "admin_state_up" : true,
    "bgp_asn" : 64512,
    "local_ep_group" : [ "192.168.3.0/24" ],
    "enterprise_project_id" : "0",
    "public_border_group" : "center"
  },
```



```
  "request_id" : "765f7aaf8f2edd0e719de564ef72e2de"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Updating the name and description of a virtual gateway and changing its IPv4 subnet to 192.168.3.0/24

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class UpdateVirtualGatewaySolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateVirtualGatewayRequest request = new UpdateVirtualGatewayRequest();
        UpdateVirtualGatewayRequestBody body = new UpdateVirtualGatewayRequestBody();
        List<String> listVirtualGatewayLocalEpGroup = new ArrayList<>();
        listVirtualGatewayLocalEpGroup.add("192.168.3.0/24");
        UpdateVirtualGateway virtualGatewaybody = new UpdateVirtualGateway();
        virtualGatewaybody.withName("update-vgw-c7b22")
            .withDescription("")
            .withLocalEpGroup(listVirtualGatewayLocalEpGroup);
        body.withVirtualGateway(virtualGatewaybody);
        request.withBody(body);
        try {
            UpdateVirtualGatewayResponse response = client.updateVirtualGateway(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
```



```
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Updating the name and description of a virtual gateway and changing its IPv4 subnet to 192.168.3.0/24

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdateVirtualGatewayRequest()
        listLocalEpGroupVirtualGateway = [
            "192.168.3.0/24"
        ]
        virtualGatewaybody = UpdateVirtualGateway(
            name="update-vgw-c7b22",
            description="",
            local_ep_group=listLocalEpGroupVirtualGateway
        )
        request.body = UpdateVirtualGatewayRequestBody(
            virtual_gateway=virtualGatewaybody
        )
        response = client.update_virtual_gateway(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Updating the name and description of a virtual gateway and changing its IPv4 subnet to 192.168.3.0/24

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
```



```
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateVirtualGatewayRequest{}
    var listLocalEpGroupVirtualGateway = []string{
        "192.168.3.0/24",
    }
    nameVirtualGateway:= "update-vgw-c7b22"
    descriptionVirtualGateway:= ""
    virtualGatewaybody := &model.UpdateVirtualGateway{
        Name: &nameVirtualGateway,
        Description: &descriptionVirtualGateway,
        LocalEpGroup: &listLocalEpGroupVirtualGateway,
    }
    request.Body = &model.UpdateVirtualGatewayRequestBody{
        VirtualGateway: virtualGatewaybody,
    }
    response, err := client.UpdateVirtualGateway(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.2.5 Deleting a Virtual Gateway

Function

The API is used to delete a specific virtual gateway.

Debugging

For details, see **Calling APIs**.

URI

DELETE /v3/{project_id}/dcaas/virtual-gateways/{virtual_gateway_id}

Table 4-79 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
virtual_gateway_id	Yes	String	Specifies the virtual gateway ID.

Request Parameters

Table 4-80 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

None

Example Requests

Deleting a virtual gateway


```
DELETE https://{dc_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/dcaas/virtual-gateways/
20082c1b-3c99-48d8-8e8c-116af5d7e9f0
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class DeleteVirtualGatewaySolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteVirtualGatewayRequest request = new DeleteVirtualGatewayRequest();
        try {
            DeleteVirtualGatewayResponse response = client.deleteVirtualGateway(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8
```



```
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteVirtualGatewayRequest()
        response = client.delete_virtual_gateway(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteVirtualGatewayRequest{}
    response, err := client.DeleteVirtualGateway(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
```



```
  }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	No Content

Error Codes

See **Error Codes**.

4.3 Virtual Interfaces

4.3.1 Creating a Virtual Interface

Function

This API is used to create a virtual interface.

Debugging

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/dcaas/virtual-interfaces

Table 4-81 Path parameters

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

Request Parameters

Table 4-82 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-83 Request body parameters

Parameter	Mandatory	Type	Description
virtual_interface	Yes	**CreateVirtualInterface** object	Specifies the virtual interface to be created.

Table 4-84 CreateVirtualInterface

Parameter	Mandatory	Type	Description
name	No	String	Specifies the virtual interface name. Minimum: **0** Maximum: **64**
description	No	String	Provides supplementary information about the virtual interface. Minimum: **0** Maximum: **128**

Parameter	Mandatory	Type	Description
direct_connect_id	No	String	Specifies the ID of the connection associated with the virtual interface. When creating a virtual interface, you need to specify **direct_connect_id** or **lag_id**. This parameter is mandatory when LAG is not supported at the site.
type	Yes	String	Specifies the type of the virtual interface. The value is **private**. Enumeration values: **private**
service_type	No	String	Specifies the gateway type. The value can be **VGW**, **GDGW**, or **LGW**. You do not need to configure this parameter if a virtual gateway is used. Enumeration values: • **VGW** • **GDGW** • **LGW**
vlan	Yes	Integer	Specifies the customer VLAN to be connected. If you select a hosted connection, the VLAN must be the same as that of the hosted connection. Minimum: **0** Maximum: **3999**
bandwidth	Yes	Integer	Specifies the virtual interface bandwidth. Minimum: **2** Maximum: **2147483647**
local_gateway_v4_ip	No	String	Specifies the IPv4 interface address of the gateway used on the cloud. This parameter is mandatory if **address_family** is set to an IPv4 address.

Parameter	Mandatory	Type	Description
remote_gateway_v4_ip	No	String	Specifies the IPv4 interface address of the gateway on the on-premises network. This parameter is mandatory if **address_family** is set to an IPv4 address.
address_family	No	String	Specifies the address family of the virtual interface. The value can be **IPv4** or **IPv6**. Default: **ipv4**
local_gateway_v6_ip	No	String	Specifies the IPv6 interface address of the gateway used on the cloud. This parameter is mandatory if **address_family** is set to an IPv6 address.
remote_gateway_v6_ip	No	String	Specifies the IPv6 interface address of the gateway on the on-premises network. This parameter is mandatory if **address_family** is set to an IPv6 address.
vgw_id	Yes	String	Specifies the ID of the virtual gateway connected by the virtual interface.
route_mode	Yes	String	Specifies the routing mode. The value can be **static** or **bgp**. Default: **static** Enumeration values: • **static** • **bgp**
bgp_asn	No	Integer	Specifies the ASN of the BGP peer on the customer side. Minimum: **1** Maximum: **4294967295**
bgp_md5	No	String	Specifies the MD5 password of the BGP peer.
remote_ep_group	Yes	Array of strings	Specifies the remote subnet list, which records the CIDR blocks used in the on-premises data center.

Parameter	Mandatory	Type	Description
service_ep_group	No	Array of strings	Specifies the subnets that access Internet services through a connection.
enable_bfd	No	Boolean	Specifies whether to enable BFD. The value can be **true** or **false**. Default: **false**
enable_nqa	No	Boolean	Specifies whether to enable NQA. The value can be **true** or **false**. Default: **false**
lag_id	No	String	Specifies the ID of the LAG associated with the virtual interface. Minimum: **36** Maximum: **36**
resource_tenant_id	No	String	Specifies the project ID of another tenant, which is used to create virtual interfaces across tenants.
enterprise_project_id	No	String	Specifies the ID of the enterprise project that the virtual interface belongs to. Minimum: **36** Maximum: **36**
tags	No	Array of **Tag** objects	Specifies the tags. Array length: **0–10**

Table 4-85 Tag

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**

Parameter	Mandatory	Type	Description
value	No	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Response Parameters

Status code: 201

Table 4-86 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
virtual_interface	**VirtualInterface** object	Specifies the virtual interface.

Table 4-87 VirtualInterface

Parameter	Type	Description
id	String	Specifies the virtual interface ID. Maximum: **36**
name	String	Specifies the virtual interface name. Maximum: **64**
admin_state_up	Boolean	Specifies the administrative status. The value can be **true** or **false**.
bandwidth	Integer	Specifies the virtual interface bandwidth. Minimum: **2** Maximum: **2147483647**
create_time	String	Specifies when the virtual interface was created. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*. Maximum: **255**

Parameter	Type	Description
update_time	String	Specifies when the virtual interface was updated. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*. Maximum: **255**
description	String	Provides supplementary information about the virtual interface. Maximum: **128**
direct_connect_id	String	Specifies the connection ID. Maximum: **36**
service_type	String	Specifies the gateway type. The value can be **VGW**, **GDGW**, or **LGW**. Enumeration values: • **VGW** • **GDGW** • **LGW**
status	String	Specifies the operating status. The value can be **ACTIVE**, **DOWN**, **BUILD**, **ERROR**, **PENDING_CREATE**, **PENDING_UPDATE**, **PENDING_DELETE**, **DELETED**, **AUTHORIZATION**, or **REJECTED**.
tenant_id	String	Specifies the project ID. Minimum: **32** Maximum: **32**
type	String	Specifies the type of the virtual interface. The value is **private**. Default: **private** Maximum: **255** Enumeration values: **private**
vgw_id	String	Specifies the virtual gateway ID. Minimum: **36** Maximum: **36**
vlan	Integer	Specifies the VLAN for connecting to the customer gateway. The value ranges from **0** to **3999**. Minimum: **0** Maximum: **3999**

Parameter	Type	Description
route_limit	Integer	Specifies the remote subnet route configurations of the virtual interface. Minimum: **1** Maximum: **200** Default: **50**
enable_nqa	Boolean	Specifies whether NQA is enabled. The value can be **true** or **false**.
enable_bfd	Boolean	Specifies whether BFD is enabled. The value can be **true** or **false**.
lag_id	String	Specifies the ID of the LAG associated with the virtual interface. Minimum: **36** Maximum: **36**
device_id	String	Specifies the ID of the device that the virtual interface belongs to.
enterprise_project_id	String	Specifies the ID of the enterprise project that the virtual interface belongs to. Minimum: **36** Maximum: **36**
tags	Array of **Tag** objects	Specifies the tags. Array length: **0–10**
local_gateway_v4_ip	String	Specifies the IPv4 interface address of the gateway used on the cloud. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
remote_gateway_v4_ip	String	Specifies the IPv4 interface address of the gateway used on premises. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
ies_id	String	Specifies the edge site ID.
reason	String	Displays error information if the status of a line is **Error**.
rate_limit	Boolean	Specifies whether rate limiting is enabled on a virtual interface.
address_family	String	Specifies the address family of the virtual interface. The value can be **IPv4** or **IPv6**. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.

Parameter	Type	Description
local_gateway_v6_ip	String	Specifies the IPv6 interface address of the gateway used on the cloud. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
remote_gateway_v6_ip	String	Specifies the IPv6 interface address of the gateway used on premises. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
lgw_id	String	Specifies the ID of the local gateway, which is used in IES scenarios.
gateway_id	String	Specifies the ID of the gateway associated with the virtual interface.
remote_ep_group	Array of strings	Specifies the remote subnet list, which records the CIDR blocks used in the on-premises data center. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
service_ep_group	Array of strings	Specifies the list of public network addresses that can be accessed by the on-premises data center. This field is required in the APIs of public network connections. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
bgp_route_limit	Integer	Specifies the BGP route configuration.
priority	String	Specifies the priority of a virtual interface. The value can be **normal** or **low**. If the priorities are the same, the virtual interfaces work in load balancing mode. If the priorities are different, the virtual interfaces work in active/standby pairs. Outbound traffic is preferentially forwarded to the normal virtual interface with a higher priority. This option is only supported by virtual interfaces that use BGP routing. Default: **normal** Enumeration values: • **normal** • **low**
vif_peers	Array of **VifPeer** objects	Provides information about virtual interface peers.
extend_attribute	**VifExtendAttribute** object	Provides extended parameter information.

Table 4-88 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Table 4-89 VifPeer

Parameter	Type	Description
id	String	Specifies the resource ID. Minimum: **36** Maximum: **36**
tenant_id	String	Specifies the ID of the project that the virtual interface peer belongs to. Minimum: **36** Maximum: **36**
name	String	Specifies the name of the virtual interface peer. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the virtual interface peer. Minimum: **0** Maximum: **128**
address_family	String	Specifies the address family of the virtual interface. The value can be **IPv4** or **IPv6**.
local_gateway_ip	String	Specifies the gateway address of the virtual interface peer used on the cloud.

Parameter	Type	Description
remote_gateway_ip	String	Specifies the gateway of the virtual interface peer used in the on-premises data center.
route_mode	String	Specifies the routing mode. The value can be **static** or **bgp**. Maximum: **255** Enumeration values: • **bgp** • **static**
bgp_asn	Integer	Specifies the ASN of the BGP peer. Minimum: **1** Maximum: **4294967295**
bgp_md5	String	Specifies the MD5 password of the BGP peer.
remote_ep_group	Array of strings	Specifies the remote subnet list, which records the CIDR blocks used in the on-premises data center.
service_ep_group	Array of strings	Specifies the list of public network addresses that can be accessed by the on-premises data center. This field is required in the APIs of public network connections.
device_id	String	Specifies the ID of the device that the virtual interface peer belongs to.
bgp_route_limit	Integer	Specifies the BGP route configuration.
bgp_status	String	Specifies the BGP protocol status of the virtual interface peer. If the virtual interface peer uses static routing, the status is **null**. Maximum: **10**
status	String	Specifies the status of the virtual interface peer.
vif_id	String	Specifies the ID of the virtual interface corresponding to the virtual interface peer. Minimum: **36** Maximum: **36**
receive_route_num	Integer	Specifies the number of received BGP routes if BGP routing is used. If static routing is used, this parameter is meaningless and the value is **-1**. If this parameter cannot be obtained, contact customer service to migrate your ports.

Parameter	Type	Description
enable_nqa	Boolean	Specifies whether NQA is enabled. The value can be **true** or **false**.
enable_bfd	Boolean	Specifies whether BFD is enabled. The value can be **true** or **false**.

Table 4-90 VifExtendAttribute

Parameter	Type	Description
ha_type	String	Specifies the availability detection type of the virtual interface. Enumeration values: • **nqa** • **bfd**
ha_mode	String	Specifies the availability detection mode. Enumeration values: • **auto_single** • **auto_multi** • **static_single** • **static_multi** • **enhance_nqa**
detect_multiplier	Integer	Specifies the number of detection retries. Default: **5**
min_rx_interval	Integer	Specifies the interval for receiving detection packets. Default: **1000**
min_tx_interval	Integer	Specifies the interval for sending detection packets. Default: **1000**
remote_disclaim	Integer	Specifies the remote identifier of the static BFD session.
local_disclaim	Integer	Specifies the local identifier of the static BFD session.

Example Requests

- Creating a private virtual interface, with the bandwidth set to 2 Mbit/s, VLAN to 332, local gateway to 1.1.1.1/30, and remote gateway to 1.1.1.2/30, and routing mode to static routing

```
POST https://{dc_endpoint}/v3/0605768a3300d5762f82c01180692873/dcaas/virtual-interfaces
```



```
{
  "virtual_interface" : {
    "name" : "vif-0819",
    "description" : "mytest",
    "direct_connect_id" : "4673e339-8412-4ee1-b73e-2ba9cdfa54c1",
    "vgw_id" : "8a47064a-f34c-4f94-b7fe-cac456c9b37b",
    "vlan" : 332,
    "bandwidth" : 2,
    "local_gateway_v4_ip" : "1.1.1.1/30",
    "remote_gateway_v4_ip" : "1.1.1.2/30",
    "type" : "private",
    "route_mode" : "static",
    "remote_ep_group" : [ "1.1.2.0/30" ]
  }
}
```

Example Responses

Status code: 201

Created

```
{
  "virtual_interface" : {
    "id" : "0d0fdf63-f2c4-491c-8866-d504796189be",
    "name" : "vif-0819",
    "description" : "mytest",
    "tenant_id" : "0605768a3300d5762f82c01180692873",
    "direct_connect_id" : "4673e339-8412-4ee1-b73e-2ba9cdfa54c1",
    "vgw_id" : "8a47064a-f34c-4f94-b7fe-cac456c9b37b",
    "type" : "private",
    "service_type" : "VGW",
    "vlan" : 332,
    "bandwidth" : 2,
    "device_id" : "18.9.215.131",
    "status" : "ACTIVE",
    "create_time" : "2022-08-19T11:28:06.000Z",
    "update_time" : "2022-08-19T11:28:06.000Z",
    "admin_state_up" : true,
    "enable_bfd" : false,
    "route_limit" : 50,
    "enable_nqa" : false,
    "local_gateway_v4_ip" : "1.1.1.1/30",
    "remote_gateway_v4_ip" : "1.1.1.2/30",
    "ies_id" : null,
    "reason" : null,
    "rate_limit" : false,
    "local_gateway_v6_ip" : null,
    "remote_gateway_v6_ip" : null,
    "lgw_id" : null,
    "lag_id" : null,
    "priority" : "normal",
    "vif_peers" : [ {
      "id" : "c768eb52-12a8-4859-9b43-81194643040c",
      "tenant_id" : "0605768a3300d5762f82c01180692873",
      "name" : "vif-0819",
      "description" : "",
      "address_family" : "ipv4",
      "local_gateway_ip" : "1.1.1.1/30",
      "remote_gateway_ip" : "1.1.1.2/30",
      "route_mode" : "static",
      "bgp_asn" : null,
      "bgp_md5" : null,
      "device_id" : "18.9.215.131",
      "bgp_route_limit" : 100,
      "bgp_status" : null,
      "status" : "ACTIVE",
      "vif_id" : "0d0fdf63-f2c4-491c-8866-d504796189be",
      "receive_route_num" : -1,
      "remote_ep_group" : [ "1.1.2.0/30" ],
```



```
    "enable_bfd" : false,
    "enable_nqa" : false,
    "service_ep_group" : null
  } ],
  "enterprise_project_id" : "0"
 },
 "request_id" : "5633df7af874576d819a481c76673236"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Creating a private virtual interface, with the bandwidth set to 2 Mbit/s, VLAN to 332, local gateway to 1.1.1.1/30, and remote gateway to 1.1.1.2/30, and routing mode to static routing

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class CreateVirtualInterfaceSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateVirtualInterfaceRequest request = new CreateVirtualInterfaceRequest();
        CreateVirtualInterfaceRequestBody body = new CreateVirtualInterfaceRequestBody();
        List<String> listVirtualInterfaceRemoteEpGroup = new ArrayList<>();
        listVirtualInterfaceRemoteEpGroup.add("1.1.2.0/30");
        CreateVirtualInterface virtualInterfacebody = new CreateVirtualInterface();
        virtualInterfacebody.withName("vif-0819")
            .withDescription("mytest")
            .withDirectConnectId("4673e339-8412-4ee1-b73e-2ba9cdfa54c1")
            .withType(CreateVirtualInterface.TypeEnum.fromValue("private"))
            .withVlan(332)
            .withBandwidth(2)
            .withLocalGatewayV4Ip("1.1.1.1/30")
            .withRemoteGatewayV4Ip("1.1.1.2/30")
            .withVgwId("8a47064a-f34c-4f94-b7fe-cac456c9b37b")
            .withRouteMode(CreateVirtualInterface.RouteModeEnum.fromValue("static"))
```



```
            .withRemoteEpGroup(listVirtualInterfaceRemoteEpGroup);
        body.withVirtualInterface(virtualInterfacebody);
        request.withBody(body);
        try {
            CreateVirtualInterfaceResponse response = client.createVirtualInterface(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Creating a private virtual interface, with the bandwidth set to 2 Mbit/s, VLAN to 332, local gateway to 1.1.1.1/30, and remote gateway to 1.1.1.2/30, and routing mode to static routing

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateVirtualInterfaceRequest()
        listRemoteEpGroupVirtualInterface = [
            "1.1.2.0/30"
        ]
        virtualInterfacebody = CreateVirtualInterface(
            name="vif-0819",
            description="mytest",
            direct_connect_id="4673e339-8412-4ee1-b73e-2ba9cdfa54c1",
            type="private",
            vlan=332,
            bandwidth=2,
            local_gateway_v4_ip="1.1.1.1/30",
            remote_gateway_v4_ip="1.1.1.2/30",
            vgw_id="8a47064a-f34c-4f94-b7fe-cac456c9b37b",
            route_mode="static",
            remote_ep_group=listRemoteEpGroupVirtualInterface
        )
        request.body = CreateVirtualInterfaceRequestBody(
```



```
            virtual_interface=virtualInterfacebody
        )
        response = client.create_virtual_interface(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Creating a private virtual interface, with the bandwidth set to 2 Mbit/s, VLAN to 332, local gateway to 1.1.1.1/30, and remote gateway to 1.1.1.2/30, and routing mode to static routing

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateVirtualInterfaceRequest{}
    var listRemoteEpGroupVirtualInterface = []string{
        "1.1.2.0/30",
    }
    nameVirtualInterface:= "vif-0819"
    descriptionVirtualInterface:= "mytest"
    directConnectIdVirtualInterface:= "4673e339-8412-4ee1-b73e-2ba9cdfa54c1"
    localGatewayV4IpVirtualInterface:= "1.1.1.1/30"
    remoteGatewayV4IpVirtualInterface:= "1.1.1.2/30"
    virtualInterfacebody := &model.CreateVirtualInterface{
        Name: &nameVirtualInterface,
        Description: &descriptionVirtualInterface,
        DirectConnectId: &directConnectIdVirtualInterface,
        Type: model.GetCreateVirtualInterfaceTypeEnum().PRIVATE,
        Vlan: int32(332),
        Bandwidth: int32(2),
        LocalGatewayV4Ip: &localGatewayV4IpVirtualInterface,
        RemoteGatewayV4Ip: &remoteGatewayV4IpVirtualInterface,
        VgwId: "8a47064a-f34c-4f94-b7fe-cac456c9b37b",
        RouteMode: model.GetCreateVirtualInterfaceRouteModeEnum().STATIC,
        RemoteEpGroup: listRemoteEpGroupVirtualInterface,
    }
```



```
    request.Body = &model.CreateVirtualInterfaceRequestBody{
        VirtualInterface: virtualInterfacebody,
    }
    response, err := client.CreateVirtualInterface(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
201	Created

Error Codes

See **Error Codes**.

4.3.2 Querying the Virtual Interface List

Function

This API is used to query the virtual interface list.

Debugging

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/virtual-interfaces

Table 4-91 Path parameters

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

Table 4-92 Query parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the number of records returned on each page. Value range: **1–2000** Minimum: **1** Maximum: **2000** Default: **2000**
marker	No	String	Specifies the ID of the last resource record on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with **limit**. Minimum: **0** Maximum: **36**
fields	No	Array	Specifies the list of fields to be displayed. Array length: **1–5**
sort_dir	No	Array	Specifies the sorting order of returned results. The value can be **asc** (default) or **desc**.
sort_key	No	String	Specifies the field for sorting. Default: **id** Minimum: **0** Maximum: **36**
enterprise_project_id	No	Array	Filters resource instances by enterprise project ID. Array length: **1–10**
id	No	Array	Specifies the resource ID by which instances are queried. Array length: **1–5**
status	No	Array	Specifies the status by which instances are queried. Array length: **1–5**
direct_connect_id	No	Array	Specifies the connection ID by which virtual interfaces are queried. Array length: **1–5**

Parameter	Mandatory	Type	Description
vgw_id	No	Array	Specifies the virtual gateway ID by which virtual interfaces are queried. Array length: **1–5**

Request Parameters

Table 4-93 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-94 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
virtual_interfaces	Array of **VirtualInterface** objects	Specifies the virtual interface.
page_info	**PageInfo** object	Specifies the pagination query information.

Table 4-95 VirtualInterface

Parameter	Type	Description
id	String	Specifies the virtual interface ID. Maximum: **36**
name	String	Specifies the virtual interface name. Maximum: **64**
admin_state_up	Boolean	Specifies the administrative status. The value can be **true** or **false**.
bandwidth	Integer	Specifies the virtual interface bandwidth. Minimum: **2** Maximum: **2147483647**
create_time	String	Specifies when the virtual interface was created. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*. Maximum: **255**
update_time	String	Specifies when the virtual interface was updated. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*. Maximum: **255**
description	String	Provides supplementary information about the virtual interface. Maximum: **128**
direct_connect_id	String	Specifies the connection ID. Maximum: **36**
service_type	String	Specifies the gateway type. The value can be **VGW**, **GDGW**, or **LGW**. You do not need to configure this parameter if a virtual gateway is used. Enumeration values: • **VGW** • **GDGW** • **LGW**
status	String	Specifies the operating status. The value can be **ACTIVE**, **DOWN**, **BUILD**, **ERROR**, **PENDING_CREATE**, **PENDING_UPDATE**, **PENDING_DELETE**, **DELETED**, **AUTHORIZATION**, or **REJECTED**.
tenant_id	String	Specifies the project ID. Minimum: **32** Maximum: **32**

Parameter	Type	Description
type	String	Specifies the type of the virtual interface. The value is **private**. Default: **private** Maximum: **255** Enumeration value: **private**
vgw_id	String	Specifies the virtual gateway ID. Minimum: **36** Maximum: **36**
vlan	Integer	Specifies the VLAN for connecting to the customer gateway. The value ranges from **0** to **3999**. Minimum: **0** Maximum: **3999**
route_limit	Integer	Specifies the remote subnet route configurations of the virtual interface. Minimum: **1** Maximum: **200** Default: **50**
enable_nqa	Boolean	Specifies whether NQA is enabled. The value can be **true** or **false**.
enable_bfd	Boolean	Specifies whether BFD is enabled. The value can be **true** or **false**.
lag_id	String	Specifies the ID of the LAG associated with the virtual interface. Minimum: **36** Maximum: **36**
device_id	String	Specifies the ID of the device that the virtual interface belongs to.
enterprise_project_id	String	Specifies the ID of the enterprise project that the virtual interface belongs to. Minimum: **36** Maximum: **36**
tags	Array of **Tag** objects	Specifies the tags. Array length: **0–10**
local_gateway_v4_ip	String	Specifies the IPv4 interface address of the gateway used on the cloud. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.

Parameter	Type	Description
remote_gateway_v4_ip	String	Specifies the IPv4 interface address of the gateway used on premises. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
ies_id	String	Specifies the edge site ID.
reason	String	Displays error information if the status of a line is **Error**.
rate_limit	Boolean	Specifies whether rate limiting is enabled on a virtual interface.
address_family	String	Specifies the address family of the virtual interface. The value can be **IPv4** or **IPv6**. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
local_gateway_v6_ip	String	Specifies the IPv6 interface address of the gateway used on the cloud. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
remote_gateway_v6_ip	String	Specifies the IPv6 interface address of the gateway used on premises. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
lgw_id	String	Specifies the ID of the local gateway, which is used in IES scenarios.
gateway_id	String	Specifies the ID of the gateway associated with the virtual interface.
remote_ep_group	Array of strings	Specifies the remote subnet list, which records the CIDR blocks used in the on-premises data center. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
service_ep_group	Array of strings	Specifies the list of public network addresses that can be accessed by the on-premises data center. This field is required in the APIs of public network connections. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
bgp_route_limit	Integer	Specifies the BGP route configuration.

Parameter	Type	Description
priority	String	Specifies the priority of a virtual interface. The value can be **normal** or **low**. If the priorities are the same, the virtual interfaces work in load balancing mode. If the priorities are different, the virtual interfaces work in active/standby pairs. Outbound traffic is preferentially forwarded to the normal virtual interface with a higher priority. This option is only supported by virtual interfaces that use BGP routing. Default: **normal** Enumeration values: • **normal** • **low**
vif_peers	Array of **VifPeer** objects	Provides information about virtual interface peers.
extend_attribute	**VifExtendAttribute** object	Provides extended parameter information.

Table 4-96 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Table 4-97 VifPeer

Parameter	Type	Description
id	String	Specifies the resource ID. Minimum: **36** Maximum: **36**
tenant_id	String	Specifies the ID of the project that the virtual interface peer belongs to. Minimum: **36** Maximum: **36**
name	String	Specifies the name of the virtual interface peer. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the virtual interface peer. Minimum: **0** Maximum: **128**
address_family	String	Specifies the address family of the virtual interface. The value can be **IPv4** or **IPv6**.
local_gateway_ip	String	Specifies the gateway address of the virtual interface peer used on the cloud.
remote_gateway_ip	String	Specifies the gateway of the virtual interface peer used in the on-premises data center.
route_mode	String	Specifies the routing mode. The value can be **static** or **bgp**. Maximum: **255** Enumeration values: • **bgp** • **static**
bgp_asn	Integer	Specifies the ASN of the BGP peer. Minimum: **1** Maximum: **4294967295**
bgp_md5	String	Specifies the MD5 password of the BGP peer.
remote_ep_group	Array of strings	Specifies the remote subnet list, which records the CIDR blocks used in the on-premises data center.
service_ep_group	Array of strings	Specifies the list of public network addresses that can be accessed by the on-premises data center. This field is required in the APIs of public network connections.

Parameter	Type	Description
device_id	String	Specifies the ID of the device that the virtual interface peer belongs to.
bgp_route_limit	Integer	Specifies the BGP route configuration.
bgp_status	String	Specifies the BGP protocol status of the virtual interface peer. If the virtual interface peer uses static routing, the status is **null**. Maximum: **10**
status	String	Specifies the status of the virtual interface peer.
vif_id	String	Specifies the ID of the virtual interface corresponding to the virtual interface peer. Minimum: **36** Maximum: **36**
receive_route_num	Integer	Specifies the number of received BGP routes if BGP routing is used. If static routing is used, this parameter is meaningless and the value is **-1**. If this parameter cannot be obtained, contact customer service to migrate your ports.
enable_nqa	Boolean	Specifies whether NQA is enabled. The value can be **true** or **false**.
enable_bfd	Boolean	Specifies whether BFD is enabled. The value can be **true** or **false**.

Table 4-98 VifExtendAttribute

Parameter	Type	Description
ha_type	String	Specifies the availability detection type of the virtual interface. Enumeration values: • **nqa** • **bfd**

Parameter	Type	Description
ha_mode	String	Specifies the availability detection mode. Enumeration values: • **auto_single** • **auto_multi** • **static_single** • **static_multi** • **enhance_nqa**
detect_multiplier	Integer	Specifies the number of detection retries. Default: **5**
min_rx_interval	Integer	Specifies the interval for receiving detection packets. Default: **1000**
min_tx_interval	Integer	Specifies the interval for sending detection packets. Default: **1000**
remote_disclaim	Integer	Specifies the remote identifier of the static BFD session.
local_disclaim	Integer	Specifies the local identifier of the static BFD session.

Table 4-99 PageInfo

Parameter	Type	Description
previous_marker	String	Specifies the marker of the previous page. The value is the resource UUID. Minimum: **0** Maximum: **36**
current_count	Integer	Specifies the number of resources in the current list. Minimum: **0** Maximum: **2000**
next_marker	String	Specifies the marker of the next page. The value is the resource UUID. If this parameter is left empty, the resource is on the last page. Minimum: **0** Maximum: **36**

Example Requests

Querying the virtual interface list

```
GET https://{dc_endpoint}/v3/0605768a3300d5762f82c01180692873/dcaas/virtual-interfaces
```

Example Responses

Status code: 200

OK


```
{
  "virtual_interfaces" : [ {
    "id" : "0d0fdf63-f2c4-491c-8866-d504796189be",
    "name" : "vif-0819",
    "description" : "mytest",
    "tenant_id" : "0605768a3300d5762f82c01180692873",
    "direct_connect_id" : "4673e339-8412-4ee1-b73e-2ba9cdfa54c1",
    "vgw_id" : "8a47064a-f34c-4f94-b7fe-cac456c9b37b",
    "type" : "private",
    "service_type" : "VGW",
    "vlan" : 332,
    "bandwidth" : 2,
    "status" : "ACTIVE",
    "create_time" : "2022-08-19T11:28:06.000Z",
    "update_time" : "2022-08-19T11:28:06.000Z",
    "admin_state_up" : true,
    "enable_bfd" : false,
    "route_limit" : 50,
    "enable_nqa" : false,
    "local_gateway_v4_ip" : "1.1.1.1/30",
    "remote_gateway_v4_ip" : "1.1.1.2/30",
    "ies_id" : null,
    "reason" : null,
    "rate_limit" : false,
    "address_family" : "ipv4",
    "local_gateway_v6_ip" : null,
    "remote_gateway_v6_ip" : null,
    "lgw_id" : null,
    "gateway_id" : null,
    "remote_ep_group" : [ "1.1.2.0/30" ],
    "service_ep_group" : [ ],
    "bgp_route_limit" : 100,
    "priority" : "normal",
    "vif_peers" : [ {
      "id" : "c768eb52-12a8-4859-9b43-81194643040c",
      "tenant_id" : "0605768a3300d5762f82c01180692873",
      "name" : "vif-0819",
      "description" : "",
      "address_family" : "ipv4",
      "local_gateway_ip" : "1.1.1.1/30",
      "remote_gateway_ip" : "1.1.1.2/30",
      "route_mode" : "static",
      "bgp_asn" : null,
      "bgp_md5" : null,
      "device_id" : "18.9.215.131",
      "bgp_route_limit" : 100,
      "bgp_status" : null,
      "status" : "ACTIVE",
      "vif_id" : "0d0fdf63-f2c4-491c-8866-d504796189be",
      "receive_route_num" : -1,
      "remote_ep_group" : [ "1.1.2.0/30" ],
      "service_ep_group" : null,
      "enable_bfd" : false,
      "enable_nqa" : false
    } ],
    "enterprise_project_id" : "0"
```

```
  } ],
  "request_id" : "5633df7af874576d819a481c76673236"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class ListVirtualInterfacesSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ListVirtualInterfacesRequest request = new ListVirtualInterfacesRequest();
        request.withDirectConnectId();
        request.withVgwId();
        request.withLimit(<limit>);
        request.withMarker("<marker>");
        request.withFields();
        request.withSortDir();
        request.withSortKey("<sort_key>");
        request.withEnterpriseProjectId();
        request.withId();
        request.withStatus();
        try {
            ListVirtualInterfacesResponse response = client.listVirtualInterfaces(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
```



```
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListVirtualInterfacesRequest()
        request.direct_connect_id =
        request.vgw_id =
        request.limit = <limit>
        request.marker = "<marker>"
        request.fields =
        request.sort_dir =
        request.sort_key = "<sort_key>"
        request.enterprise_project_id =
        request.id =
        request.status =
        response = client.list_virtual_interfaces(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
```



```
    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListVirtualInterfacesRequest{}
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    sortKeyRequest:= "<sort_key>"
    request.SortKey = &sortKeyRequest
    response, err := client.ListVirtualInterfaces(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.3.3 Querying Details About a Virtual Interface

Function

This API is used to querying details about a virtual interface.

Debugging

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/virtual-interfaces/{virtual_interface_id}

Table 4-100 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
virtual_interface_id	Yes	String	Specifies the virtual interface ID. Minimum: **36** Maximum: **36**

Table 4-101 Query parameters

Parameter	Mandatory	Type	Description
fields	No	Array	Specifies the list of fields to be displayed. Array length: **1–5**

Request Parameters

Table 4-102 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-103 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.

Parameter	Type	Description
virtual_interface	**VirtualInterface** object	Specifies the virtual interface.

Table 4-104 VirtualInterface

Parameter	Type	Description
id	String	Specifies the virtual interface ID. Maximum: **36**
name	String	Specifies the virtual interface name. Maximum: **64**
admin_state_up	Boolean	Specifies the administrative status. The value can be **true** or **false**.
bandwidth	Integer	Specifies the virtual interface bandwidth. Minimum: **2** Maximum: **2147483647**
create_time	String	Specifies when the virtual interface was created. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*. Maximum: **255**
update_time	String	Specifies when the virtual interface was updated. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*. Maximum: **255**
description	String	Provides supplementary information about the virtual interface. Maximum: **128**
direct_connect_id	String	Specifies the connection ID. Maximum: **36**
service_type	String	Specifies the gateway type. The value can be **VGW**, **GDGW**, or **LGW**. You do not need to configure this parameter if a virtual gateway is used. Enumeration values: • **VGW** • **GDGW** • **LGW**

Parameter	Type	Description
status	String	Specifies the operating status. The value can be **ACTIVE**, **DOWN**, **BUILD**, **ERROR**, **PENDING_CREATE**, **PENDING_UPDATE**, **PENDING_DELETE**, **DELETED**, **AUTHORIZATION**, or **REJECTED**.
tenant_id	String	Specifies the project ID. Minimum: **32** Maximum: **32**
type	String	Specifies the type of the virtual interface. The value is **private**. Default: **private** Maximum: **255** Enumeration values: **private**
vgw_id	String	Specifies the virtual gateway ID. Minimum: **36** Maximum: **36**
vlan	Integer	Specifies the VLAN for connecting to the customer gateway. The value ranges from **0** to **3999**. Minimum: **0** Maximum: **3999**
route_limit	Integer	Specifies the remote subnet route configurations of the virtual interface. Minimum: **1** Maximum: **200** Default: **50**
enable_nqa	Boolean	Specifies whether NQA is enabled. The value can be **true** or **false**.
enable_bfd	Boolean	Specifies whether BFD is enabled. The value can be **true** or **false**.
lag_id	String	Specifies the ID of the LAG associated with the virtual interface. Minimum: **36** Maximum: **36**
device_id	String	Specifies the ID of the device that the virtual interface belongs to.

Parameter	Type	Description
enterprise_project_id	String	Specifies the ID of the enterprise project that the virtual interface belongs to. Minimum: **36** Maximum: **36**
tags	Array of **Tag** objects	Specifies the tags. Array length: **0–10**
local_gateway_v4_ip	String	Specifies the IPv4 interface address of the gateway used on the cloud. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
remote_gateway_v4_ip	String	Specifies the IPv4 interface address of the gateway used on premises. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
ies_id	String	Specifies the edge site ID.
reason	String	Displays error information if the status of a line is **Error**.
rate_limit	Boolean	Specifies whether rate limiting is enabled on a virtual interface.
address_family	String	Specifies the address family of the virtual interface. The value can be **IPv4** or **IPv6**. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
local_gateway_v6_ip	String	Specifies the IPv6 interface address of the gateway used on the cloud. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
remote_gateway_v6_ip	String	Specifies the IPv6 interface address of the gateway used on premises. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
lgw_id	String	Specifies the ID of the local gateway, which is used in IES scenarios.
gateway_id	String	Specifies the ID of the gateway associated with the virtual interface.
remote_ep_group	Array of strings	Specifies the remote subnet list, which records the CIDR blocks used in the on-premises data center. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.

Parameter	Type	Description
service_ep_group	Array of strings	Specifies the list of public network addresses that can be accessed by the on-premises data center. This field is required in the APIs of public network connections. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
bgp_route_limit	Integer	Specifies the BGP route configuration.
priority	String	Specifies the priority of a virtual interface. The value can be **normal** or **low**. If the priorities are the same, the virtual interfaces work in load balancing mode. If the priorities are different, the virtual interfaces work in active/standby pairs. Outbound traffic is preferentially forwarded to the normal virtual interface with a higher priority. This option is only supported by virtual interfaces that use BGP routing. Default: **normal** Enumeration values: • **normal** • **low**
vif_peers	Array of **VifPeer** objects	Provides information about virtual interface peers.
extend_attribute	**VifExtendAttribute** object	Provides extended parameter information.

Table 4-105 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Table 4-106 VifPeer

Parameter	Type	Description
id	String	Specifies the resource ID. Minimum: **36** Maximum: **36**
tenant_id	String	Specifies the ID of the project that the virtual interface peer belongs to. Minimum: **36** Maximum: **36**
name	String	Specifies the name of the virtual interface peer. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the virtual interface peer. Minimum: **0** Maximum: **128**
address_family	String	Specifies the address family of the virtual interface. The value can be **IPv4** or **IPv6**.
local_gateway_ip	String	Specifies the gateway address of the virtual interface peer used on the cloud.
remote_gateway_ip	String	Specifies the gateway of the virtual interface peer used in the on-premises data center.
route_mode	String	Specifies the routing mode. The value can be **static** or **bgp**. Maximum: **255** Enumeration values: • **bgp** • **static**
bgp_asn	Integer	Specifies the ASN of the BGP peer. Minimum: **1** Maximum: **4294967295**
bgp_md5	String	Specifies the MD5 password of the BGP peer.
remote_ep_group	Array of strings	Specifies the remote subnet list, which records the CIDR blocks used in the on-premises data center.

Parameter	Type	Description
service_ep_group	Array of strings	Specifies the list of public network addresses that can be accessed by the on-premises data center. This field is required in the APIs of public network connections.
device_id	String	Specifies the ID of the device that the virtual interface peer belongs to.
bgp_route_limit	Integer	Specifies the BGP route configuration.
bgp_status	String	Specifies the BGP protocol status of the virtual interface peer. If the virtual interface peer uses static routing, the status is **null**. Maximum: **10**
status	String	Specifies the status of the virtual interface peer.
vif_id	String	Specifies the ID of the virtual interface corresponding to the virtual interface peer. Minimum: **36** Maximum: **36**
receive_route_num	Integer	Specifies the number of received BGP routes if BGP routing is used. If static routing is used, this parameter is meaningless and the value is **-1**. If this parameter cannot be obtained, contact customer service to migrate your ports.
enable_nqa	Boolean	Specifies whether NQA is enabled. The value can be **true** or **false**.
enable_bfd	Boolean	Specifies whether BFD is enabled. The value can be **true** or **false**.

Table 4-107 VifExtendAttribute

Parameter	Type	Description
ha_type	String	Specifies the availability detection type of the virtual interface. Enumeration values: • **nqa** • **bfd**

Parameter	Type	Description
ha_mode	String	Specifies the availability detection mode. Enumeration values: • **auto_single** • **auto_multi** • **static_single** • **static_multi** • **enhance_nqa**
detect_multiplier	Integer	Specifies the number of detection retries. Default: **5**
min_rx_interval	Integer	Specifies the interval for receiving detection packets. Default: **1000**
min_tx_interval	Integer	Specifies the interval for sending detection packets. Default: **1000**
remote_disclaim	Integer	Specifies the remote identifier of the static BFD session.
local_disclaim	Integer	Specifies the local identifier of the static BFD session.

Example Requests

Querying a virtual interface

```
POST https://{dc_endpoint}/v3/0605768a3300d5762f82c01180692873/dcaas/virtual-interfaces/0d0fdf63-f2c4-491c-8866-d504796189be
```

Example Responses

Status code: 200

OK

```
{
  "virtual_interface" : {
    "id" : "0d0fdf63-f2c4-491c-8866-d504796189be",
    "name" : "vif-0819",
    "description" : "",
    "tenant_id" : "0605768a3300d5762f82c01180692873",
    "direct_connect_id" : "4673e339-8412-4ee1-b73e-2ba9cdfa54c1",
    "vgw_id" : "8a47064a-f34c-4f94-b7fe-cac456c9b37b",
    "type" : "private",
    "service_type" : "VGW",
    "vlan" : 332,
    "bandwidth" : 2,
    "status" : "ACTIVE",
    "create_time" : "2022-08-19T11:28:06.000Z",
    "update_time" : "2022-08-19T11:28:06.000Z",
```



```
    "admin_state_up" : true,
    "enable_bfd" : false,
    "route_limit" : 50,
    "enable_nqa" : false,
    "local_gateway_v4_ip" : "1.1.1.1/30",
    "remote_gateway_v4_ip" : "1.1.1.2/30",
    "ies_id" : null,
    "reason" : null,
    "rate_limit" : false,
    "address_family" : "ipv4",
    "local_gateway_v6_ip" : null,
    "remote_gateway_v6_ip" : null,
    "lgw_id" : null,
    "lag_id" : null,
    "gateway_id" : null,
    "remote_ep_group" : [ "1.1.2.0/30" ],
    "service_ep_group" : [ ],
    "bgp_route_limit" : 100,
    "priority" : "normal",
    "vif_peers" : [ {
      "id" : "c768eb52-12a8-4859-9b43-81194643040c",
      "tenant_id" : "0605768a3300d5762f82c01180692873",
      "name" : "vif-0819",
      "description" : "",
      "address_family" : "ipv4",
      "local_gateway_ip" : "1.1.1.1/30",
      "remote_gateway_ip" : "1.1.1.2/30",
      "route_mode" : "static",
      "bgp_asn" : null,
      "bgp_md5" : null,
      "device_id" : "18.9.215.131",
      "bgp_route_limit" : 100,
      "bgp_status" : null,
      "status" : "ACTIVE",
      "vif_id" : "0d0fdf63-f2c4-491c-8866-d504796189be",
      "receive_route_num" : -1,
      "remote_ep_group" : [ "1.1.2.0/30" ],
      "service_ep_group" : null,
      "enable_bfd" : false,
      "enable_nqa" : false
    } ],
    "enterprise_project_id" : "0"
  },
  "request_id" : "5633df7af874576d819a481c76673236"
}
```


SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class ShowVirtualInterfaceSolution {
```

```
    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowVirtualInterfaceRequest request = new ShowVirtualInterfaceRequest();
        request.withFields();
        try {
            ShowVirtualInterfaceResponse response = client.showVirtualInterface(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowVirtualInterfaceRequest()
        request.fields =
        response = client.show_virtual_interface(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
```



```
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowVirtualInterfaceRequest{}
    response, err := client.ShowVirtualInterface(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.3.4 Updating a Virtual Interface

Function

This API is used to update a virtual interface.

Debugging

For details, see **Calling APIs**.

URI

PUT /v3/{project_id}/dcaas/virtual-interfaces/{virtual_interface_id}

Table 4-108 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
virtual_interface_id	Yes	String	Specifies the virtual interface ID. Minimum: **36** Maximum: **36**

Request Parameters

Table 4-109 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-110 Request body parameters

Parameter	Mandatory	Type	Description
virtual_interface	Yes	**UpdateVirtualInterface** object	Specifies the virtual interface to be updated.

Table 4-111 UpdateVirtualInterface

Parameter	Mandatory	Type	Description
name	No	String	Specifies the virtual interface name. Minimum: **0** Maximum: **64**
description	No	String	Provides supplementary information about the virtual interface. Minimum: **0** Maximum: **128**
bandwidth	No	Integer	Specifies the virtual interface bandwidth configuration. Minimum: **2** Maximum: **2147483647**
remote_ep_group	No	Array of strings	Specifies the remote subnet list, which records the CIDR blocks used in the on-premises data center.
service_ep_group	No	Array of strings	Specifies the local endpoint group that is connected to the public network over a connection.
enable_bfd	No	Boolean	Specifies whether to enable BFD. The value can be **true** or **false**.
enable_nqa	No	Boolean	Specifies whether to enable NQA. The value can be **true** or **false**.

Parameter	Mandatory	Type	Description
status	No	String	Confirms the virtual interfaces created by other users. The value can be **ACCEPTED** or **REJECTED**. Enumeration values: • **ACCEPTED** • **REJECTED**

Response Parameters

Status code: 200

Table 4-112 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
virtual_interface	**VirtualInterface** object	Specifies the virtual interface.

Table 4-113 VirtualInterface

Parameter	Type	Description
id	String	Specifies the virtual interface ID. Maximum: **36**
name	String	Specifies the virtual interface name. Maximum: **64**
admin_state_up	Boolean	Specifies the administrative status. The value can be **true** or **false**.
bandwidth	Integer	Specifies the virtual interface bandwidth. Minimum: **2** Maximum: **2147483647**
create_time	String	Specifies when the virtual interface was created. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*. Maximum: **255**

Parameter	Type	Description
update_time	String	Specifies when the virtual interface was updated. The UTC time format is *yyyy-MM-ddTHH:mm:ss.SSSZ*. Maximum: **255**
description	String	Provides supplementary information about the virtual interface. Maximum: **128**
direct_connect_id	String	Specifies the connection ID. Maximum: **36**
service_type	String	Specifies the gateway type. The value can be **VGW**, **GDGW**, or **LGW**. You do not need to configure this parameter if a virtual gateway is used. Enumeration values: • **VGW** • **GDGW** • **LGW**
status	String	Specifies the operating status. The value can be **ACTIVE**, **DOWN**, **BUILD**, **ERROR**, **PENDING_CREATE**, **PENDING_UPDATE**, **PENDING_DELETE**, **DELETED**, **AUTHORIZATION**, or **REJECTED**.
tenant_id	String	Specifies the project ID. Minimum: **32** Maximum: **32**
type	String	Specifies the type of the virtual interface. The value is **private**. Default: **private** Maximum: **255** Enumeration value: **private**
vgw_id	String	Specifies the virtual gateway ID. Minimum: **36** Maximum: **36**
vlan	Integer	Specifies the VLAN for connecting to the customer gateway. The value ranges from **0** to **3999**. Minimum: **0** Maximum: **3999**

Parameter	Type	Description
route_limit	Integer	Specifies the remote subnet route configurations of the virtual interface. Minimum: **1** Maximum: **200** Default: **50**
enable_nqa	Boolean	Specifies whether NQA is enabled. The value can be **true** or **false**.
enable_bfd	Boolean	Specifies whether BFD is enabled. The value can be **true** or **false**.
lag_id	String	Specifies the ID of the LAG associated with the virtual interface. Minimum: **36** Maximum: **36**
device_id	String	Specifies the ID of the device that the virtual interface belongs to.
enterprise_project_id	String	Specifies the ID of the enterprise project that the virtual interface belongs to. Minimum: **36** Maximum: **36**
tags	Array of **Tag** objects	Specifies the tags. Array length: **0–10**
local_gateway_v4_ip	String	Specifies the IPv4 interface address of the gateway used on the cloud. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
remote_gateway_v4_ip	String	Specifies the IPv4 interface address of the gateway used on premises. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
ies_id	String	Specifies the edge site ID.
reason	String	Displays error information if the status of a line is **Error**.
rate_limit	Boolean	Specifies whether rate limiting is enabled on a virtual interface.
address_family	String	Specifies the address family of the virtual interface. The value can be **IPv4** or **IPv6**. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.

Parameter	Type	Description
local_gateway_v6_ip	String	Specifies the IPv6 interface address of the gateway used on the cloud. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
remote_gateway_v6_ip	String	Specifies the IPv6 interface address of the gateway used on premises. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
lgw_id	String	Specifies the ID of the local gateway, which is used in IES scenarios.
gateway_id	String	Specifies the ID of the gateway associated with the virtual interface.
remote_ep_group	Array of strings	Specifies the remote subnet list, which records the CIDR blocks used in the on-premises data center. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
service_ep_group	Array of strings	Specifies the list of public network addresses that can be accessed by the on-premises data center. This field is required in the APIs of public network connections. This parameter has been migrated to the **vifpeer** parameter list and will be discarded later.
bgp_route_limit	Integer	Specifies the BGP route configuration.
priority	String	Specifies the priority of a virtual interface. The value can be **normal** or **low**. If the priorities are the same, the virtual interfaces work in load balancing mode. If the priorities are different, the virtual interfaces work in active/standby pairs. Outbound traffic is preferentially forwarded to the normal virtual interface with a higher priority. This option is only supported by virtual interfaces that use BGP routing. Default: **normal** Enumeration values: • **normal** • **low**
vif_peers	Array of **VifPeer** objects	Provides information about virtual interface peers.
extend_attribute	**VifExtendAttribute** object	Provides extended parameter information.

Table 4-114 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Table 4-115 VifPeer

Parameter	Type	Description
id	String	Specifies the resource ID. Minimum: **36** Maximum: **36**
tenant_id	String	Specifies the ID of the project that the virtual interface peer belongs to. Minimum: **36** Maximum: **36**
name	String	Specifies the name of the virtual interface peer. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the virtual interface peer. Minimum: **0** Maximum: **128**
address_family	String	Specifies the address family of the virtual interface. The value can be **IPv4** or **IPv6**.
local_gateway_ip	String	Specifies the gateway of the virtual interface peer used on the cloud.

Parameter	Type	Description
remote_gateway_ip	String	Specifies the gateway of the virtual interface peer used in the on-premises data center.
route_mode	String	Specifies the routing mode. The value can be **static** or **bgp**. Maximum: **255** Enumeration values: • **bgp** • **static**
bgp_asn	Integer	Specifies the ASN of the BGP peer. Minimum: **1** Maximum: **4294967295**
bgp_md5	String	Specifies the MD5 password of the BGP peer.
remote_ep_group	Array of strings	Specifies the remote subnet list, which records the CIDR blocks used in the on-premises data center.
service_ep_group	Array of strings	Specifies the list of public network addresses that can be accessed by the on-premises data center. This field is required in the APIs of public network connections.
device_id	String	Specifies the ID of the device that the virtual interface peer belongs to.
bgp_route_limit	Integer	Specifies the BGP route configuration.
bgp_status	String	Specifies the BGP protocol status of the virtual interface peer. If the virtual interface peer uses static routing, the status is **null**. Maximum: **10**
status	String	Specifies the status of the virtual interface peer.
vif_id	String	Specifies the ID of the virtual interface corresponding to the virtual interface peer. Minimum: **36** Maximum: **36**
receive_route_num	Integer	Specifies the number of received BGP routes if BGP routing is used. If static routing is used, this parameter is meaningless and the value is **-1**. If this parameter cannot be obtained, contact customer service to migrate your ports.

Parameter	Type	Description
enable_nqa	Boolean	Specifies whether NQA is enabled. The value can be **true** or **false**.
enable_bfd	Boolean	Specifies whether BFD is enabled. The value can be **true** or **false**.

Table 4-116 VifExtendAttribute

Parameter	Type	Description
ha_type	String	Specifies the availability detection type of the virtual interface. Enumeration values: • **nqa** • **bfd**
ha_mode	String	Specifies the availability detection mode. Enumeration values: • **auto_single** • **auto_multi** • **static_single** • **static_multi** • **enhance_nqa**
detect_multiplier	Integer	Specifies the number of detection retries. Default: **5**
min_rx_interval	Integer	Specifies the interval for receiving detection packets. Default: **1000**
min_tx_interval	Integer	Specifies the interval for sending detection packets. Default: **1000**
remote_disclaim	Integer	Specifies the remote identifier of the static BFD session.
local_disclaim	Integer	Specifies the local identifier of the static BFD session.

Example Requests

Updating the name and description of a virtual interface and changing its bandwidth to 2 Mbit/s

```
PUT https://{dc_endpoint}/v3/0605768a3300d5762f82c01180692873/dcaas/virtual-interfaces/0d0fdf63-f2c4-491c-8866-d504796189be
```



```
{
  "virtual_interface" : {
    "name" : "vif-0819",
    "description" : "mytest",
    "bandwidth" : 2
  }
}
```

Example Responses

Status code: 200

OK

```
{
  "virtual_interface" : {
    "id" : "0d0fdf63-f2c4-491c-8866-d504796189be",
    "name" : "vif-0819",
    "description" : "mytest",
    "tenant_id" : "0605768a3300d5762f82c01180692873",
    "direct_connect_id" : "4673e339-8412-4ee1-b73e-2ba9cdfa54c1",
    "vgw_id" : "8a47064a-f34c-4f94-b7fe-cac456c9b37b",
    "type" : "private",
    "service_type" : "VGW",
    "vlan" : 332,
    "bandwidth" : 2,
    "status" : "ACTIVE",
    "create_time" : "2022-08-19T11:28:06.000Z",
    "update_time" : "2022-08-19T11:28:06.000Z",
    "admin_state_up" : true,
    "enable_bfd" : false,
    "route_limit" : 50,
    "enable_nqa" : false,
    "local_gateway_v4_ip" : "1.1.1.1/30",
    "remote_gateway_v4_ip" : "1.1.1.2/30",
    "ies_id" : null,
    "reason" : null,
    "rate_limit" : false,
    "address_family" : "ipv4",
    "local_gateway_v6_ip" : null,
    "remote_gateway_v6_ip" : null,
    "lgw_id" : null,
    "lag_id" : null,
    "gateway_id" : null,
    "remote_ep_group" : [ "1.1.2.0/30" ],
    "service_ep_group" : [ ],
    "bgp_route_limit" : 100,
    "priority" : "normal",
    "vif_peers" : [ {
      "id" : "c768eb52-12a8-4859-9b43-81194643040c",
      "tenant_id" : "0605768a3300d5762f82c01180692873",
      "name" : "vif-0819",
      "description" : "",
      "address_family" : "ipv4",
      "local_gateway_ip" : "1.1.1.1/30",
      "remote_gateway_ip" : "1.1.1.2/30",
      "route_mode" : "static",
      "bgp_asn" : null,
      "bgp_md5" : null,
      "device_id" : "18.9.215.131",
      "bgp_route_limit" : 100,
      "bgp_status" : null,
      "status" : "ACTIVE",
      "vif_id" : "0d0fdf63-f2c4-491c-8866-d504796189be",
      "receive_route_num" : -1,
      "remote_ep_group" : [ "1.1.2.0/30" ],
      "service_ep_group" : null,
      "enable_bfd" : false,
```



```
    "enable_nqa" : false
  } ],
  "enterprise_project_id" : "0"
 },
 "request_id" : "5633df7af874576d819a481c76673236"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Updating the name and description of a virtual interface and changing its bandwidth to 2 Mbit/s

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class UpdateVirtualInterfaceSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateVirtualInterfaceRequest request = new UpdateVirtualInterfaceRequest();
        UpdateVirtualInterfaceRequestBody body = new UpdateVirtualInterfaceRequestBody();
        UpdateVirtualInterface virtualInterfacebody = new UpdateVirtualInterface();
        virtualInterfacebody.withName("vif-0819")
            .withDescription("mytest")
            .withBandwidth(2);
        body.withVirtualInterface(virtualInterfacebody);
        request.withBody(body);
        try {
            UpdateVirtualInterfaceResponse response = client.updateVirtualInterface(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
```



```
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Updating the name and description of a virtual interface and changing its bandwidth to 2 Mbit/s

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdateVirtualInterfaceRequest()
        virtualInterfacebody = UpdateVirtualInterface(
            name="vif-0819",
            description="mytest",
            bandwidth=2
        )
        request.body = UpdateVirtualInterfaceRequestBody(
            virtual_interface=virtualInterfacebody
        )
        response = client.update_virtual_interface(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Updating the name and description of a virtual interface and changing its bandwidth to 2 Mbit/s

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
```



```
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateVirtualInterfaceRequest{}
    nameVirtualInterface:= "vif-0819"
    descriptionVirtualInterface:= "mytest"
    bandwidthVirtualInterface:= int32(2)
    virtualInterfacebody := &model.UpdateVirtualInterface{
        Name: &nameVirtualInterface,
        Description: &descriptionVirtualInterface,
        Bandwidth: &bandwidthVirtualInterface,
    }
    request.Body = &model.UpdateVirtualInterfaceRequestBody{
        VirtualInterface: virtualInterfacebody,
    }
    response, err := client.UpdateVirtualInterface(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.3.5 Deleting a Virtual Interface

Function

This API is used to delete a virtual interface.

Debugging

For details, see **Calling APIs**.

URI

DELETE /v3/{project_id}/dcaas/virtual-interfaces/{virtual_interface_id}

Table 4-117 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
virtual_interface_id	Yes	String	Specifies the virtual interface ID. Minimum: **36** Maximum: **36**

Request Parameters

Table 4-118 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

None

Example Requests

Deleting a virtual interface

```
DELETE https://{dc_endpoint}/v3/0605768a3300d5762f82c01180692873/dcaas/virtual-interfaces/0d0fdf63-f2c4-491c-8866-d504796189be
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class DeleteVirtualInterfaceSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteVirtualInterfaceRequest request = new DeleteVirtualInterfaceRequest();
        try {
            DeleteVirtualInterfaceResponse response = client.deleteVirtualInterface(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
```



```
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteVirtualInterfaceRequest()
        response = client.delete_virtual_interface(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteVirtualInterfaceRequest{}
    response, err := client.DeleteVirtualInterface(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	No Content

Error Codes

See **Error Codes**.

4.3.6 Creating a Virtual Interface Peer

Function

This API is used to create an IPv6 virtual interface peer. Each virtual interface can have two peers: an IPv4 peer and an IPv6 peer. When a virtual interface is created, an IPv4 peer is created by default.

Debugging

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/dcaas/vif-peers

Table 4-119 Path parameters

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

Request Parameters

Table 4-120 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-121 Request body parameters

Parameter	Mandatory	Type	Description
vif_peer	No	**CreateVifPeer** object	Specifies the virtual interface peer to be created.

Table 4-122 CreateVifPeer

Parameter	Mandatory	Type	Description
name	No	String	Specifies the name of the virtual interface peer. Minimum: **0** Maximum: **64**
description	No	String	Provides supplementary information about the virtual interface peer. Minimum: **0** Maximum: **128**
address_family	No	String	Specifies the address family of the virtual interface. The value can be **IPv4** or **IPv6**.
local_gateway_ip	No	String	Specifies the gateway address of the virtual interface peer used on the cloud.

Parameter	Mandatory	Type	Description
remote_gateway_ip	No	String	Specifies the gateway of the virtual interface peer used in the on-premises data center.
route_mode	No	String	Specifies the routing mode. The value can be **static** or **bgp**. Maximum: **255** Enumeration values: • **bgp** • **static**
bgp_asn	No	Integer	Specifies the ASN of the BGP peer. Minimum: **1** Maximum: **4294967295**
bgp_md5	No	String	Specifies the MD5 password of the BGP peer.
remote_ep_group	No	Array of strings	Specifies the remote subnet list, which records the CIDR blocks used in the on-premises data center.
vif_id	No	String	Specifies the ID of the virtual interface corresponding to the virtual interface peer. Minimum: **36** Maximum: **36**

Response Parameters

Status code: 201

Table 4-123 Response body parameters

Parameter	Type	Description
vif_peer	**VifPeer** object	Specifies the virtual interface peer.

Table 4-124 VifPeer

Parameter	Type	Description
id	String	Specifies the resource ID. Minimum: **36** Maximum: **36**
tenant_id	String	Specifies the ID of the project that the virtual interface peer belongs to. Minimum: **36** Maximum: **36**
name	String	Specifies the name of the virtual interface peer. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the virtual interface peer. Minimum: **0** Maximum: **128**
address_family	String	Specifies the address family of the virtual interface. The value can be **IPv4** or **IPv6**.
local_gateway_ip	String	Specifies the gateway address of the virtual interface peer used on the cloud.
remote_gateway_ip	String	Specifies the gateway of the virtual interface peer used in the on-premises data center.
route_mode	String	Specifies the routing mode. The value can be **static** or **bgp**. Maximum: **255** Enumeration values: • **bgp** • **static**
bgp_asn	Integer	Specifies the ASN of the BGP peer. Minimum: **1** Maximum: **4294967295**
bgp_md5	String	Specifies the MD5 password of the BGP peer.
remote_ep_group	Array of strings	Specifies the remote subnet list, which records the CIDR blocks used in the on-premises data center.
service_ep_group	Array of strings	Specifies the list of public network addresses that can be accessed by the on-premises data center. This field is required in the APIs of public network connections.

Parameter	Type	Description
device_id	String	Specifies the ID of the device that the virtual interface peer belongs to.
bgp_route_limit	Integer	Specifies the BGP route configuration.
bgp_status	String	Specifies the BGP protocol status of the virtual interface peer. If the virtual interface peer uses static routing, the status is **null**. Maximum: **10**
status	String	Specifies the status of the virtual interface peer.
vif_id	String	Specifies the ID of the virtual interface corresponding to the virtual interface peer. Minimum: **36** Maximum: **36**
receive_route_num	Integer	Specifies the number of received BGP routes if BGP routing is used. If static routing is used, this parameter is meaningless and the value is **-1**. If this parameter cannot be obtained, contact customer service to migrate your ports.
enable_nqa	Boolean	Specifies whether NQA is enabled. The value can be **true** or **false**.
enable_bfd	Boolean	Specifies whether BFD is enabled. The value can be **true** or **false**.

Example Requests

Creating a virtual interface peer with the remote subnet set to 20.1.1.0/24

```
POST https://{endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/dcaas/vif-peers
{
  "vif_peer" : {
    "name" : "vif-0819",
    "address_family" : "ipv4",
    "description" : "mytest",
    "local_gateway_ip" : "12.3.4.1/30",
    "remote_gateway_ip" : "12.3.4.2/30",
    "vif_id" : "5d6c17bc-0ebe-420b-8734-21f519e9d7ad",
    "remote_ep_group" : [ "20.1.1.0/24" ]
  }
}
```

Example Responses

Status code: 201

Created

```
{
  "vif_peer" : {
```



```
  "name" : "vif-0819",
  "description" : "mytest",
  "id" : "4c95de3e-9f75-4357-9c79-b22498dd71c7",
  "tenant_id" : "ed28c294165741faaeccab26913122a1",
  "address_family" : "ipv4",
  "local_gateway_ip" : "12.3.4.1/30",
  "remote_gateway_ip" : "12.3.4.2/30",
  "route_mode" : "static",
  "bgp_asn" : null,
  "bgp_md5" : null,
  "bgp_route_limit" : 100,
  "bgp_status" : null,
  "status" : "ACTIVE",
  "vif_id" : "5d6c17bc-0ebe-420b-8734-21f519e9d7ad",
  "receive_route_num" : -1,
  "remote_ep_group" : [ "12.3.4.0/30 172.56.0.0/16" ]
 }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Creating a virtual interface peer with the remote subnet set to 20.1.1.0/24

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class CreateVifPeerSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateVifPeerRequest request = new CreateVifPeerRequest();
        CreateVifPeerRequestBody body = new CreateVifPeerRequestBody();
        List<String> listVifPeerRemoteEpGroup = new ArrayList<>();
        listVifPeerRemoteEpGroup.add("20.1.1.0/24");
        CreateVifPeer vifPeerbody = new CreateVifPeer();
        vifPeerbody.withName("vif-0819")
            .withDescription("mytest")
```



```
            .withRemoteEpGroup(listVifPeerRemoteEpGroup);
        body.withVifPeer(vifPeerbody);
        request.withBody(body);
        try {
            CreateVifPeerResponse response = client.createVifPeer(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Creating a virtual interface peer with the remote subnet set to 20.1.1.0/24

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateVifPeerRequest()
        listRemoteEpGroupVifPeer = [
            "20.1.1.0/24"
        ]
        vifPeerbody = CreateVifPeer(
            name="vif-0819",
            description="mytest",
            remote_ep_group=listRemoteEpGroupVifPeer
        )
        request.body = CreateVifPeerRequestBody(
            vif_peer=vifPeerbody
        )
        response = client.create_vif_peer(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```


Go

Creating a virtual interface peer with the remote subnet set to 20.1.1.0/24

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateVifPeerRequest{}
    var listRemoteEpGroupVifPeer = []string{
        "20.1.1.0/24",
    }
    nameVifPeer:= "vif-0819"
    descriptionVifPeer:= "mytest"
    vifPeerbody := &model.CreateVifPeer{
        Name: &nameVifPeer,
        Description: &descriptionVifPeer,
        RemoteEpGroup: &listRemoteEpGroupVifPeer,
    }
    request.Body = &model.CreateVifPeerRequestBody{
        VifPeer: vifPeerbody,
    }
    response, err := client.CreateVifPeer(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
201	Created

Error Codes

See **Error Codes**.

4.3.7 Updating a Virtual Interface Peer

Function

This API is used to update a virtual interface peer. The following parameters can be updated: **name**, **description**, and **remote_ep_group**.

Debugging

For details, see **Calling APIs**.

URI

PUT /v3/{project_id}/dcaas/vif-peers/{vif_peer_id}

Table 4-125 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
vif_peer_id	Yes	String	Specifies the virtual interface peer ID.

Request Parameters

Table 4-126 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-127 Request body parameters

Parameter	Mandatory	Type	Description
vif_peer	No	**UpdateVifPeer** object	Specifies the virtual interface peer to be updated.

Table 4-128 UpdateVifPeer

Parameter	Mandatory	Type	Description
name	No	String	Specifies the name of the virtual interface peer. Minimum: **0** Maximum: **64**
description	No	String	Provides supplementary information about the virtual interface peer. Minimum: **0** Maximum: **128**
remote_ep_group	No	Array of strings	Specifies the remote subnet list, which records the CIDR blocks used in the on-premises data center.

NOTE

When you update a virtual interface peer, at least one of the following parameters needs to be specified: **name**, **description**, and **remote_ep_group**.

Response Parameters

Status code: 200

Table 4-129 Response body parameters

Parameter	Type	Description
vif_peer	VifPeer object	Specifies the virtual interface peer.

Table 4-130 VifPeer

Parameter	Type	Description
id	String	Specifies the resource ID. Minimum: **36** Maximum: **36**
tenant_id	String	Specifies the ID of the project that the virtual interface peer belongs to. Minimum: **36** Maximum: **36**
name	String	Specifies the name of the virtual interface peer. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the virtual interface peer. Minimum: **0** Maximum: **128**
address_family	String	Specifies the address family of the virtual interface. The value can be **IPv4** or **IPv6**.
local_gateway_ip	String	Specifies the gateway of the virtual interface peer used on the cloud.
remote_gateway_ip	String	Specifies the gateway of the virtual interface peer used in the on-premises data center.

Parameter	Type	Description
route_mode	String	Specifies the routing mode. The value can be **static** or **bgp**. Maximum: **255** Enumeration values: • **bgp** • **static**
bgp_asn	Integer	Specifies the ASN of the BGP peer. Minimum: **1** Maximum: **4294967295**
bgp_md5	String	Specifies the MD5 password of the BGP peer.
remote_ep_group	Array of strings	Specifies the remote subnet list, which records the CIDR blocks used in the on-premises data center.
service_ep_group	Array of strings	Specifies the list of public network addresses that can be accessed by the on-premises data center. This field is required in the APIs of public network connections.
device_id	String	Specifies the ID of the device that the virtual interface peer belongs to.
bgp_route_limit	Integer	Specifies the BGP route configuration.
bgp_status	String	Specifies the BGP protocol status of the virtual interface peer. If the virtual interface peer uses static routing, the status is **null**. Maximum: **10**
status	String	Specifies the status of the virtual interface peer.
vif_id	String	Specifies the ID of the virtual interface corresponding to the virtual interface peer. Minimum: **36** Maximum: **36**
receive_route_num	Integer	Specifies the number of received BGP routes if BGP routing is used. If static routing is used, this parameter is meaningless and the value is **-1**. If this parameter cannot be obtained, contact customer service to migrate your ports.
enable_nqa	Boolean	Specifies whether NQA is enabled. The value can be **true** or **false**.

Parameter	Type	Description
enable_bfd	Boolean	Specifies whether BFD is enabled. The value can be **true** or **false**.

Example Requests

Updating the name, description, and remote subnet of a virtual interface peer

```
PUT https://{endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/dcaas/vif-peers/68250543-0a13-4ac7-aa36-d018856ac640

{
  "vif_peer" : {
    "name" : "vif-0819",
    "description" : "mytest",
    "remote_ep_group" : [ "20.1.1.0/24" ]
  }
}
```

Example Responses

Status code: 200

OK

```
{
  "vif_peer" : {
    "name" : "vif-0819",
    "description" : "mytest",
    "id" : "4c95de3e-9f75-4357-9c79-b22498dd71c7",
    "tenant_id" : "ed28c294165741faaeccab26913122a1",
    "address_family" : "ipv4",
    "local_gateway_ip" : "12.3.4.1/30",
    "remote_gateway_ip" : "12.3.4.2/30",
    "route_mode" : "static",
    "bgp_asn" : null,
    "bgp_md5" : null,
    "bgp_route_limit" : 100,
    "bgp_status" : null,
    "status" : "ACTIVE",
    "vif_id" : "5d6c17bc-0ebe-420b-8734-21f519e9d7ad",
    "receive_route_num" : -1,
    "remote_ep_group" : [ "20.1.1.0/24" ]
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Updating the name, description, and remote subnet of a virtual interface peer

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
```



```
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class UpdateVifPeerSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateVifPeerRequest request = new UpdateVifPeerRequest();
        UpdateVifPeerRequestBody body = new UpdateVifPeerRequestBody();
        List<String> listVifPeerRemoteEpGroup = new ArrayList<>();
        listVifPeerRemoteEpGroup.add("20.1.1.0/24");
        UpdateVifPeer vifPeerbody = new UpdateVifPeer();
        vifPeerbody.withName("vif-0819")
            .withDescription("mytest")
            .withRemoteEpGroup(listVifPeerRemoteEpGroup);
        body.withVifPeer(vifPeerbody);
        request.withBody(body);
        try {
            UpdateVifPeerResponse response = client.updateVifPeer(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Updating the name, description, and remote subnet of a virtual interface peer

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
```



```
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdateVifPeerRequest()
        listRemoteEpGroupVifPeer = [
            "20.1.1.0/24"
        ]
        vifPeerbody = UpdateVifPeer(
            name="vif-0819",
            description="mytest",
            remote_ep_group=listRemoteEpGroupVifPeer
        )
        request.body = UpdateVifPeerRequestBody(
            vif_peer=vifPeerbody
        )
        response = client.update_vif_peer(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Updating the name, description, and remote subnet of a virtual interface peer

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateVifPeerRequest{}
    var listRemoteEpGroupVifPeer = []string{
```



```
        "20.1.1.0/24",
    }
    nameVifPeer:= "vif-0819"
    descriptionVifPeer:= "mytest"
    vifPeerbody := &model.UpdateVifPeer{
        Name: &nameVifPeer,
        Description: &descriptionVifPeer,
        RemoteEpGroup: &listRemoteEpGroupVifPeer,
    }
    request.Body = &model.UpdateVifPeerRequestBody{
        VifPeer: vifPeerbody,
    }
    response, err := client.UpdateVifPeer(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.3.8 Deleting a Virtual Interface Peer

Function

This API is used to delete a virtual interface peer. A virtual interface must have at least one peer. The last peer cannot be deleted.

This API is available only in regions that support IPv6. To use this API, contact customer service.

Debugging

For details, see **Calling APIs**.

URI

DELETE /v3/{project_id}/dcaas/vif-peers/{vif_peer_id}

Table 4-131 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
vif_peer_id	Yes	String	Specifies the virtual interface peer ID.

Request Parameters

Table 4-132 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

None

Example Requests

Deleting a virtual interface peer

```
DELETE https://{endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/dcaas/vif-peers/68250543-0a13-4ac7-aa36-d018856ac640
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
```



```
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class DeleteVifPeerSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteVifPeerRequest request = new DeleteVifPeerRequest();
        try {
            DeleteVifPeerResponse response = client.deleteVifPeer(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()
```



```
    try:
        request = DeleteVifPeerRequest()
        response = client.delete_vif_peer(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteVifPeerRequest{}
    response, err := client.DeleteVifPeer(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	No Content

Error Codes

See **Error Codes**.

4.3.9 Performing a Virtual Interface Switchover Test

Function

Two connections require an automatic switchover to test network connectivity. An automatic switchover causes the virtual interfaces to be disabled or enabled and service traffic to be interrupted.

You can disable or enable a virtual interface.

- If you disable a virtual interface, the **shutdown** command is executed, and a switchover performed.
- If you enable a virtual interface, the **undo_shutdown** command is executed.

When a virtual interface is disabled for a switchover, the virtual interface is in the **ADMIN_SHUTDOWN** state, and no other operations are allowed on the virtual interface. If **undo_shutdown** is executed, the virtual interface is in the **ACTIVE** state.

Debugging

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/dcaas/switchover-test

Table 4-133 Path parameters

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

Request Parameters

Table 4-134 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-135 Request body parameters

Parameter	Mandatory	Type	Description
switchover_test_record	No	**CreateSwitchoverTest** object	Specifies the parameters for creating a switchover test record.

Table 4-136 CreateSwitchoverTest

Parameter	Mandatory	Type	Description
resource_id	Yes	String	Specifies the ID of the resource on which the switchover test is to be performed.
resource_type	No	String	Specifies the type of the resource on which the switchover test is to be performed. Default: **virtual_interface** Minimum: **0** Maximum: **128** Enumeration values: • **virtual_interface**

Parameter	Mandatory	Type	Description
operation	Yes	String	Specifies whether to perform a switchover test. Value options: **shutdown** and **undo_shutdown** Minimum: **0** Maximum: **128** Enumeration values: • **shutdown** • **undo_shutdown**

Response Parameters

Status code: 201

Table 4-137 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
switchover_test_record	**SwitchoverTestRecord** object	Provides supplementary information about the switchover test record.

Table 4-138 SwitchoverTestRecord

Parameter	Type	Description
id	String	Specifies the unique ID of the switchover test record.
tenant_id	String	Specifies the project ID. Minimum: **32** Maximum: **32**
resource_id	String	Specifies the ID of the resource on which the switchover test is to be performed.

Parameter	Type	Description
resource_type	String	Specifies the type of the resource on which the switchover test is to be performed. Default: **virtual_interface** Minimum: **0** Maximum: **128** Enumeration values: • **virtual_interface**
operation	String	Specifies whether to perform a switchover test. Value options: **shutdown** and **undo_shutdown** Minimum: **0** Maximum: **128** Enumeration values: • **shutdown** • **undo_shutdown**
start_time	String	Specifies the start time of the switchover test.
end_time	String	Specifies the end time of the switchover test.
operate_status	String	Specifies the switchover test status. • **STARTING**: indicates the initial status. • **INPROGRESS**: The configuration is being delivered. • **COMPLETE**: The configuration is delivered. • **ERROR**: The configuration fails to be delivered. Enumeration values: • **STARTING** • **INPROGRESS** • **COMPLETE** • **ERROR**

Example Requests

Shutting down the virtual interface to perform a switchover test

```
POST https://{dc_endpoint}/v3/de58f033eb664102ba85e4a5db473ca5/dcaas/switchover-test

{
  "switchover_test_record" : {
    "resource_type" : "virtual_interface",
    "resource_id" : "d0b3329c-0063-470c-b1dc-657656b2e540",
    "operation" : "shutdown"
  }
}
```


Example Responses

Status code: 201

Created

```
{
  "switchover_test_record" : {
    "id" : "862d61f1-d9ea-4093-ba0e-2b8d415e3ab3",
    "tenant_id" : "de58f033eb664102ba85e4a5db473ca5",
    "resource_type" : "virtual_interface",
    "resource_id" : "d0b3329c-0063-470c-b1dc-657656b2e540",
    "operation" : "shutdown",
    "start_time" : "2023-10-09T18:41:23.000Z",
    "end_time" : "2023-10-09T18:41:23.000Z",
    "operate_status" : "STARTING"
  },
  "request_id" : "f91634a12b116b6f946d7871f5b4de18"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Shutting down the virtual interface to perform a switchover test

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class SwitchoverTestSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        SwitchoverTestRequest request = new SwitchoverTestRequest();
        CreateSwitchoverTestRequestBody body = new CreateSwitchoverTestRequestBody();
        CreateSwitchoverTest switchoverTestRecordbody = new CreateSwitchoverTest();
        switchoverTestRecordbody.withResourceId("d0b3329c-0063-470c-b1dc-657656b2e540")
            .withResourceType(CreateSwitchoverTest.ResourceTypeEnum.fromValue("virtual_interface"))
            .withOperation(CreateSwitchoverTest.OperationEnum.fromValue("shutdown"));
        body.withSwitchoverTestRecord(switchoverTestRecordbody);
        request.withBody(body);
```



```
        try {
            SwitchoverTestResponse response = client.switchoverTest(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Shutting down the virtual interface to perform a switchover test

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = SwitchoverTestRequest()
        switchoverTestRecordbody = CreateSwitchoverTest(
            resource_id="d0b3329c-0063-470c-b1dc-657656b2e540",
            resource_type="virtual_interface",
            operation="shutdown"
        )
        request.body = CreateSwitchoverTestRequestBody(
            switchover_test_record=switchoverTestRecordbody
        )
        response = client.switchover_test(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Shutting down the virtual interface to perform a switchover test

```
package main
```



```
import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.SwitchoverTestRequest{}
    resourceTypeSwitchoverTestRecord:= model.GetCreateSwitchoverTestResourceTypeEnum().VIRTUAL_INTERFACE
    switchoverTestRecordbody := &model.CreateSwitchoverTest{
        ResourceId: "d0b3329c-0063-470c-b1dc-657656b2e540",
        ResourceType: &resourceTypeSwitchoverTestRecord,
        Operation: model.GetCreateSwitchoverTestOperationEnum().SHUTDOWN,
    }
    request.Body = &model.CreateSwitchoverTestRequestBody{
        SwitchoverTestRecord: switchoverTestRecordbody,
    }
    response, err := client.SwitchoverTest(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Code

Status Code	Description
201	Created

Error Codes

See **Error Codes**.

4.3.10 Querying the List of Virtual Interface Switchover Test Records

Function

This API is used to query the list of switchover test records. Only the records whose **operate_status** is **COMPLETE** are displayed.

Debugging

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/switchover-test

Table 4-139 Path parameters

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

Table 4-140 Query parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the number of records returned on each page. Value range: **1–2000** Minimum: **1** Maximum: **2000** Default: **2000**
marker	No	String	Specifies the ID of the last resource record on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with **limit**. Minimum: **0** Maximum: **36**
fields	No	Array	Specifies the list of fields to be displayed. Array length: **1–5**

Parameter	Mandatory	Type	Description
sort_dir	No	Array	Specifies the sorting order of returned results. The value can be **asc** (default) or **desc**.
sort_key	No	String	Specifies the field for sorting. Default: **id** Minimum: **0** Maximum: **36**
resource_id	No	Array	Specifies the resource ID used for querying switchover test records.

Request Parameters

Table 4-141 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-142 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
switchover_test_records	Array of **SwitchoverTestRecord** objects	Lists the switchover test records.

Parameter	Type	Description
page_info	PageInfo object	Specifies the pagination query information.

Table 4-143 SwitchoverTestRecord

Parameter	Type	Description
id	String	Specifies the unique ID of the switchover test record.
tenant_id	String	Specifies the project ID. Minimum: **32** Maximum: **32**
resource_id	String	Specifies the ID of the resource on which the switchover test is to be performed.
resource_type	String	Specifies the type of the resource on which the switchover test is to be performed. Default: **virtual_interface** Minimum: **0** Maximum: **128** Enumeration values: • **virtual_interface**
operation	String	Specifies whether to perform a switchover test. Value options: **shutdown** and **undo_shutdown** Minimum: **0** Maximum: **128** Enumeration values: • **shutdown** • **undo_shutdown**
start_time	String	Specifies the start time of the switchover test.
end_time	String	Specifies the end time of the switchover test.

Parameter	Type	Description
operate_status	String	Specifies the switchover test status. • **STARTING**: indicates the initial status. • **INPROGRESS**: The configuration is being delivered. • **COMPLETE**: The configuration is delivered. • **ERROR**: The configuration fails to be delivered. Enumeration values: • **STARTING** • **INPROGRESS** • **COMPLETE** • **ERROR**

Table 4-144 PageInfo

Parameter	Type	Description
previous_marker	String	Specifies the marker of the previous page. The value is the resource UUID. Minimum: **0** Maximum: **36**
current_count	Integer	Specifies the number of resources in the current list. Minimum: **0** Maximum: **2000**
next_marker	String	Specifies the marker of the next page. The value is the resource UUID. If this parameter is left empty, the resource is on the last page. Minimum: **0** Maximum: **36**

Example Requests

Querying the switchover test record list

```
GET https://{dc_endpoint}/v3/de58f033eb664102ba85e4a5db473ca5/dcaas/switchover-test
```

Example Responses

Status code: 200

OK


```
{
  "request_id" : "bb154519fb167f99cdb01b7b9995ad14",
  "switchover_test_records" : [ {
    "id" : "862d61f1-d9ea-4093-ba0e-2b8d415e3ab3",
    "tenant_id" : "de58f033eb664102ba85e4a5db473ca5",
    "resource_type" : "virtual_interface",
    "resource_id" : "d0b3329c-0063-470c-b1dc-657656b2e540",
    "operation" : "shutdown",
    "start_time" : "2023-10-10T10:41:23.000Z",
    "end_time" : "2023-10-10T10:41:23.000Z",
    "operate_status" : "COMPLETE"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class ListSwitchoverTestRecordsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ListSwitchoverTestRecordsRequest request = new ListSwitchoverTestRecordsRequest();
        request.withLimit(<limit>);
        request.withMarker("<marker>");
        request.withFields();
        request.withSortDir();
        request.withSortKey("<sort_key>");
        request.withResourceId();
        try {
            ListSwitchoverTestRecordsResponse response = client.listSwitchoverTestRecords(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
```



```
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListSwitchoverTestRecordsRequest()
        request.limit = <limit>
        request.marker = "<marker>"
        request.fields =
        request.sort_dir =
        request.sort_key = "<sort_key>"
        request.resource_id =
        response = client.list_switchover_test_records(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
```



```
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListSwitchoverTestRecordsRequest{}
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    sortKeyRequest:= "<sort_key>"
    request.SortKey = &sortKeyRequest
    response, err := client.ListSwitchoverTestRecords(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Code

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.4 Tag Management

4.4.1 Adding a Resource Tag

Function

- You can add up to 10 tags to a resource.
- The API is idempotent.
- If a tag to be added has the same key as an existing tag, the tag will be added and overwrite the existing one.

Debugging

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/{resource_type}/{resource_id}/tags

Table 4-145 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
resource_id	Yes	String	Specifies the resource ID.
resource_type	Yes	String	• Specifies the Direct Connect resource type. The value can be **dc-directconnect**, **dc-vgw**, or **dc-vif**. • **dc-directconnect**: Direct Connect connection • **dc-vgw**: virtual gateway • **dc-vif**: virtual interface Enumeration values: • **dc-directconnect** • **dc-vgw** • **dc-vif**

Request Parameters

Table 4-146 Request body parameters

Parameter	Mandatory	Type	Description
tag	Yes	**Tag** object	Specifies the tag.

Table 4-147 Tag

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	No	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Response Parameters

None

Example Requests

Adding a resource tag

```
POST https://{endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/dc-vgw/3320166e-b937-40cc-a35c-02cd3f2b3ee2/tags

{
  "tag" : {
    "key" : "key1",
    "value" : "value1"
  }
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Adding a resource tag

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
```



```
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class CreateResourceTagSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateResourceTagRequest request = new CreateResourceTagRequest();
        CreateResourceTagRequestBody body = new CreateResourceTagRequestBody();
        Tag tagbody = new Tag();
        tagbody.withKey("key1")
            .withValue("value1");
        body.withTag(tagbody);
        request.withBody(body);
        try {
            CreateResourceTagResponse response = client.createResourceTag(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Adding a resource tag

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
```

```
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateResourceTagRequest()
        tagbody = Tag(
            key="key1",
            value="value1"
        )
        request.body = CreateResourceTagRequestBody(
            tag=tagbody
        )
        response = client.create_resource_tag(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Adding a resource tag

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateResourceTagRequest{}
    valueTag:= "value1"
    tagbody := &model.Tag{
        Key: "key1",
        Value: &valueTag,
    }
    request.Body = &model.CreateResourceTagRequestBody{
        Tag: tagbody,
```



```
    }
    response, err := client.CreateResourceTag(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Code

Status Code	Description
204	No Content

Error Codes

See **Error Codes**.

4.4.2 Querying Tags by Project

Function

- This API is used to query all resource tags of a resource in a specified project.
- TMS uses this API to list tags created by a tenant to ease tag creation and resource filtering.

Debugging

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/{resource_type}/tags

Table 4-148 Path parameters

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

Parameter	Mandatory	Type	Description
resource_type	Yes	String	• Specifies the Direct Connect resource type. The value can be **dc-directconnect**, **dc-vgw**, or **dc-vif**. • **dc-directconnect**: Direct Connect connection • **dc-vgw**: virtual gateway • **dc-vif**: virtual interface Enumeration values: • **dc-directconnect** • **dc-vgw** • **dc-vif**

Request Parameters

None

Response Parameters

Status code: 200

Table 4-149 Response body parameters

Parameter	Type	Description
tags	Array of **Tag** objects	Specifies the tag list.
request_id	String	Specifies the request ID.

Table 4-150 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**

Parameter	Type	Description
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Example Requests

```
GET https://{dc_endpoint}/v3/ed28c294165741faaeccab26913122a1/dc-directconnect/tags
```

Example Responses

Status code: 200

OK

```
{
  "tags" : [ {
    "key" : "department",
    "value" : "finance"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class ListProjectTagsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
```



```
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ListProjectTagsRequest request = new ListProjectTagsRequest();
        try {
            ListProjectTagsResponse response = client.listProjectTags(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListProjectTagsRequest()
        response = client.list_project_tags(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
```



```
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListProjectTagsRequest{}
    response, err := client.ListProjectTags(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Code

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.4.3 Querying Tags of a Resource

Function

This API is used to query the tags of a resource.

Debugging

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/{resource_type}/{resource_id}/tags

Table 4-151 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
resource_type	Yes	String	• Specifies the Direct Connect resource type. The value can be **dc-directconnect**, **dc-vgw**, or **dc-vif**. • **dc-directconnect**: Direct Connect connection • **dc-vgw**: virtual gateway • **dc-vif**: virtual interface Enumeration values: • **dc-directconnect** • **dc-vgw** • **dc-vif**
resource_id	Yes	String	Specifies the resource ID.

Request Parameters

None

Response Parameters

Status code: 200

Table 4-152 Response body parameters

Parameter	Type	Description
tags	Array of **Tag** objects	Specifies the tag list.
sys_tags	Array of **Tag** objects	Specifies the list of queried tags. If no tag is matched, an empty array is returned.
request_id	String	Specifies the request ID.

Table 4-153 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Example Requests

Querying tags of a resource

```
https://{endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/dc-vgw/resource-instances/action
```

Example Responses

Status code: 200

OK

```
{
  "request_id" : "80ef5f21-b81a-4546-b23d-84272507d330",
  "tags" : [ {
    "key" : "key2",
    "value" : "value2"
  }, {
    "key" : "key1",
    "value" : "value1"
  }, {
    "key" : "key3",
    "value" : "value3"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
```



```
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class ShowResourceTagSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowResourceTagRequest request = new ShowResourceTagRequest();
        try {
            ShowResourceTagResponse response = client.showResourceTag(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowResourceTagRequest()
```



```
        response = client.show_resource_tag(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowResourceTagRequest{}
    response, err := client.ShowResourceTag(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Code

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.4.4 Querying Resources by Tag

Function

This API is used to query resources by tag.

Debugging

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/{resource_type}/resource-instances/action

Table 4-154 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
resource_type	Yes	String	• Specifies the Direct Connect resource type. The value can be **dc-directconnect**, **dc-vgw**, or **dc-vif**. • **dc-directconnect**: Direct Connect connection • **dc-vgw**: virtual gateway • **dc-vif**: virtual interface Enumeration values: • **dc-directconnect** • **dc-vgw** • **dc-vif**

Request Parameters

Table 4-155 Request body parameters

Parameter	Mandatory	Type	Description
offset	No	String	Specifies the index position. The query starts from the next image indexed by this parameter. This parameter is not required when you query data on the first page. The value in the response returned for querying data on the previous page will be included in this parameter for querying data on subsequent pages. This parameter is not available when **action** is set to **count**. If **action** is set to **filter**, the value must be a number, and the default value is **0**. The value cannot be a negative number.
limit	No	String	Number of records. This parameter is not available when **action** is set to **count**. The default value is **1000** when **action** is set to **filter**. The maximum value is **1000**, and the minimum value is **1**. The value cannot be a negative number.
action	Yes	String	The value can only be **filter** or **count**. The value filter indicates pagination query. The value count indicates that the total number of query results meeting the search criteria will be returned. Returning other fields is not allowed. Enumeration values: • **filter** • **count**

Parameter	Mandatory	Type	Description
matches	No	Array of **Match** objects	Specifies the search criteria. The tag key is the parameter to match, for example, **resource_name**. The tag value indicates the value to be matched. This field is a fixed dictionary value. Determine whether fuzzy match is required based on different fields. For example, if **key** is **resource_name**, fuzzy search (case insensitive) is used by default. If **value** is an empty string, exact match is used. If **key** is **resource_id**, exact match is used. Only **resource_name** is queried at the first phase, and other keys will be queried later.
not_tags	No	Array of **Tags** objects	Specifies the excluded tags. Each tag contains a maximum of 10 keys, and each key contains a maximum of 10 values. The structure body cannot be missing, and the key cannot be left blank or set to an empty string. Each tag key must be unique, and each tag value of a tag must also be unique. Resources not identified by different keys are in AND relationship, and values in one tag are in OR relationship. If **not_tags_any** is not specified, all resources will be returned.

Parameter	Mandatory	Type	Description
tags	No	Array of **Tags** objects	A maximum of 10 keys can be queried at a time, and each key can contain a maximum of 10 values. The structure body must be included. The tag key cannot be left blank or be an empty string. Each tag key must be unique, and each tag value of a tag must also be unique. Resources identified by different keys are in AND relationship, and values in one tag are in OR relationship. If no tag filtering criteria is specified, full data is returned.
tags_any	No	Array of **Tags** objects	Specifies any included tags. Each tag contains a maximum of 10 keys, and each key contains a maximum of 10 values. The structure body cannot be missing, and the key cannot be left blank or set to an empty string. Each tag key must be unique, and each tag value of a tag must also be unique. Resources identified by different keys are in OR relationship, and values in one tag are in OR relationship. If **not_tags_any** is not specified, all resources will be returned.

Parameter	Mandatory	Type	Description
not_tags_any	No	Array of **Tags** objects	Specifies any excluded tags. Each tag contains a maximum of 10 keys, and each key contains a maximum of 10 values. The structure body cannot be missing, and the key cannot be left blank or set to an empty string. Each tag key must be unique, and each tag value of a tag must also be unique. Resources not identified by different keys are in OR relationship, and values in one tag are in OR relationship. If **not_tags_any** is not specified, all resources will be returned.
sys_tags	No	Array of **Tags** objects	Only users with the **op_service** permission can use this parameter to filter resources. Only one tag structure is contained when this API is called by Tag Management Service (TMS). The **key** is **_sys_enterprise_project_id**, and the **value** is the enterprise project ID list. Currently, each key can contain only one value. **0** indicates the default enterprise project. **sys_tags** and tenant tag filtering conditions (**without_any_tag**, **tags**, **tags_any**, **not_tags**, and **not_tags_any**) cannot be used at the same time.

Table 4-156 Match

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key. The value can be **dc-directconnect**, **dc-vgw**, or **dc-vif**.

Parameter	Mandatory	Type	Description
value	Yes	String	Specifies the tag value. It can contain a maximum of 255 Unicode characters.

Table 4-157 Tags

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key. A key can contain a maximum of 127 Unicode characters. The tag key cannot be left blank.
values	Yes	Array of strings	Lists the tag values. It can contain a maximum of 255 Unicode characters.

Response Parameters

Status code: 200

Table 4-158 Response body parameters

Parameter	Type	Description
resources	Array of **Resource** objects	Specifies the resource list.
total_count	Integer	Specifies the total number of resources.
request_id	String	Specifies the request ID.

Table 4-159 Resource

Parameter	Type	Description
resource_detail	Object	Provides details about the resource. The value is a resource object, used for extension. **resource_detail** is left blank by default.
resource_id	String	Specifies the resource ID.
resource_name	String	Resource name. This parameter is an empty string by default if there is no resource name.

Parameter	Type	Description
tags	Array of **Tag** objects	Specifies the list of queried tags. If no tag is matched, an empty array is returned.
sys_tags	Array of **Tag** objects	Specifies the list of queried tags. If no tag is matched, an empty array is returned.

Table 4-160 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Example Requests

- Querying resources (**action** set to **filter**)

```
https://{endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/dc-vgw/resource-instances/action

{
  "offset" : "10",
  "limit" : "10",
  "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 resources (**action** set to **count**)

```
https://{endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/dc-vgw/resource_instances/action

{
  "action" : "count",
  "not_tags" : [ {
    "key" : "key1",
    "values" : [ "value1", "*value2" ]
  } ],
  "tags" : [ {
    "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" ]
  } ],
  "sys_tags" : [ {
    "key" : "_sys_enterprise_project_id",
    "values" : [ "5aa119a8-d25b-45a7-8d1b-88e127885635" ]
  } ],
  "matches" : [ {
    "key" : "resource_name",
    "value" : "resource1"
  } ]
}
```

Example Responses

Status code: 200

OK

```
{
  "resources" : [ ],
  "total_count" : 0,
  "request_id" : "9a4f4dfc4fb2fc101e65bba07d908535"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

- Querying resources (**action** set to **filter**)

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;
```



```
public class ListTagResourceInstancesSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ListTagResourceInstancesRequest request = new ListTagResourceInstancesRequest();
        ListTagResourceInstancesRequestBody body = new ListTagResourceInstancesRequestBody();
        List<String> listNotTagsAnyValues = new ArrayList<>();
        listNotTagsAnyValues.add("value1");
        listNotTagsAnyValues.add("value2");
        List<Tags> listbodyNotTagsAny = new ArrayList<>();
        listbodyNotTagsAny.add(
            new Tags()
                .withKey("key1")
                .withValues(listNotTagsAnyValues)
        );
        List<String> listTagsAnyValues = new ArrayList<>();
        listTagsAnyValues.add("value1");
        listTagsAnyValues.add("value2");
        List<Tags> listbodyTagsAny = new ArrayList<>();
        listbodyTagsAny.add(
            new Tags()
                .withKey("key1")
                .withValues(listTagsAnyValues)
        );
        List<String> listTagsValues = new ArrayList<>();
        listTagsValues.add("*value1");
        listTagsValues.add("value2");
        List<Tags> listbodyTags = new ArrayList<>();
        listbodyTags.add(
            new Tags()
                .withKey("key1")
                .withValues(listTagsValues)
        );
        List<String> listNotTagsValues = new ArrayList<>();
        listNotTagsValues.add("*value1");
        listNotTagsValues.add("value2");
        List<Tags> listbodyNotTags = new ArrayList<>();
        listbodyNotTags.add(
            new Tags()
                .withKey("key1")
                .withValues(listNotTagsValues)
        );
        List<Match> listbodyMatches = new ArrayList<>();
        listbodyMatches.add(
            new Match()
                .withKey("resource_name")
                .withValue("resource1")
        );
        body.withNotTagsAny(listbodyNotTagsAny);
        body.withTagsAny(listbodyTagsAny);
        body.withTags(listbodyTags);
        body.withNotTags(listbodyNotTags);
```



```
        body.withMatches(listbodyMatches);
        body.withAction(ListTagResourceInstancesRequestBody.ActionEnum.fromValue("filter"));
        body.withLimit("10");
        body.withOffset("10");
        request.withBody(body);
        try {
            ListTagResourceInstancesResponse response = client.listTagResourceInstances(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

- Querying the total number of resources (**action** set to **count**)

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class ListTagResourceInstancesSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ListTagResourceInstancesRequest request = new ListTagResourceInstancesRequest();
        ListTagResourceInstancesRequestBody body = new ListTagResourceInstancesRequestBody();
        List<String> listSysTagsValues = new ArrayList<>();
        listSysTagsValues.add("5aa119a8-d25b-45a7-8d1b-88e127885635");
        List<Tags> listbodySysTags = new ArrayList<>();
        listbodySysTags.add(
            new Tags()
                .withKey("_sys_enterprise_project_id")
                .withValues(listSysTagsValues)
        );
        List<String> listNotTagsAnyValues = new ArrayList<>();
        listNotTagsAnyValues.add("value1");
        listNotTagsAnyValues.add("value2");
```



```
List<Tags> listbodyNotTagsAny = new ArrayList<>();
listbodyNotTagsAny.add(
    new Tags()
        .withKey("key1")
        .withValues(listNotTagsAnyValues)
);
List<String> listTagsAnyValues = new ArrayList<>();
listTagsAnyValues.add("value1");
listTagsAnyValues.add("value2");
List<Tags> listbodyTagsAny = new ArrayList<>();
listbodyTagsAny.add(
    new Tags()
        .withKey("key1")
        .withValues(listTagsAnyValues)
);
List<String> listTagsValues = new ArrayList<>();
listTagsValues.add("value1");
listTagsValues.add("value2");
List<String> listTagsValues1 = new ArrayList<>();
listTagsValues1.add("value1");
listTagsValues1.add("value2");
List<Tags> listbodyTags = new ArrayList<>();
listbodyTags.add(
    new Tags()
        .withKey("key1")
        .withValues(listTagsValues1)
);
listbodyTags.add(
    new Tags()
        .withKey("key2")
        .withValues(listTagsValues)
);
List<String> listNotTagsValues = new ArrayList<>();
listNotTagsValues.add("value1");
listNotTagsValues.add("*value2");
List<Tags> listbodyNotTags = new ArrayList<>();
listbodyNotTags.add(
    new Tags()
        .withKey("key1")
        .withValues(listNotTagsValues)
);
List<Match> listbodyMatches = new ArrayList<>();
listbodyMatches.add(
    new Match()
        .withKey("resource_name")
        .withValue("resource1")
);
body.withSysTags(listbodySysTags);
body.withNotTagsAny(listbodyNotTagsAny);
body.withTagsAny(listbodyTagsAny);
body.withTags(listbodyTags);
body.withNotTags(listbodyNotTags);
body.withMatches(listbodyMatches);
body.withAction(ListTagResourceInstancesRequestBody.ActionEnum.fromValue("count"));
request.withBody(body);
try {
    ListTagResourceInstancesResponse response = client.listTagResourceInstances(request);
    System.out.println(response.toString());
} catch (ConnectionException e) {
    e.printStackTrace();
} catch (RequestTimeoutException e) {
    e.printStackTrace();
} catch (ServiceResponseException e) {
    e.printStackTrace();
    System.out.println(e.getHttpStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
```



```
    }
}
```

Python

- Querying resources (**action** set to **filter**)

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListTagResourceInstancesRequest()
        listValuesNotTagsAny = [
            "value1",
            "value2"
        ]
        listNotTagsAnybody = [
            Tags(
                key="key1",
                values=listValuesNotTagsAny
            )
        ]
        listValuesTagsAny = [
            "value1",
            "value2"
        ]
        listTagsAnybody = [
            Tags(
                key="key1",
                values=listValuesTagsAny
            )
        ]
        listValuesTags = [
            "*value1",
            "value2"
        ]
        listTagsbody = [
            Tags(
                key="key1",
                values=listValuesTags
            )
        ]
        listValuesNotTags = [
            "*value1",
            "value2"
        ]
        listNotTagsbody = [
            Tags(
                key="key1",
```



```
            values=listValuesNotTags
        )
    ]
    listMatchesbody = [
        Match(
            key="resource_name",
            value="resource1"
        )
    ]
    request.body = ListTagResourceInstancesRequestBody(
        not_tags_any=listNotTagsAnybody,
        tags_any=listTagsAnybody,
        tags=listTagsbody,
        not_tags=listNotTagsbody,
        matches=listMatchesbody,
        action="filter",
        limit="10",
        offset="10"
    )
    response = client.list_tag_resource_instances(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

- Querying the total number of resources (**action** set to **count**)

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListTagResourceInstancesRequest()
        listValuesSysTags = [
            "5aa119a8-d25b-45a7-8d1b-88e127885635"
        ]
        listSysTagsbody = [
            Tags(
                key="_sys_enterprise_project_id",
                values=listValuesSysTags
            )
        ]
        listValuesNotTagsAny = [
            "value1",
            "value2"
        ]
        listNotTagsAnybody = [
            Tags(
                key="key1",
```



```
            values=listValuesNotTagsAny
        )
    ]
    listValuesTagsAny = [
        "value1",
        "value2"
    ]
    listTagsAnybody = [
        Tags(
            key="key1",
            values=listValuesTagsAny
        )
    ]
    listValuesTags = [
        "value1",
        "value2"
    ]
    listValuesTags1 = [
        "value1",
        "value2"
    ]
    listTagsbody = [
        Tags(
            key="key1",
            values=listValuesTags1
        ),
        Tags(
            key="key2",
            values=listValuesTags
        )
    ]
    listValuesNotTags = [
        "value1",
        "*value2"
    ]
    listNotTagsbody = [
        Tags(
            key="key1",
            values=listValuesNotTags
        )
    ]
    listMatchesbody = [
        Match(
            key="resource_name",
            value="resource1"
        )
    ]
    request.body = ListTagResourceInstancesRequestBody(
        sys_tags=listSysTagsbody,
        not_tags_any=listNotTagsAnybody,
        tags_any=listTagsAnybody,
        tags=listTagsbody,
        not_tags=listNotTagsbody,
        matches=listMatchesbody,
        action="count"
    )
    response = client.list_tag_resource_instances(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

- Querying resources (**action** set to **filter**)

```
package main
```

```
import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListTagResourceInstancesRequest{}
    var listValuesNotTagsAny = []string{
        "value1",
        "value2",
    }
    var listNotTagsAnybody = []model.Tags{
        {
            Key: "key1",
            Values: listValuesNotTagsAny,
        },
    }
    var listValuesTagsAny = []string{
        "value1",
        "value2",
    }
    var listTagsAnybody = []model.Tags{
        {
            Key: "key1",
            Values: listValuesTagsAny,
        },
    }
    var listValuesTags = []string{
        "*value1",
        "value2",
    }
    var listTagsbody = []model.Tags{
        {
            Key: "key1",
            Values: listValuesTags,
        },
    }
    var listValuesNotTags = []string{
        "*value1",
        "value2",
    }
    var listNotTagsbody = []model.Tags{
        {
            Key: "key1",
            Values: listValuesNotTags,
        },
```



```
    }
    var listMatchesbody = []model.Match{
        {
            Key: "resource_name",
            Value: "resource1",
        },
    }
    limitListTagResourceInstancesRequestBody:= "10"
    offsetListTagResourceInstancesRequestBody:= "10"
    request.Body = &model.ListTagResourceInstancesRequestBody{
        NotTagsAny: &listNotTagsAnybody,
        TagsAny: &listTagsAnybody,
        Tags: &listTagsbody,
        NotTags: &listNotTagsbody,
        Matches: &listMatchesbody,
        Action: model.GetListTagResourceInstancesRequestBodyActionEnum().FILTER,
        Limit: &limitListTagResourceInstancesRequestBody,
        Offset: &offsetListTagResourceInstancesRequestBody,
    }
    response, err := client.ListTagResourceInstances(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

- Querying the total number of resources (**action** set to **count**)

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListTagResourceInstancesRequest{}
    var listValuesSysTags = []string{
        "5aa119a8-d25b-45a7-8d1b-88e127885635",
    }
    var listSysTagsbody = []model.Tags{
        {
            Key: "_sys_enterprise_project_id",
            Values: listValuesSysTags,
        },
    }
    var listValuesNotTagsAny = []string{
```

```
        "value1",
        "value2",
    }
    var listNotTagsAnybody = []model.Tags{
        {
            Key: "key1",
            Values: listValuesNotTagsAny,
        },
    }
    var listValuesTagsAny = []string{
        "value1",
        "value2",
    }
    var listTagsAnybody = []model.Tags{
        {
            Key: "key1",
            Values: listValuesTagsAny,
        },
    }
    var listValuesTags = []string{
        "value1",
        "value2",
    }
    var listValuesTags1 = []string{
        "value1",
        "value2",
    }
    var listTagsbody = []model.Tags{
        {
            Key: "key1",
            Values: listValuesTags1,
        },
        {
            Key: "key2",
            Values: listValuesTags,
        },
    }
    var listValuesNotTags = []string{
        "value1",
        "*value2",
    }
    var listNotTagsbody = []model.Tags{
        {
            Key: "key1",
            Values: listValuesNotTags,
        },
    }
    var listMatchesbody = []model.Match{
        {
            Key: "resource_name",
            Value: "resource1",
        },
    }
    request.Body = &model.ListTagResourceInstancesRequestBody{
        SysTags: &listSysTagsbody,
        NotTagsAny: &listNotTagsAnybody,
        TagsAny: &listTagsAnybody,
        Tags: &listTagsbody,
        NotTags: &listNotTagsbody,
        Matches: &listMatchesbody,
        Action: model.GetListTagResourceInstancesRequestBodyActionEnum().COUNT,
    }
    response, err := client.ListTagResourceInstances(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```


More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Code

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.4.5 Deleting a Resource Tag

Function

When a tag is deleted, the tag character set is not verified. Before calling this API, perform the encodeURI operation. The server must perform decodeURI on the API URI. The tag key cannot be left blank or be an empty string. If the key of the tag to be deleted is not found, 404 will be returned.

Debugging

For details, see **Calling APIs**.

URI

DELETE /v3/{project_id}/{resource_type}/{resource_id}/tags/{key}

Table 4-161 Path parameters

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key.
project_id	Yes	String	Specifies the project ID.
resource_id	Yes	String	Specifies the resource ID.

Parameter	Mandatory	Type	Description
resource_type	Yes	String	• Specifies the Direct Connect resource type. The value can be **dc-directconnect**, **dc-vgw**, or **dc-vif**. • **dc-directconnect**: Direct Connect connection • **dc-vgw**: virtual gateway • **dc-vif**: virtual interface Enumeration values: • **dc-directconnect** • **dc-vgw** • **dc-vif**

Request Parameters

None

Response Parameters

None

Example Requests

Deleting a resource tag

```
DELETE https://{dc-endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/instance/3320166e-b937-40cc-a35c-02cd3f2b3ee2/tags/key1
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class DeleteResourceTagSolution {
```



```
    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteResourceTagRequest request = new DeleteResourceTagRequest();
        try {
            DeleteResourceTagResponse response = client.deleteResourceTag(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteResourceTagRequest()
        response = client.delete_resource_tag(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
```



```
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteResourceTagRequest{}
    response, err := client.DeleteResourceTag(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Code

Status Code	Description
204	No Content

Error Codes

See **Error Codes**.

4.4.6 Adding or Deleting Tags in Batches

Function

- This API is used to add or delete tags of a specific resource in batches.
- TMS may use this API to manage service resource tags.
- You can add up to 10 tags to a resource.

Debugging

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/{resource_type}/{resource_id}/tags/action

Table 4-162 Path parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID.
resource_id	Yes	String	Specifies the resource ID.
resource_type	Yes	String	• Specifies the Direct Connect resource type. The value can be **dc-directconnect**, **dc-vgw**, or **dc-vif**. • **dc-directconnect**: Direct Connect connection • **dc-vgw**: virtual gateway • **dc-vif**: virtual interface Enumeration values: • **dc-directconnect** • **dc-vgw** • **dc-vif**

Request Parameters

Table 4-163 Request body parameters

Parameter	Mandatory	Type	Description
action	Yes	String	Specifies the action type. Value options: **create** and **delete** Enumeration values: • **create** • **delete**
tags	No	Array of **Tag** objects	Specifies the tag list.
sys_tags	No	Array of **Tag** objects	Specifies the tag list.

Table 4-164 Tag

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters. Only letters, digits, hyphens (-), and underscores (_) are allowed. Minimum: **0** Maximum: **36**
value	No	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters. Only letters, digits, hyphens (-), underscores (_), and periods (.) are allowed. Minimum: **0** Maximum: **43**

Response Parameters

None

Example Requests

- Batch adding resource tags
  POST https://{endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/dc-vgw/3320166e-b937-40cc-a35c-02cd3f2b3ee2/tags/action


```
{
  "action" : "create",
  "tags" : [ {
    "key" : "key1",
    "value" : "value1"
  }, {
    "key" : "key2",
    "value" : "value2"
  } ]
}
```

- Batch deleting resource tags

```
POST https://{endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/dc-vgw/3320166e-b937-40cc-a35c-02cd3f2b3ee2/tags/action

{
  "action" : "delete",
  "tags" : [ {
    "key" : "key1"
  }, {
    "key" : "key2",
    "value" : "value3"
  } ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

- Batch adding resource tags

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class BatchCreateResourceTagsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);
```

```
        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        BatchCreateResourceTagsRequest request = new BatchCreateResourceTagsRequest();
        BatchOperateResourceTagsRequestBody body = new BatchOperateResourceTagsRequestBody();
        List<Tag> listbodyTags = new ArrayList<>();
        listbodyTags.add(
            new Tag()
                .withKey("key1")
                .withValue("value1")
        );
        listbodyTags.add(
            new Tag()
                .withKey("key2")
                .withValue("value2")
        );
        body.withTags(listbodyTags);
        body.withAction(BatchOperateResourceTagsRequestBody.ActionEnum.fromValue("create"));
        request.withBody(body);
        try {
            BatchCreateResourceTagsResponse response = client.batchCreateResourceTags(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

- Batch deleting resource tags

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class BatchCreateResourceTagsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
```

```
            .withRegion(DcRegion.valueOf("<YOUR REGION>"))
            .build();
        BatchCreateResourceTagsRequest request = new BatchCreateResourceTagsRequest();
        BatchOperateResourceTagsRequestBody body = new BatchOperateResourceTagsRequestBody();
        List<Tag> listbodyTags = new ArrayList<>();
        listbodyTags.add(
            new Tag()
                .withKey("key1")
        );
        listbodyTags.add(
            new Tag()
                .withKey("key2")
                .withValue("value3")
        );
        body.withTags(listbodyTags);
        body.withAction(BatchOperateResourceTagsRequestBody.ActionEnum.fromValue("delete"));
        request.withBody(body);
        try {
            BatchCreateResourceTagsResponse response = client.batchCreateResourceTags(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

- Batch adding resource tags

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = BatchCreateResourceTagsRequest()
        listTagsbody = [
            Tag(
                key="key1",
                value="value1"
            ),
            Tag(
```



```
            key="key2",
            value="value2"
        )
    ]
    request.body = BatchOperateResourceTagsRequestBody(
        tags=listTagsbody,
        action="create"
    )
    response = client.batch_create_resource_tags(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

- Batch deleting resource tags

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = BatchCreateResourceTagsRequest()
        listTagsbody = [
            Tag(
                key="key1"
            ),
            Tag(
                key="key2",
                value="value3"
            )
        ]
        request.body = BatchOperateResourceTagsRequestBody(
            tags=listTagsbody,
            action="delete"
        )
        response = client.batch_create_resource_tags(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

- Batch adding resource tags

```
package main
```

```
import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.BatchCreateResourceTagsRequest{}
    valueTags:= "value1"
    valueTags1:= "value2"
    var listTagsbody = []model.Tag{
        {
            Key: "key1",
            Value: &valueTags,
        },
        {
            Key: "key2",
            Value: &valueTags1,
        },
    }
    request.Body = &model.BatchOperateResourceTagsRequestBody{
        Tags: &listTagsbody,
        Action: model.GetBatchOperateResourceTagsRequestBodyActionEnum().CREATE,
    }
    response, err := client.BatchCreateResourceTags(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

- Batch deleting resource tags

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before
```

```
running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.BatchCreateResourceTagsRequest{}
    valueTags:= "value3"
    var listTagsbody = []model.Tag{
        {
            Key: "key1",
        },
        {
            Key: "key2",
            Value: &valueTags,
        },
    }
    request.Body = &model.BatchOperateResourceTagsRequestBody{
        Tags: &listTagsbody,
        Action: model.GetBatchOperateResourceTagsRequestBodyActionEnum().DELETE,
    }
    response, err := client.BatchCreateResourceTags(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Code

Status Code	Description
204	No Content

Error Codes

See **Error Codes**.

4.5 Quota Management

4.5.1 Querying Quotas

Function

This API is used to query resource quotas, for example, how many connections and virtual interfaces have been created.

Debugging

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/quotas

Table 4-165 Path parameters

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

Table 4-166 Query parameters

Parameter	Mandatory	Type	Description
type	No	Array	Specifies resource quotas. • - **physicalConnect**: connection quota and used quota • - **virtualInterface**: virtual-interface quota and used quota • - **globalDcGateway**: global DC gateway quota and used quota • - **peerLinkPerGdgw**: peer link quota and used quota

Request Parameters

None

Response Parameters

Status code: 201

Table 4-167 Response body parameters

Parameter	Type	Description
quotas	**quotas** object	Provides used quota details.

Table 4-168 quotas

Parameter	Type	Description
resources	Array of **Info** objects	Specifies the used resource quotas.

Table 4-169 Info

Parameter	Type	Description
type	String	Specifies the quota type.
quota	Long	Specifies the available quota. The value **-1** indicates that there is no quota limit.
used	Long	Specifies the used quota.
unit	String	Specifies the measurement unit of resource usage.

Example Requests

Querying quotas

```
GET https://{dc_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/dcaas/quotas
```

Example Responses

Status code: 201

Quotas are queried.

```
{
  "quotas" : {
    "resources" : [ {
      "type" : "direct_connect",
      "quota" : 1,
      "used" : 0,
      "unit" : "count"
    } ]
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class ShowQuotasSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

        ICredential auth = new BasicCredentials()
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowQuotasRequest request = new ShowQuotasRequest();
        request.withType();
        try {
            ShowQuotasResponse response = client.showQuotas(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
```



```
    ak = os.getenv("CLOUD_SDK_AK")
    sk = os.getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowQuotasRequest()
        request.type =
        response = client.show_quotas(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowQuotasRequest{}
    response, err := client.ShowQuotas(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the **Sample Code** tab in **API Explorer**. SDK sample code can be automatically generated.

Status Code

Status Code	Description
201	Quotas are queried.

Error Codes

See **Error Codes**.

4.6 Global DC Gateways

4.6.1 Querying the Global DC Gateway List

Function

This API is used to query the global DC gateway list. Pagination query is recommended. The **marker** and **limit** parameters are used for pagination query. The two parameters take effect only when they are used together.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/global-dc-gateways

Table 4-170 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**

Table 4-171 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the number of records returned on each page. Value range: 1 to 2000 Minimum: **1** Maximum: **2000** Default: **2000**
fields	No	Array of strings	Specifies the list of fields to be displayed. Array Length: **1 - 5**
marker	No	String	Specifies the ID of the last resource record on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with **limit**. Minimum: **0** Maximum: **36**
sort_key	No	String	Specifies the sorting field. Default: **id** Minimum: **0** Maximum: **36**
sort_dir	No	Array of strings	Specifies the sorting order of returned results. There are two options: **asc** (default) and **desc**.
id	No	Array of strings	Specifies the resource ID for querying instances. Array Length: **1 - 5**
name	No	Array of strings	Specifies the resource name for querying instances. You can specify multiple names. Array Length: **1 - 5**
enterprise_project_id	No	Array of strings	Specifies the enterprise project ID for querying instances. Array Length: **1 - 10**
site_network_id	No	Array of strings	Specifies the site network ID.

Parameter	Mandatory	Type	Description
cloud_connection_id	No	Array of strings	Specifies the cloud connection ID.
status	No	Array of strings	Specifies the status by which instances are queried. Array Length: **1 - 5**
global_center_network_id	No	Array of strings	Specifies the central network ID.

Request Parameters

Table 4-172 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-173 Response body parameters

Parameter	Type	Description
global_dc_gateways	Array of **GlobalDcGatewayEntry** objects	Lists the global DC gateways. Array Length: **0 - 2000**
page_info	**PageInfo** object	Specifies the pagination query information.
request_id	String	Specifies the request ID. Minimum: **0** Maximum: **36**

Table 4-174 GlobalDcGatewayEntry

Parameter	Type	Description
id	String	Specifies the global DC gateway ID. Minimum: **0** Maximum: **36**
tenant_id	String	Specifies the project ID. Minimum: **0** Maximum: **255**
name	String	Specifies the name of the global DC gateway. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the global DC gateway. Minimum: **0** Maximum: **128**
reason	String	Specifies the cause of the failure to create the global DC gateway. Minimum: **0** Maximum: **255**
enterprise_project_id	String	Specifies the ID of the enterprise project that the global DC gateway belongs to. Minimum: **0** Maximum: **36**
global_center_network_id	String	Specifies the ID of the central network that the global DC gateway is added to. Minimum: **0** Maximum: **36**
bgp_asn	Long	Specifies the BGP ASN of the global DC gateway. Minimum: **0** Maximum: **65535**
region_id	String	Specifies the region of the global DC gateway. Minimum: **0** Maximum: **36**

Parameter	Type	Description
location_name	String	Specifies the location where the underlying device of the global DC gateway is deployed. Minimum: **0** Maximum: **36**
locales	**LocalesBody** object	Specifies the locale.
current_peer_link_count	Integer	Specifies the number of peer links allowed on a global DC gateway, indicating the number of enterprise routers that the global DC gateway can be attached to.
available_peer_link_count	Integer	Specifies the number of peer links that can be created for a global DC gateway.
tags	Array of **Tag** objects	Specifies the tag added to the global DC gateway. Array Length: **0 - 10**
admin_state_up	Boolean	Specifies the administrative status of the global DC gateway. • **true**: The global DC gateway is available. • **false**: The global DC gateway is frozen.
status	String	Specifies the status of the global DC gateway.- **DOWN**: The global DC gateway is faulty.- **PENDING_UPDATE**: The global DC gateway is being updated.- **ACTIVE**: The global DC gateway is available.- **ERROR**: An error occurred.
created_time	String	Specifies the time when the global DC gateway was created.
updated_time	String	Specifies the time when the global DC gateway was updated.
address_family	String	Specifies the IP address family of the global DC gateway. • **ipv4**: Only IPv4 is supported. • **dual**: Both IPv4 and IPv6 are supported.

Table 4-175 LocalesBody

Parameter	Type	Description
en_us	String	Specifies the region name in English. Minimum: **0** Maximum: **255**
zh_cn	String	Specifies the region name in Chinese. Minimum: **0** Maximum: **255**

Table 4-176 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters, including letters, digits, hyphens (-), and underscores (_). Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters, including letters, digits, hyphens (-), underscores (_), and periods (.). Minimum: **0** Maximum: **43**

Table 4-177 PageInfo

Parameter	Type	Description
previous_marker	String	Specifies the marker of the previous page. The value is the resource UUID. Minimum: **0** Maximum: **36**
current_count	Integer	Specifies the number of resources in the current list. Minimum: **0** Maximum: **2000**

Parameter	Type	Description
next_marker	String	Specifies the marker of the next page. The value is the resource UUID. If the value is empty, the resource is on the last page. Minimum: **0** Maximum: **36**

Example Requests

Querying the global DC gateway list

```
GET https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/global-dc-gateways
```

Example Responses

Status code: 200

OK

- Global DC gateway list that has been queried

```
{
  "request_id" : "f7fdbf6618bc3b3e8750340cb37d1761",
  "global_dc_gateways" : [ {
    "enterprise_project_id" : "0",
    "name" : "zss-ipv6-test",
    "id" : "0790b22c-42db-4051-b974-b80c5cd61a7b",
    "tenant_id" : "b197c48159d44a66b32c538c3f8da89a",
    "description" : "",
    "tags" : [ ],
    "status" : "ACTIVE",
    "reason" : null,
    "admin_state_up" : true,
    "created_time" : "2024-06-06T01:33:21.000Z",
    "updated_time" : "2024-09-12T08:32:49.831Z",
    "bgp_asn" : 64511,
    "global_center_network_id" : null,
    "current_peer_link_count" : 0,
    "available_peer_link_count" : 3,
    "location_name" : "Beijing4",
    "locales" : {
      "en_us" : "Beijing-4",
      "zh_cn" : "Beijing-4"
    },
    "region_id" : "cn-southwest-242",
    "address_family" : "ipv4"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
```



```
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class ListGlobalDcGatewaysSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ListGlobalDcGatewaysRequest request = new ListGlobalDcGatewaysRequest();
        try {
            ListGlobalDcGatewaysResponse response = client.listGlobalDcGateways(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)
```



```
    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListGlobalDcGatewaysRequest()
        response = client.list_global_dc_gateways(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListGlobalDcGatewaysRequest{}
    response, err := client.ListGlobalDcGateways(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.6.2 Creating a Global DC Gateway

Function

This API is used to create a global DC gateway that can be attached to an enterprise router.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/dcaas/global-dc-gateways

Table 4-178 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**

Request Parameters

Table 4-179 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-180 Request body parameters

Parameter	Mandatory	Type	Description
global_dc_gateway	Yes	**CreateGlobalDcGateway** object	Specifies the global DC gateway to be created.

Table 4-181 CreateGlobalDcGateway

Parameter	Mandatory	Type	Description
tenant_id	No	String	Specifies the tenant ID. Minimum: **0** Maximum: **255**
name	Yes	String	Specifies the name of the global DC gateway. Minimum: **0** Maximum: **64**
description	No	String	Provides supplementary information about the global DC gateway. Minimum: **0** Maximum: **255**

Parameter	Mandatory	Type	Description
bgp_asn	No	Long	Specifies the ASN assigned to the global DC gateway. Minimum: **1** Maximum: **4294967295**
enterprise_project_id	No	String	Specifies the ID of the enterprise project that the global DC gateway belongs to. Default: **0** Minimum: **0** Maximum: **36**
address_family	No	String	Specifies the IP address family of the global DC gateway. • **ipv4**: Only IPv4 is supported. • **dual**: Both IPv4 and IPv6 are supported.
tags	No	Array of **Tag** objects	Specifies the tag added to the global DC gateway. Array Length: **0 - 10**

Table 4-182 Tag

Parameter	Mandatory	Type	Description
key	Yes	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters, including letters, digits, hyphens (-), and underscores (_). Minimum: **0** Maximum: **36**
value	No	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters, including letters, digits, hyphens (-), underscores (_), and periods (.). Minimum: **0** Maximum: **43**

Response Parameters

Status code: 201

Table 4-183 Response body parameters

Parameter	Type	Description
global_dc_gateway	CreateGlobalDcGatewayEntry object	Specifies the global DC gateway.
request_id	String	Specifies the request ID. Minimum: **0** Maximum: **36**

Table 4-184 CreateGlobalDcGatewayEntry

Parameter	Type	Description
id	String	Specifies the global DC gateway ID. Minimum: **0** Maximum: **36**
tenant_id	String	Specifies the project ID. Minimum: **0** Maximum: **255**
name	String	Specifies the name of the global DC gateway. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the global DC gateway. Minimum: **0** Maximum: **128**
enterprise_project_id	String	Specifies the ID of the enterprise project that the global DC gateway belongs to. Minimum: **0** Maximum: **36**
global_center_network_id	String	Specifies the ID of the central network that the global DC gateway is added to. Minimum: **0** Maximum: **36**

Parameter	Type	Description
bgp_asn	Long	Specifies the BGP ASN of the global DC gateway. Minimum: **0** Maximum: **65535**
region_id	String	Specifies the region of the global DC gateway. Minimum: **0** Maximum: **36**
location_name	String	Specifies the location of the global DC gateway. Minimum: **0** Maximum: **36**
current_peer_link_count	Integer	Specifies the number of peer links allowed on a global DC gateway, indicating the number of enterprise routers that the global DC gateway can be attached to.
available_peer_link_count	Integer	Specifies the number of peer links that can be created for a global DC gateway.
tags	Array of **Tag** objects	Specifies the tag added to the global DC gateway. Array Length: **0 - 10**
admin_state_up	Boolean	Specifies the administrative status of the global DC gateway. • **true**: The global DC gateway is available. • **false**: The global DC gateway is frozen.
status	String	Specifies the status of the global DC gateway.- **DOWN**: The global DC gateway is faulty.- **PENDING_UPDATE**: The global DC gateway is being updated.- **ACTIVE**: The global DC gateway is available.- **ERROR**: An error occurred.
created_time	String	Specifies the time when the global DC gateway was created.

Parameter	Type	Description
address_family	String	Specifies the IP address family of the global DC gateway. • **ipv4**: Only IPv4 is supported. • **dual**: Both IPv4 and IPv6 are supported.

Table 4-185 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters, including letters, digits, hyphens (-), and underscores (_). Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters, including letters, digits, hyphens (-), underscores (_), and periods (.). Minimum: **0** Maximum: **43**

Example Requests

Creating a global DC gateway

```
POST https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/global-dc-gateways

{
  "global_dc_gateway" : {
    "bgp_asn" : "64512",
    "description" : "",
    "enterprise_project_id" : "0",
    "name" : "dgw-2c18",
    "tags" : [ {
      "key" : "key1",
      "value" : "value1"
    } ],
    "address_family" : "ipv4"
  }
}
```

Example Responses

Status code: 201

Created

- Global DC gateway that has been created

```
{
  "request_id" : "2e97ccd07037d0f48abc620979b65976",
  "global_dc_gateway" : {
    "enterprise_project_id" : "0",
    "name" : "dgw-2c18",
    "id" : "71f6ac9b-2745-4fb8-96c8-9d97d969c4b5",
    "tenant_id" : "b197c48159d44a66b32c538c3f8da89a",
    "description" : "",
    "status" : "DOWN",
    "tags" : [ {
      "key" : "key1",
      "value" : "value1"
    } ],
    "admin_state_up" : true,
    "created_time" : "2024-12-11T23:33:19.000Z",
    "bgp_asn" : 64512,
    "global_center_network_id" : null,
    "current_peer_link_count" : null,
    "available_peer_link_count" : 3,
    "location_name" : null,
    "region_id" : null,
    "address_family" : "ipv4"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Creating a global DC gateway

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class CreateGlobalDcGatewaySolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
```



```
            .withRegion(DcRegion.valueOf("<YOUR REGION>"))
            .build();
        CreateGlobalDcGatewayRequest request = new CreateGlobalDcGatewayRequest();
        CreateGlobalDcGatewayRequestBody body = new CreateGlobalDcGatewayRequestBody();
        List<Tag> listGlobalDcGatewayTags = new ArrayList<>();
        listGlobalDcGatewayTags.add(
            new Tag()
                .withKey("key1")
                .withValue("value1")
        );
        CreateGlobalDcGateway globalDcGatewaybody = new CreateGlobalDcGateway();
        globalDcGatewaybody.withName("dgw-2c18")
            .withDescription("")
            .withBgpAsn(64512L)
            .withEnterpriseProjectId("0")
            .withAddressFamily(CreateGlobalDcGateway.AddressFamilyEnum.fromValue("ipv4"))
            .withTags(listGlobalDcGatewayTags);
        body.withGlobalDcGateway(globalDcGatewaybody);
        request.withBody(body);
        try {
            CreateGlobalDcGatewayResponse response = client.createGlobalDcGateway(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Creating a global DC gateway

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreateGlobalDcGatewayRequest()
        listTagsGlobalDcGateway = [
            Tag(
```



```
            key="key1",
            value="value1"
        )
    ]
    globalDcGatewaybody = CreateGlobalDcGateway(
        name="dgw-2c18",
        description="",
        bgp_asn=64512,
        enterprise_project_id="0",
        address_family="ipv4",
        tags=listTagsGlobalDcGateway
    )
    request.body = CreateGlobalDcGatewayRequestBody(
        global_dc_gateway=globalDcGatewaybody
    )
    response = client.create_global_dc_gateway(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

Creating a global DC gateway

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateGlobalDcGatewayRequest{}
    valueTags:= "value1"
    var listTagsGlobalDcGateway = []model.Tag{
        {
            Key: "key1",
            Value: &valueTags,
        },
    }
    descriptionGlobalDcGateway:= ""
    bgpAsnGlobalDcGateway:= int64(64512)
```



```
    enterpriseProjectIdGlobalDcGateway:= "0"
    addressFamilyGlobalDcGateway:= model.GetCreateGlobalDcGatewayAddressFamilyEnum().IPV4
    globalDcGatewaybody := &model.CreateGlobalDcGateway{
        Name: "dgw-2c18",
        Description: &descriptionGlobalDcGateway,
        BgpAsn: &bgpAsnGlobalDcGateway,
        EnterpriseProjectId: &enterpriseProjectIdGlobalDcGateway,
        AddressFamily: &addressFamilyGlobalDcGateway,
        Tags: &listTagsGlobalDcGateway,
    }
    request.Body = &model.CreateGlobalDcGatewayRequestBody{
        GlobalDcGateway: globalDcGatewaybody,
    }
    response, err := client.CreateGlobalDcGateway(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
201	Created

Error Codes

See **Error Codes**.

4.6.3 Querying Details About a Global DC Gateway

Function

This API is used to query details about a global DC gateway.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/global-dc-gateways/{global_dc_gateway_id}

Table 4-186 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**
global_dc_gateway_id	Yes	String	Specifies the global DC gateway ID.

Table 4-187 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the number of records returned on each page. Value range: 1 to 2000 Minimum: **1** Maximum: **2000** Default: **2000**
fields	No	Array of strings	Specifies the list of fields to be displayed. Array Length: **1 - 5**
ext_fields	No	Array of strings	show response ext-fields Array Length: **0 - 5**
enterprise_project_id	No	Array of strings	Specifies the enterprise project ID for querying instances. Array Length: **1 - 10**

Request Parameters

Table 4-188 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-189 Response body parameters

Parameter	Type	Description
global_dc_gateway	**GlobalDcGatewayEntry** object	Specifies the global DC gateway.
request_id	String	Specifies the request ID. Minimum: **0** Maximum: **36**

Table 4-190 GlobalDcGatewayEntry

Parameter	Type	Description
id	String	Specifies the global DC gateway ID. Minimum: **0** Maximum: **36**
tenant_id	String	Specifies the project ID. Minimum: **0** Maximum: **255**

Parameter	Type	Description
name	String	Specifies the name of the global DC gateway. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the global DC gateway. Minimum: **0** Maximum: **128**
reason	String	Specifies the cause of the failure to create the global DC gateway. Minimum: **0** Maximum: **255**
enterprise_project_id	String	Specifies the ID of the enterprise project that the global DC gateway belongs to. Minimum: **0** Maximum: **36**
global_center_network_id	String	Specifies the ID of the central network that the global DC gateway is added to. Minimum: **0** Maximum: **36**
bgp_asn	Long	Specifies the BGP ASN of the global DC gateway. Minimum: **0** Maximum: **65535**
region_id	String	Specifies the region of the global DC gateway. Minimum: **0** Maximum: **36**
location_name	String	Specifies the location where the underlying device of the global DC gateway is deployed. Minimum: **0** Maximum: **36**
locales	**LocalesBody** object	Specifies the locale.

Parameter	Type	Description
current_peer_link_count	Integer	Specifies the number of peer links allowed on a global DC gateway, indicating the number of enterprise routers that the global DC gateway can be attached to.
available_peer_link_count	Integer	Specifies the number of peer links that can be created for a global DC gateway.
tags	Array of **Tag** objects	Specifies the tag added to the global DC gateway. Array Length: **0 - 10**
admin_state_up	Boolean	Specifies the administrative status of the global DC gateway. • **true**: The global DC gateway is available. • **false**: The global DC gateway is frozen.
status	String	Specifies the status of the global DC gateway.- **DOWN**: The global DC gateway is faulty.- **PENDING_UPDATE**: The global DC gateway is being updated.- **ACTIVE**: The global DC gateway is available.- **ERROR**: An error occurred.
created_time	String	Specifies the time when the global DC gateway was created.
updated_time	String	Specifies the time when the global DC gateway was updated.
address_family	String	Specifies the IP address family of the global DC gateway. • **ipv4**: Only IPv4 is supported. • **dual**: Both IPv4 and IPv6 are supported.

Table 4-191 LocalesBody

Parameter	Type	Description
en_us	String	Specifies the region name in English. Minimum: **0** Maximum: **255**

Parameter	Type	Description
zh_cn	String	Specifies the region name in Chinese. Minimum: **0** Maximum: **255**

Table 4-192 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters, including letters, digits, hyphens (-), and underscores (_). Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters, including letters, digits, hyphens (-), underscores (_), and periods (.). Minimum: **0** Maximum: **43**

Example Requests

Querying details about a global DC gateway

```
GET https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/global-dc-gateways/71f6ac9b-2745-4fb8-96c8-9d97d969c4b5
```

Example Responses

Status code: 200

OK

- Global DC gateway details that have been queried

```
{
  "global_dc_gateway" : {
    "enterprise_project_id" : "0",
    "name" : "dgw-2c18",
    "id" : "71f6ac9b-2745-4fb8-96c8-9d97d969c4b5",
    "tenant_id" : "b197c48159d44a66b32c538c3f8da89a",
    "description" : "",
    "tags" : [ ],
    "status" : "DOWN",
    "reason" : null,
    "admin_state_up" : true,
    "created_time" : "2024-12-12T07:33:19.000Z",
    "updated_time" : "2024-12-12T07:33:19.000Z",
    "bgp_asn" : 64512,
```



```
    "global_center_network_id" : null,
    "current_peer_link_count" : 0,
    "available_peer_link_count" : 3,
    "location_name" : null,
    "locales" : null,
    "region_id" : null,
    "address_family" : "ipv4"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class ShowGlobalDcGatewaySolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowGlobalDcGatewayRequest request = new ShowGlobalDcGatewayRequest();
        request.withGlobalDcGatewayId("{global_dc_gateway_id}");
        try {
            ShowGlobalDcGatewayResponse response = client.showGlobalDcGateway(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```


Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowGlobalDcGatewayRequest()
        request.global_dc_gateway_id = "{global_dc_gateway_id}"
        response = client.show_global_dc_gateway(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
```



```
        WithCredential(auth).
        Build())

    request := &model.ShowGlobalDcGatewayRequest{}
    request.GlobalDcGatewayId = "{global_dc_gateway_id}"
    response, err := client.ShowGlobalDcGateway(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.6.4 Updating a Global DC Gateway

Function

This API is used to update a global DC gateway, for example, the name and description of a global DC gateway.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v3/{project_id}/dcaas/global-dc-gateways/{global_dc_gateway_id}

Table 4-193 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**

Parameter	Mandatory	Type	Description
global_dc_gateway_id	Yes	String	Specifies the global DC gateway ID.

Request Parameters

Table 4-194 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-195 Request body parameters

Parameter	Mandatory	Type	Description
global_dc_gateway	Yes	**UpdateGlobalDcGateway** object	Specifies the global DC gateway to be updated.

Table 4-196 UpdateGlobalDcGateway

Parameter	Mandatory	Type	Description
name	No	String	Specifies the name of the global DC gateway. Minimum: **0** Maximum: **64**
description	No	String	Provides supplementary information about the global DC gateway. Minimum: **0** Maximum: **255**

Parameter	Mandatory	Type	Description
address_family	No	String	Specifies the IP address family of the global DC gateway. Minimum: **0** Maximum: **36**

Response Parameters

Status code: 200

Table 4-197 Response body parameters

Parameter	Type	Description
global_dc_gateway	**GlobalDcGatewayEntry** object	Specifies the global DC gateway.
request_id	String	Specifies the request ID. Minimum: **0** Maximum: **36**

Table 4-198 GlobalDcGatewayEntry

Parameter	Type	Description
id	String	Specifies the global DC gateway ID. Minimum: **0** Maximum: **36**
tenant_id	String	Specifies the project ID. Minimum: **0** Maximum: **255**
name	String	Specifies the name of the global DC gateway. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the global DC gateway. Minimum: **0** Maximum: **128**

Parameter	Type	Description
reason	String	Specifies the cause of the failure to create the global DC gateway. Minimum: **0** Maximum: **255**
enterprise_project_id	String	Specifies the ID of the enterprise project that the global DC gateway belongs to. Minimum: **0** Maximum: **36**
global_center_network_id	String	Specifies the ID of the central network that the global DC gateway is added to. Minimum: **0** Maximum: **36**
bgp_asn	Long	Specifies the BGP ASN of the global DC gateway. Minimum: **0** Maximum: **65535**
region_id	String	Specifies the region of the global DC gateway. Minimum: **0** Maximum: **36**
location_name	String	Specifies the location where the underlying device of the global DC gateway is deployed. Minimum: **0** Maximum: **36**
locales	**LocalesBody** object	Specifies the locale.
current_peer_link_count	Integer	Specifies the number of peer links allowed on a global DC gateway, indicating the number of enterprise routers that the global DC gateway can be attached to.
available_peer_link_count	Integer	Specifies the number of peer links that can be created for a global DC gateway.
tags	Array of **Tag** objects	Specifies the tag added to the global DC gateway. Array Length: **0 - 10**

Parameter	Type	Description
admin_state_up	Boolean	Specifies the administrative status of the global DC gateway. • **true**: The global DC gateway is available. • **false**: The global DC gateway is frozen.
status	String	Specifies the status of the global DC gateway.- **DOWN**: The global DC gateway is faulty.- **PENDING_UPDATE**: The global DC gateway is being updated.- **ACTIVE**: The global DC gateway is available.- **ERROR**: An error occurred.
created_time	String	Specifies the time when the global DC gateway was created.
updated_time	String	Specifies the time when the global DC gateway was updated.
address_family	String	Specifies the IP address family of the global DC gateway. • **ipv4**: Only IPv4 is supported. • **dual**: Both IPv4 and IPv6 are supported.

Table 4-199 LocalesBody

Parameter	Type	Description
en_us	String	Specifies the region name in English. Minimum: **0** Maximum: **255**
zh_cn	String	Specifies the region name in Chinese. Minimum: **0** Maximum: **255**

Table 4-200 Tag

Parameter	Type	Description
key	String	Specifies the tag key. The key can contain a maximum of 36 Unicode characters, including letters, digits, hyphens (-), and underscores (_). Minimum: **0** Maximum: **36**
value	String	Specifies the tag value. The value can contain a maximum of 43 Unicode characters, including letters, digits, hyphens (-), underscores (_), and periods (.). Minimum: **0** Maximum: **43**

Example Requests

Updating a global DC gateway

```
PUT https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/global-dc-gateways/
71f6ac9b-2745-4fb8-96c8-9d97d969c4b5

{
  "global_dc_gateway" : {
    "name" : "dgw-2c19"
  }
}
```

Example Responses

Status code: 200

OK

- Global DC gateway that has been updated

```
{
  "request_id" : "fa70b8d1f22787684bba9407779b8bf2",
  "global_dc_gateway" : {
    "enterprise_project_id" : "0",
    "name" : "dgw-2c19",
    "id" : "71f6ac9b-2745-4fb8-96c8-9d97d969c4b5",
    "tenant_id" : "b197c48159d44a66b32c538c3f8da89a",
    "description" : "",
    "status" : "DOWN",
    "admin_state_up" : true,
    "created_time" : "2024-12-12T07:33:19.000Z",
    "updated_time" : "2024-12-12T07:36:04.257Z",
    "bgp_asn" : 64512,
    "global_center_network_id" : null,
    "current_peer_link_count" : 0,
    "available_peer_link_count" : 3,
    "location_name" : null,
    "region_id" : null
  }
}
```


SDK Sample Code

The SDK sample code is as follows.

Java

Updating a global DC gateway

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class UpdateGlobalDcGatewaySolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateGlobalDcGatewayRequest request = new UpdateGlobalDcGatewayRequest();
        request.withGlobalDcGatewayId("{global_dc_gateway_id}");
        UpdateGlobalDcGatewayRequestBody body = new UpdateGlobalDcGatewayRequestBody();
        UpdateGlobalDcGateway globalDcGatewaybody = new UpdateGlobalDcGateway();
        globalDcGatewaybody.withName("dgw-2c19");
        body.withGlobalDcGateway(globalDcGatewaybody);
        request.withBody(body);
        try {
            UpdateGlobalDcGatewayResponse response = client.updateGlobalDcGateway(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Updating a global DC gateway


```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdateGlobalDcGatewayRequest()
        request.global_dc_gateway_id = "{global_dc_gateway_id}"
        globalDcGatewaybody = UpdateGlobalDcGateway(
            name="dgw-2c19"
        )
        request.body = UpdateGlobalDcGatewayRequestBody(
            global_dc_gateway=globalDcGatewaybody
        )
        response = client.update_global_dc_gateway(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Updating a global DC gateway

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
```



```
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateGlobalDcGatewayRequest{}
    request.GlobalDcGatewayId = "{global_dc_gateway_id}"
    nameGlobalDcGateway:= "dgw-2c19"
    globalDcGatewaybody := &model.UpdateGlobalDcGateway{
        Name: &nameGlobalDcGateway,
    }
    request.Body = &model.UpdateGlobalDcGatewayRequestBody{
        GlobalDcGateway: globalDcGatewaybody,
    }
    response, err := client.UpdateGlobalDcGateway(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.6.5 Deleting a Global DC Gateway

Function

This API is used to delete a global DC gateway.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v3/{project_id}/dcaas/global-dc-gateways/{global_dc_gateway_id}

Table 4-201 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**
global_dc_gateway_id	Yes	String	Specifies the global DC gateway ID.

Request Parameters

Table 4-202 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

None

Example Requests

Deleting a global DC gateway

```
DELETE https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/global-dc-gateways/71f6ac9b-2745-4fb8-96c8-9d97d969c4b5
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;
```



```
import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class DeleteGlobalDcGatewaySolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteGlobalDcGatewayRequest request = new DeleteGlobalDcGatewayRequest();
        request.withGlobalDcGatewayId("{global_dc_gateway_id}");
        try {
            DeleteGlobalDcGatewayResponse response = client.deleteGlobalDcGateway(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"
```

```
    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteGlobalDcGatewayRequest()
        request.global_dc_gateway_id = "{global_dc_gateway_id}"
        response = client.delete_global_dc_gateway(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteGlobalDcGatewayRequest{}
    request.GlobalDcGatewayId = "{global_dc_gateway_id}"
    response, err := client.DeleteGlobalDcGateway(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	NO CONTENT

Error Codes

See **Error Codes**.

4.7 Peer Links

4.7.1 Querying the Peer Link List

Function

This API is used to query the peer link list. The **marker** and **limit** parameters are used for pagination query. The two parameters take effect only when they are used together.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/global-dc-gateways/{global_dc_gateway_id}/peer-links

Table 4-203 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**
global_dc_gateway_id	Yes	String	Specifies the global DC gateway ID.

Table 4-204 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the number of records returned on each page. Value range: 1 to 2000 Minimum: **1** Maximum: **2000** Default: **2000**
offset	No	Integer	Specifies the pagination offset. Minimum: **1** Maximum: **1000**
marker	No	String	Specifies the ID of the last resource record on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with **limit**. Minimum: **0** Maximum: **36**
page_reverse	No	Boolean	Specifies the pagination parameter.
fields	No	Array of strings	Specifies the list of fields to be displayed. Array Length: **1 - 5**
ext_fields	No	Array of strings	show response ext-fields Array Length: **0 - 5**
sort_key	No	String	Specifies the sorting field. Default: **id** Minimum: **0** Maximum: **36**
sort_dir	No	Array of strings	Specifies the sorting order of returned results. There are two options: **asc** (default) and **desc**.
id	No	Array of strings	Specifies the resource ID for querying instances. Array Length: **1 - 5**

Parameter	Mandatory	Type	Description
name	No	Array of strings	Specifies the resource name for querying instances. You can specify multiple names. Array Length: **1 - 5**

Request Parameters

Table 4-205 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-206 Response body parameters

Parameter	Type	Description
peer_links	Array of **PeerLinkEntry** objects	Lists the peer links. Array Length: **0 - 2000**
page_info	**PageInfo** object	Specifies the pagination query information.
request_id	String	Specifies the request ID. Minimum: **0** Maximum: **36**

Table 4-207 PeerLinkEntry

Parameter	Type	Description
id	String	Specifies the peer link ID. Minimum: **0** Maximum: **36**
tenant_id	String	Specifies the tenant ID. Minimum: **0** Maximum: **255**
name	String	Specifies the name of the peer link. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the peer link. Minimum: **0** Maximum: **255**
reason	String	Specifies the cause of the failure to add the peer link. Minimum: **0** Maximum: **255**
global_dc_gateway_id	String	Specifies the ID of the global DC gateway that the peer link is added for. Minimum: **0** Maximum: **64**
bandwidth_info	**BandWidthInfo** object	Provides bandwidth information.
peer_site	**PeerSite** object	Describes the peer site.
status	String	Specifies the status of the peer link.- **PENDING_CREATE**: The peer link is being created.- **PENDING_UPDATE**: The peer link is being updated.- **ACTIVE**: The peer link is available.- **ERROR**: An error occurred.
created_time	String	Specifies the time when the peer link was added.
updated_time	String	Specifies the time when the peer link was updated.

Parameter	Type	Description
create_owner	String	Specifies the cloud service where the peer link is used. • **cc**: Cloud Connect • **dc**: Direct Connect
instance_id	String	Specifies the ID of the instance associated with the peer link.

Table 4-208 BandWidthInfo

Parameter	Type	Description
bandwidth_size	Integer	Specifies the bandwidth. Minimum: **0** Maximum: **268435455**
gcb_id	String	Specifies the global connection bandwidth ID. Minimum: **0** Maximum: **36**

Table 4-209 PeerSite

Parameter	Type	Description
gateway_id	String	Specifies the peer gateway ID. Minimum: **0** Maximum: **36**
link_id	String	Specifies the connection ID of the peer gateway at the peer site. For example, if the peer gateway is an enterprise router, this parameter is set to the attachment ID. If the peer gateway is a global DC gateway, this parameter is set to the peer link ID. Minimum: **0** Maximum: **64**
region_id	String	Specifies the region ID of the peer site. Minimum: **0** Maximum: **36**

Parameter	Type	Description
site_code	String	Specifies the site information of the global DC gateway. Minimum: **0** Maximum: **64**
project_id	String	Specifies the project ID of the peer site. Minimum: **0** Maximum: **36**
type	String	Specifies the type of the peer gateway. • **er**: enterprise router • **GDGW**: global DC gateway Minimum: **0** Maximum: **64**

Table 4-210 PageInfo

Parameter	Type	Description
previous_marker	String	Specifies the marker of the previous page. The value is the resource UUID. Minimum: **0** Maximum: **36**
current_count	Integer	Specifies the number of resources in the current list. Minimum: **0** Maximum: **2000**
next_marker	String	Specifies the marker of the next page. The value is the resource UUID. If the value is empty, the resource is on the last page. Minimum: **0** Maximum: **36**

Example Requests

Querying the peer link list

```
GET https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/global-dc-gateways/
1c6edc27-5fdb-4dae-ac77-72d47c70ed83/peer-links
```


Example Responses

Status code: 200

OK

- Peer link list that has been queried

```
{
  "request_id" : "d6f35fa3bde2e26efad6253bd32b4837",
  "peer_links" : [ {
    "name" : "dgw-zss-02_1_peer_link",
    "id" : "5ad07c58-71a8-41b7-a5c0-5b6148d518b2",
    "tenant_id" : "b197c48159d44a66b32c538c3f8da89a",
    "description" : "",
    "reason" : null,
    "status" : "ACTIVE",
    "created_time" : "2024-06-21T01:48:57.000Z",
    "updated_time" : "2024-11-17T08:44:18.504Z",
    "global_dc_gateway_id" : "1c6edc27-5fdb-4dae-ac77-72d47c70ed83",
    "bandwidth_info" : {
      "bandwidth_size" : 0,
      "gcb_id" : null
    },
    "peer_site" : {
      "gateway_id" : "f8551651-0f42-48ff-9088-fff87e6d74e2",
      "link_id" : "c794a0f3-e89d-4e64-a614-9b6be4394b07",
      "region_id" : "cn-southwest-246",
      "site_code" : "cn-southwest-246",
      "project_id" : "6bea6e6ed6b34892bd2e195cad496348",
      "type" : "ER"
    },
    "create_owner" : "cc",
    "instance_id" : "f174fa3e-d63a-45bb-a5a4-b56782552494"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class ListPeerLinksSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
```



```
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

    DcClient client = DcClient.newBuilder()
            .withCredential(auth)
            .withRegion(DcRegion.valueOf("<YOUR REGION>"))
            .build();
    ListPeerLinksRequest request = new ListPeerLinksRequest();
    request.withGlobalDcGatewayId("{global_dc_gateway_id}");
    try {
        ListPeerLinksResponse response = client.listPeerLinks(request);
        System.out.println(response.toString());
    } catch (ConnectionException e) {
        e.printStackTrace();
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
  }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListPeerLinksRequest()
        request.global_dc_gateway_id = "{global_dc_gateway_id}"
        response = client.list_peer_links(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main
```

```
import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListPeerLinksRequest{}
    request.GlobalDcGatewayId = "{global_dc_gateway_id}"
    response, err := client.ListPeerLinks(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.7.2 Adding a Peer Link

Function

This API is used to add a peer link between a global DC gateway and an enterprise router or another global DC gateway.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/dcaas/global-dc-gateways/{global_dc_gateway_id}/peer-links

Table 4-211 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**
global_dc_gateway_id	Yes	String	Specifies the global DC gateway ID.

Request Parameters

Table 4-212 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-213 Request body parameters

Parameter	Mandatory	Type	Description
peer_link	Yes	**peer_link** object	Request body for creating a peer link

Table 4-214 peer_link

Parameter	Mandatory	Type	Description
name	Yes	String	Specifies the name of the peer link. Minimum: **0** Maximum: **64**
description	No	String	Provides supplementary information about the peer link. Minimum: **0** Maximum: **128**
peer_site	Yes	**peer_site** object	Specifies the site of the peer link.

Table 4-215 peer_site

Parameter	Mandatory	Type	Description
gateway_id	Yes	String	Specifies the ID of enterprise router that the global DC gateway is attached to. Minimum: **0** Maximum: **36**
project_id	Yes	String	Specifies the project ID of the enterprise router that the global DC gateway is attached to. Minimum: **0** Maximum: **36**
region_id	Yes	String	Specifies the region ID of the enterprise router that the global DC gateway is attached to. Minimum: **0** Maximum: **36**

Response Parameters

Status code: 201

Table 4-216 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
peer_link	**ExternalCreatePeerLink** object	Specifies the peer link.

Table 4-217 ExternalCreatePeerLink

Parameter	Type	Description
id	String	Specifies the peer link ID.
instance_id	String	Specifies the peer link ID.
tenant_id	String	Specifies the tenant ID.
name	String	Specifies the peer link name.
description	String	Provides supplementary information about the peer link.
global_dc_gateway_id	String	Specifies the global DC gateway ID.
bandwidth_info	**BandwidthInfoExternal** object	Provides bandwidth information.
peer_site	**PeerSiteExternal** object	Specifies the site to be connected.
status	String	Specifies the status of the peer link. • **ACTIVE**: The peer link is normal. • **ERROR**: The peer link is abnormal.
reason	String	Specifies the cause of the failure to add the peer link.
created_time	String	Specifies the time when the peer link was added.
updated_time	String	Specifies the time when the peer link was updated.

Table 4-218 BandwidthInfoExternal

Parameter	Type	Description
bandwidth_size	Long	Specifies the bandwidth.
gcb_id	String	Specifies the global connection bandwidth ID.

Table 4-219 PeerSiteExternal

Parameter	Type	Description
gateway_id	String	Specifies the global DC gateway ID.
link_id	String	Specifies the peer link ID.
region_id	String	Specifies the site ID.
project_id	String	Specifies the project ID.
site_code	String	Specifies the site code.
type	String	Specifies the peer link type.

Example Requests

Adding a peer link

```
POST https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/global-dc-gateways/
1c6edc27-5fdb-4dae-ac77-72d47c70ed83/peer-links

{
  "peer_link" : {
    "name" : "dgw-peer-link-94dc",
    "peer_site" : {
      "gateway_id" : "70e29908-12f8-4d5d-9adf-4da5465b91b2",
      "project_id" : "b197c48159d44a66b32c538c3f8da89a",
      "region_id" : "cn-southwest-242"
    }
  }
}
```

Example Responses

Status code: 201

Created

- Peer link that has been created

```
{
  "peer_link" : {
    "name" : "dgw-peer-link-94dc",
    "id" : "d6ea4641-9575-4675-ac4f-906884e37f28",
    "tenant_id" : "b197c48159d44a66b32c538c3f8da89a",
    "description" : null,
    "status" : "PENDING_CREATE",
    "reason" : null,
```



```
  "created_time" : "2024-12-12T00:16:40.000Z",
  "global_dc_gateway_id" : "335cb548-0ea0-4aff-80f5-502a2dab5325",
  "bandwidth_info" : {
    "bandwidth_size" : 0,
    "gcb_id" : null
  },
  "peer_site" : {
    "gateway_id" : "70e29908-12f8-4d5d-9adf-4da5465b91b2",
    "link_id" : null,
    "region_id" : "cn-southwest-242",
    "site_code" : "cn-southwest-242",
    "project_id" : "b197c48159d44a66b32c538c3f8da89a",
    "type" : "ER"
  },
  "instance_id" : null
 },
 "request_id" : "196ab00b7bbf03be9187606853d80cee"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Adding a peer link

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class CreatePeerLinkSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        CreatePeerLinkRequest request = new CreatePeerLinkRequest();
        request.withGlobalDcGatewayId("{global_dc_gateway_id}");
        CreateExternalPeerLinkRequestBody body = new CreateExternalPeerLinkRequestBody();
        CreateExternalPeerLinkRequestBodyPeerLinkPeerSite peerSitePeerLink = new CreateExternalPeerLinkRequestBodyPeerLinkPeerSite();
        peerSitePeerLink.withGatewayId("70e29908-12f8-4d5d-9adf-4da5465b91b2")
            .withProjectId("b197c48159d44a66b32c538c3f8da89a")
```



```
            .withRegionId("cn-southwest-242");
        CreateExternalPeerLinkRequestBodyPeerLink peerLinkbody = new
CreateExternalPeerLinkRequestBodyPeerLink();
        peerLinkbody.withName("dgw-peer-link-94dc")
            .withPeerSite(peerSitePeerLink);
        body.withPeerLink(peerLinkbody);
        request.withBody(body);
        try {
            CreatePeerLinkResponse response = client.createPeerLink(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Adding a peer link

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this
example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = CreatePeerLinkRequest()
        request.global_dc_gateway_id = "{global_dc_gateway_id}"
        peerSitePeerLink = CreateExternalPeerLinkRequestBodyPeerLinkPeerSite(
            gateway_id="70e29908-12f8-4d5d-9adf-4da5465b91b2",
            project_id="b197c48159d44a66b32c538c3f8da89a",
            region_id="cn-southwest-242"
        )
        peerLinkbody = CreateExternalPeerLinkRequestBodyPeerLink(
            name="dgw-peer-link-94dc",
            peer_site=peerSitePeerLink
        )
        request.body = CreateExternalPeerLinkRequestBody(
            peer_link=peerLinkbody
        )
        response = client.create_peer_link(request)
```



```
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Adding a peer link

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreatePeerLinkRequest{}
    request.GlobalDcGatewayId = "{global_dc_gateway_id}"
    peerSitePeerLink := &model.CreateExternalPeerLinkRequestBodyPeerLinkPeerSite{
        GatewayId: "70e29908-12f8-4d5d-9adf-4da5465b91b2",
        ProjectId: "b197c48159d44a66b32c538c3f8da89a",
        RegionId: "cn-southwest-242",
    }
    peerLinkbody := &model.CreateExternalPeerLinkRequestBodyPeerLink{
        Name: "dgw-peer-link-94dc",
        PeerSite: peerSitePeerLink,
    }
    request.Body = &model.CreateExternalPeerLinkRequestBody{
        PeerLink: peerLinkbody,
    }
    response, err := client.CreatePeerLink(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```


More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
201	Created

Error Codes

See **Error Codes**.

4.7.3 Querying Details About a Peer Link

Function

This API is used to query details about a peer link of a global DC gateway.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/global-dc-gateways/{global_dc_gateway_id}/peer-links/{peer_link_id}

Table 4-220 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**
global_dc_gateway_id	Yes	String	Specifies the global DC gateway ID.
peer_link_id	Yes	String	Specifies the peer link of the global DC gateway.

Table 4-221 Query Parameters

Parameter	Mandatory	Type	Description
fields	No	Array of strings	Specifies the list of fields to be displayed. Array Length: **1 - 5**
ext_fields	No	Array of strings	show response ext-fields Array Length: **0 - 5**

Request Parameters

Table 4-222 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-223 Response body parameters

Parameter	Type	Description
peer_link	**PeerLinkEntry** object	Specifies the details about the peer link.
request_id	String	Specifies the request ID. Minimum: **0** Maximum: **36**

Table 4-224 PeerLinkEntry

Parameter	Type	Description
id	String	Specifies the peer link ID. Minimum: **0** Maximum: **36**
tenant_id	String	Specifies the tenant ID. Minimum: **0** Maximum: **255**
name	String	Specifies the name of the peer link. Minimum: **0** Maximum: **64**
description	String	Provides supplementary information about the peer link. Minimum: **0** Maximum: **255**
reason	String	Specifies the cause of the failure to add the peer link. Minimum: **0** Maximum: **255**
global_dc_gateway_id	String	Specifies the ID of the global DC gateway that the peer link is added for. Minimum: **0** Maximum: **64**
bandwidth_info	**BandWidthInfo** object	Provides bandwidth information.
peer_site	**PeerSite** object	Describes the peer site.
status	String	Specifies the status of the peer link.- **PENDING_CREATE**: The peer link is being created.- **PENDING_UPDATE**: The peer link is being updated.- **ACTIVE**: The peer link is available.- **ERROR**: An error occurred.
created_time	String	Specifies the time when the peer link was added.
updated_time	String	Specifies the time when the peer link was updated.

Parameter	Type	Description
create_owner	String	Specifies the cloud service where the peer link is used. • **cc**: Cloud Connect • **dc**: Direct Connect
instance_id	String	Specifies the ID of the instance associated with the peer link.

Table 4-225 BandWidthInfo

Parameter	Type	Description
bandwidth_size	Integer	Specifies the bandwidth. Minimum: **0** Maximum: **268435455**
gcb_id	String	Specifies the global connection bandwidth ID. Minimum: **0** Maximum: **36**

Table 4-226 PeerSite

Parameter	Type	Description
gateway_id	String	Specifies the peer gateway ID. Minimum: **0** Maximum: **36**
link_id	String	Specifies the connection ID of the peer gateway at the peer site. For example, if the peer gateway is an enterprise router, this parameter is set to the attachment ID. If the peer gateway is a global DC gateway, this parameter is set to the peer link ID. Minimum: **0** Maximum: **64**
region_id	String	Specifies the region ID of the peer site. Minimum: **0** Maximum: **36**

Parameter	Type	Description
site_code	String	Specifies the site information of the global DC gateway. Minimum: **0** Maximum: **64**
project_id	String	Specifies the project ID of the peer site. Minimum: **0** Maximum: **36**
type	String	Specifies the type of the peer gateway. • **er**: enterprise router • **GDGW**: global DC gateway Minimum: **0** Maximum: **64**

Example Requests

Querying details about a peer link

```
GET https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/global-dc-gateways/
335cb548-0ea0-4aff-80f5-502a2dab5325/peer-links/d6ea4641-9575-4675-ac4f-906884e37f28
```

Example Responses

Status code: 200

OK

- Peer link details that have been queried

```
{
  "peer_link" : {
    "name" : "dgw-peer-link-94dc",
    "id" : "d6ea4641-9575-4675-ac4f-906884e37f28",
    "tenant_id" : "b197c48159d44a66b32c538c3f8da89a",
    "description" : null,
    "status" : "ACTIVE",
    "reason" : null,
    "created_time" : "2024-12-12T08:16:40.000Z",
    "updated_time" : "2024-12-12T08:17:10.796Z",
    "global_dc_gateway_id" : "335cb548-0ea0-4aff-80f5-502a2dab5325",
    "bandwidth_info" : {
      "bandwidth_size" : 0,
      "gcb_id" : null
    },
    "peer_site" : {
      "gateway_id" : "70e29908-12f8-4d5d-9adf-4da5465b91b2",
      "link_id" : null,
      "region_id" : "cn-southwest-242",
      "site_code" : "cn-southwest-242",
      "project_id" : "b197c48159d44a66b32c538c3f8da89a",
      "type" : "ER"
    },
    "create_owner" : "dc",
```



```
    "instance_id" : null
  },
  "request_id" : "d4b6270f377d1cfcb90edd12fc737b1f"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class ShowPeerLinkSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowPeerLinkRequest request = new ShowPeerLinkRequest();
        request.withGlobalDcGatewayId("{global_dc_gateway_id}");
        request.withPeerLinkId("{peer_link_id}");
        try {
            ShowPeerLinkResponse response = client.showPeerLink(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8
```



```
import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowPeerLinkRequest()
        request.global_dc_gateway_id = "{global_dc_gateway_id}"
        request.peer_link_id = "{peer_link_id}"
        response = client.show_peer_link(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())
```



```
    request := &model.ShowPeerLinkRequest{}
    request.GlobalDcGatewayId = "{global_dc_gateway_id}"
    request.PeerLinkId = "{peer_link_id}"
    response, err := client.ShowPeerLink(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.7.4 Updating a Peer Link

Function

This API is used to update a peer link between a global DC gateway and an enterprise router.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v3/{project_id}/dcaas/global-dc-gateways/{global_dc_gateway_id}/peer-links/{peer_link_id}

Table 4-227 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**

Parameter	Mandatory	Type	Description
global_dc_gateway_id	Yes	String	Specifies the global DC gateway ID.
peer_link_id	Yes	String	Specifies the peer link of the global DC gateway.

Request Parameters

Table 4-228 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-229 Request body parameters

Parameter	Mandatory	Type	Description
peer_link	No	**peer_link** object	Request body for updating a peer link

Table 4-230 peer_link

Parameter	Mandatory	Type	Description
name	No	String	Specifies the name of the peer link. Minimum: **0** Maximum: **64**
description	No	String	Provides supplementary information about the peer link. Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 4-231 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
peer_link	**ExternalUpdatePeerLink** object	Request body for updating a peer link

Table 4-232 ExternalUpdatePeerLink

Parameter	Type	Description
id	String	Specifies the peer link ID.
tenant_id	String	Specifies the tenant ID of the peer link.
name	String	Specifies the name of the peer link.
description	String	Provides supplementary information about the peer link.
global_dc_gateway_id	String	Specifies the ID of the global DC gateway that the peer link is created for.
bandwidth_info	**BandwidthInfoExternal** object	Provides bandwidth information.
peer_site	**PeerSiteExternal** object	Specifies the site to be connected.
status	String	Specifies the status of the peer link.
reason	String	Specifies the cause of the failure to add the peer link.
created_time	String	Specifies the time when the peer link was added.
updated_time	String	Specifies the time when the peer link was updated.

Table 4-233 BandwidthInfoExternal

Parameter	Type	Description
bandwidth_size	Long	Specifies the bandwidth.
gcb_id	String	Specifies the global connection bandwidth ID.

Table 4-234 PeerSiteExternal

Parameter	Type	Description
gateway_id	String	Specifies the global DC gateway ID.
link_id	String	Specifies the peer link ID.
region_id	String	Specifies the site ID.
project_id	String	Specifies the project ID.
site_code	String	Specifies the site code.
type	String	Specifies the peer link type.

Example Requests

Updating a peer link

```
PUT https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/global-dc-gateways/
335cb548-0ea0-4aff-80f5-502a2dab5325/peer-links/d6ea4641-9575-4675-ac4f-906884e37f28

{
  "peer_link" : {
    "name" : "dgw-peer-link-test",
    "description" : "test"
  }
}
```

Example Responses

Status code: 200

OK

- Peer link that has been updated

```
{
  "peer_link" : {
    "name" : "dgw-peer-link-test",
    "id" : "d6ea4641-9575-4675-ac4f-906884e37f28",
    "tenant_id" : "b197c48159d44a66b32c538c3f8da89a",
    "description" : "test",
    "status" : "ACTIVE",
    "reason" : null,
    "created_time" : "2024-12-12T08:16:40.000Z",
    "updated_time" : "2024-12-12T08:22:21.910Z",
    "global_dc_gateway_id" : "335cb548-0ea0-4aff-80f5-502a2dab5325",
    "bandwidth_info" : {
```



```
    "bandwidth_size" : 0,
    "gcb_id" : null
  },
  "peer_site" : {
    "gateway_id" : "70e29908-12f8-4d5d-9adf-4da5465b91b2",
    "link_id" : null,
    "region_id" : "cn-southwest-242",
    "site_code" : "cn-southwest-242",
    "project_id" : "b197c48159d44a66b32c538c3f8da89a",
    "type" : "ER"
  }
 },
 "request_id" : "e5406bdd85ca945d6a574e1a297abd1d"
}
```


SDK Sample Code

The SDK sample code is as follows.

Java

Updating a peer link

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class UpdatePeerLinkSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdatePeerLinkRequest request = new UpdatePeerLinkRequest();
        request.withGlobalDcGatewayId("{global_dc_gateway_id}");
        request.withPeerLinkId("{peer_link_id}");
        UpdateExternalPeerLinkRequestBody body = new UpdateExternalPeerLinkRequestBody();
        UpdateExternalPeerLinkRequestBodyPeerLink peerLinkbody = new UpdateExternalPeerLinkRequestBodyPeerLink();
        peerLinkbody.withName("dgw-peer-link-test")
            .withDescription("test");
        body.withPeerLink(peerLinkbody);
        request.withBody(body);
        try {
```

```
            UpdatePeerLinkResponse response = client.updatePeerLink(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Updating a peer link

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdatePeerLinkRequest()
        request.global_dc_gateway_id = "{global_dc_gateway_id}"
        request.peer_link_id = "{peer_link_id}"
        peerLinkbody = UpdateExternalPeerLinkRequestBodyPeerLink(
            name="dgw-peer-link-test",
            description="test"
        )
        request.body = UpdateExternalPeerLinkRequestBody(
            peer_link=peerLinkbody
        )
        response = client.update_peer_link(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Updating a peer link

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdatePeerLinkRequest{}
    request.GlobalDcGatewayId = "{global_dc_gateway_id}"
    request.PeerLinkId = "{peer_link_id}"
    namePeerLink:= "dgw-peer-link-test"
    descriptionPeerLink:= "test"
    peerLinkbody := &model.UpdateExternalPeerLinkRequestBodyPeerLink{
        Name: &namePeerLink,
        Description: &descriptionPeerLink,
    }
    request.Body = &model.UpdateExternalPeerLinkRequestBody{
        PeerLink: peerLinkbody,
    }
    response, err := client.UpdatePeerLink(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.7.5 Deleting a Peer Link

Function

This API is used to delete a peer link between a global DC gateway and an enterprise router.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v3/{project_id}/dcaas/global-dc-gateways/{global_dc_gateway_id}/peer-links/{peer_link_id}

Table 4-235 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**
global_dc_gateway_id	Yes	String	Specifies the global DC gateway ID.
peer_link_id	Yes	String	Specifies the peer link of the global DC gateway.

Request Parameters

Table 4-236 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

None

Example Requests

Deleting a peer link

```
DELETE https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/global-dc-gateways/
335cb548-0ea0-4aff-80f5-502a2dab5325/peer-links/d6ea4641-9575-4675-ac4f-906884e37f28
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class DeletePeerLinkSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        DeletePeerLinkRequest request = new DeletePeerLinkRequest();
        request.withGlobalDcGatewayId("{global_dc_gateway_id}");
        request.withPeerLinkId("{peer_link_id}");
        try {
            DeletePeerLinkResponse response = client.deletePeerLink(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
```



```
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeletePeerLinkRequest()
        request.global_dc_gateway_id = "{global_dc_gateway_id}"
        request.peer_link_id = "{peer_link_id}"
        response = client.delete_peer_link(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
```



```
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeletePeerLinkRequest{}
    request.GlobalDcGatewayId = "{global_dc_gateway_id}"
    request.PeerLinkId = "{peer_link_id}"
    response, err := client.DeletePeerLink(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	NO CONTENT

Error Codes

See **Error Codes**.

4.8 Connect Gateways

4.8.1 Querying Details About a Connect Gateway

Function

This API is used to query the details about a connect gateway.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/connect-gateways/{connect_gateway_id}

Table 4-237 Path Parameters

Parameter	Mandatory	Type	Description
connect_gateway_id	Yes	String	Specifies the connect gateway ID.
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**

Request Parameters

Table 4-238 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-239 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
connect_gateway	**ConnectGatewayResponse** object	Specifies the connect gateway.

Table 4-240 ConnectGatewayResponse

Parameter	Type	Description
id	String	Specifies the unique ID of the connect gateway.
tenant_id	String	Specifies the tenant ID.
name	String	Specifies the gateway name.
description	String	Provides supplementary information about the connect gateway.
address_family	String	Specifies the address family. • **ipv4**: Only IPv4 is supported. • **dual**: IPv4 and IPv6 are supported.
status	String	Specifies the connect gateway status. • **DOWN**: The connect gateway is not in use or the associated device goes down. • **ACTIVE**: The connect gateway is normal. • **ERROR**: The connect gateway is abnormal.
access_site	String	Specifies the access site of the connect gateway.
bgp_asn	Long	Specifies the BGP ASN.
current_geip_count	Integer	Specifies the number of global EIPs bound to the connect gateway.
created_time	String	Specifies the time when the connect gateway was created.
updated_time	String	Specifies the time when the connect gateway was updated.
gcb_id	String	Specifies the global connection bandwidth ID.
gateway_site	String	Specifies the gateway location.

Example Requests

Querying details about a connect gateway

```
GET https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/connect-gateways/934aa302-5f1a-44c8-855b-20f715e2dbf3
```


Example Responses

Status code: 200

OK

- Connect gateway details that have been queried

```
{
  "request_id" : "ecf6442668da7d4adf0dfaf4bded8840",
  "connect_gateway" : {
    "name" : "cgw-test",
    "id" : "934aa302-5f1a-44c8-855b-20f715e2dbf3",
    "description" : "",
    "created_time" : "2024-12-12T06:12:15Z",
    "updated_time" : null,
    "tenant_id" : "b197c48159d44a66b32c538c3f8da89a",
    "status" : "DOWN",
    "bgp_asn" : 139144,
    "address_family" : "dual",
    "access_site" : null,
    "current_geip_count" : 0,
    "gcb_id" : null,
    "gateway_site" : null
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class ShowConnectGatewaySolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowConnectGatewayRequest request = new ShowConnectGatewayRequest();
        request.withConnectGatewayId("{connect_gateway_id}");
```



```
        try {
            ShowConnectGatewayResponse response = client.showConnectGateway(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowConnectGatewayRequest()
        request.connect_gateway_id = "{connect_gateway_id}"
        response = client.show_connect_gateway(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
```

```
risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowConnectGatewayRequest{}
    request.ConnectGatewayId = "{connect_gateway_id}"
    response, err := client.ShowConnectGateway(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.8.2 Updating a Connect Gateway

Function

This API is used to update a connect gateway.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v3/{project_id}/dcaas/connect-gateways/{connect_gateway_id}

Table 4-241 Path Parameters

Parameter	Mandatory	Type	Description
connect_gateway_id	Yes	String	Specifies the connect gateway ID.
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**

Request Parameters

Table 4-242 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-243 Request body parameters

Parameter	Mandatory	Type	Description
connect_gateway	No	**UpdateConnectGateway** object	Request body for modifying a connect gateway

Table 4-244 UpdateConnectGateway

Parameter	Mandatory	Type	Description
name	No	String	Specifies the gateway name. Minimum: **0** Maximum: **64**
description	No	String	Provides supplementary information about the connect gateway. Minimum: **0** Maximum: **255**
address_family	No	String	Specifies the address family.

Response Parameters

Status code: 200

Table 4-245 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
connect_gateway	**ConnectGatewayResponse** object	Specifies the connect gateway.

Table 4-246 ConnectGatewayResponse

Parameter	Type	Description
id	String	Specifies the unique ID of the connect gateway.
tenant_id	String	Specifies the tenant ID.
name	String	Specifies the gateway name.
description	String	Provides supplementary information about the connect gateway.
address_family	String	Specifies the address family. • **ipv4**: Only IPv4 is supported. • **dual**: IPv4 and IPv6 are supported.

Parameter	Type	Description
status	String	Specifies the connect gateway status. • **DOWN**: The connect gateway is not in use or the associated device goes down. • **ACTIVE**: The connect gateway is normal. • **ERROR**: The connect gateway is abnormal.
access_site	String	Specifies the access site of the connect gateway.
bgp_asn	Long	Specifies the BGP ASN.
current_geip_count	Integer	Specifies the number of global EIPs bound to the connect gateway.
created_time	String	Specifies the time when the connect gateway was created.
updated_time	String	Specifies the time when the connect gateway was updated.
gcb_id	String	Specifies the global connection bandwidth ID.
gateway_site	String	Specifies the gateway location.

Example Requests

Updating a connect gateway

```
PUT https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/connect-gateways/934aa302-5f1a-44c8-855b-20f715e2dbf3

{
  "connect_gateway" : {
    "description" : "Global EIP testing"
  }
}
```

Example Responses

Status code: 200

OK

- Connect gateway that has been updated

```
{
  "request_id" : "ecf6442668da7d4adf0dfaf4bded8840",
  "connect_gateway" : {
    "name" : "cgw-test",
    "id" : "934aa302-5f1a-44c8-855b-20f715e2dbf3",
    "description" : "Global EIP testing",
    "created_time" : "2024-12-12T06:12:15Z",
```



```
    "updated_time" : null,
    "tenant_id" : "b197c48159d44a66b32c538c3f8da89a",
    "status" : "DOWN",
    "bgp_asn" : 139144,
    "address_family" : "dual",
    "access_site" : null,
    "current_geip_count" : 0,
    "gcb_id" : null,
    "gateway_site" : null
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Updating a connect gateway

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class UpdateConnectGatewaySolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateConnectGatewayRequest request = new UpdateConnectGatewayRequest();
        request.withConnectGatewayId("{connect_gateway_id}");
        UpdateConnectGatewayRequestBody body = new UpdateConnectGatewayRequestBody();
        UpdateConnectGateway connectGatewaybody = new UpdateConnectGateway();
        connectGatewaybody.withDescription("Global EIP testing");
        body.withConnectGateway(connectGatewaybody);
        request.withBody(body);
        try {
            UpdateConnectGatewayResponse response = client.updateConnectGateway(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
```



```
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Updating a connect gateway

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdateConnectGatewayRequest()
        request.connect_gateway_id = "{connect_gateway_id}"
        connectGatewaybody = UpdateConnectGateway(
            description="Global EIP testing"
        )
        request.body = UpdateConnectGatewayRequestBody(
            connect_gateway=connectGatewaybody
        )
        response = client.update_connect_gateway(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Updating a connect gateway

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
```



```
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateConnectGatewayRequest{}
    request.ConnectGatewayId = "{connect_gateway_id}"
    descriptionConnectGateway:= "Global EIP testing"
    connectGatewaybody := &model.UpdateConnectGateway{
        Description: &descriptionConnectGateway,
    }
    request.Body = &model.UpdateConnectGatewayRequestBody{
        ConnectGateway: connectGatewaybody,
    }
    response, err := client.UpdateConnectGateway(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.8.3 Deleting a Connect Gateway

Function

This API is used to delete a connect gateway.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v3/{project_id}/dcaas/connect-gateways/{connect_gateway_id}

Table 4-247 Path Parameters

Parameter	Mandatory	Type	Description
connect_gateway_id	Yes	String	Specifies the connect gateway ID.
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**

Request Parameters

Table 4-248 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

None

Example Requests

Deleting a connect gateway

```
DELETE https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/connect-gateways/934aa302-5f1a-44c8-855b-20f715e2dbf3
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class DeleteConnectGatewaySolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteConnectGatewayRequest request = new DeleteConnectGatewayRequest();
        request.withConnectGatewayId("{connect_gateway_id}");
        try {
            DeleteConnectGatewayResponse response = client.deleteConnectGateway(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
```



```
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteConnectGatewayRequest()
        request.connect_gateway_id = "{connect_gateway_id}"
        response = client.delete_connect_gateway(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()
```



```
    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteConnectGatewayRequest{}
    request.ConnectGatewayId = "{connect_gateway_id}"
    response, err := client.DeleteConnectGateway(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
204	NO Content

Error Codes

See **Error Codes**.

4.8.4 Querying the Connect Gateway List

Function

This API is used to query the list of connect gateways.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/connect-gateways

Table 4-249 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**

Table 4-250 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the number of records returned on each page. Value range: 1 to 2000 Minimum: **1** Maximum: **2000** Default: **2000**
offset	No	Integer	Specifies the pagination offset. Minimum: **1** Maximum: **1000**
marker	No	String	Specifies the ID of the last resource record on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with **limit**. Minimum: **0** Maximum: **36**
page_reverse	No	Boolean	Specifies the pagination parameter.
fields	No	Array of strings	Specifies the list of fields to be displayed. Array Length: **1 - 5**
ext_fields	No	Array of strings	show response ext-fields Array Length: **0 - 5**
sort_key	No	String	Specifies the sorting field. Default: **id** Minimum: **0** Maximum: **36**
sort_dir	No	Array of strings	Specifies the sorting order of returned results. There are two options: **asc** (default) and **desc**.
id	No	Array of strings	Specifies the resource ID for querying instances. Array Length: **1 - 5**

Parameter	Mandatory	Type	Description
name	No	Array of strings	Specifies the resource name for querying instances. You can specify multiple names. Array Length: **1 - 5**
status	No	Array of strings	Specifies the status by which instances are queried. Array Length: **1 - 5**

Request Parameters

Table 4-251 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-252 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
connect_gateways	Array of **ConnectGatewayResponse** objects	Specifies the connect gateway.
total_count	Integer	Total number of resources
page_info	**PageInfo** object	Specifies the pagination query information.

Table 4-253 ConnectGatewayResponse

Parameter	Type	Description
id	String	Specifies the unique ID of the connect gateway.
tenant_id	String	Specifies the tenant ID.
name	String	Specifies the gateway name.
description	String	Provides supplementary information about the connect gateway.
address_family	String	Specifies the address family. • **ipv4**: Only IPv4 is supported. • **dual**: IPv4 and IPv6 are supported.
status	String	Specifies the connect gateway status. • **DOWN**: The connect gateway is not in use or the associated device goes down. • **ACTIVE**: The connect gateway is normal. • **ERROR**: The connect gateway is abnormal.
access_site	String	Specifies the access site of the connect gateway.
bgp_asn	Long	Specifies the BGP ASN.
current_geip_count	Integer	Specifies the number of global EIPs bound to the connect gateway.
created_time	String	Specifies the time when the connect gateway was created.
updated_time	String	Specifies the time when the connect gateway was updated.
gcb_id	String	Specifies the global connection bandwidth ID.
gateway_site	String	Specifies the gateway location.

Table 4-254 PageInfo

Parameter	Type	Description
previous_marker	String	Specifies the marker of the previous page. The value is the resource UUID. Minimum: **0** Maximum: **36**
current_count	Integer	Specifies the number of resources in the current list. Minimum: **0** Maximum: **2000**
next_marker	String	Specifies the marker of the next page. The value is the resource UUID. If the value is empty, the resource is on the last page. Minimum: **0** Maximum: **36**

Example Requests

Querying the connect gateway list

```
GET https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/connect-gateways
```

Example Responses

Status code: 200

OK

- Connect gateway list that has been queried

```
{
  "request_id" : "620dd1f696304f95a5d4fa4b9a21505e",
  "connect_gateways" : [ {
    "name" : "cgw-test",
    "id" : "934aa302-5f1a-44c8-855b-20f715e2dbf3",
    "description" : "",
    "created_time" : "2024-12-12T06:12:15Z",
    "updated_time" : null,
    "tenant_id" : "b197c48159d44a66b32c538c3f8da89a",
    "status" : "DOWN",
    "bgp_asn" : 139144,
    "address_family" : "dual",
    "access_site" : null,
    "current_geip_count" : 0,
    "gcb_id" : null,
    "gateway_site" : null
  } ],
  "page_info" : {
    "previous_marker" : "0ffe48a8-053a-483d-aa04-70f675eda4e6",
    "current_count" : 1
  }
}
```


SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class ListConnectGatewaysSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ListConnectGatewaysRequest request = new ListConnectGatewaysRequest();
        try {
            ListConnectGatewaysResponse response = client.listConnectGateways(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
```



```
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListConnectGatewaysRequest()
        response = client.list_connect_gateways(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListConnectGatewaysRequest{}
    response, err := client.ListConnectGateways(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```


More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.8.5 Creating a Connect Gateway

Function

This API is used to create a connect gateway.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/dcaas/connect-gateways

Table 4-255 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**

Request Parameters

Table 4-256 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-257 Request body parameters

Parameter	Mandatory	Type	Description
connect_gateway	Yes	**CreateConnectGateway** object	Specifies the connect gateway.

Table 4-258 CreateConnectGateway

Parameter	Mandatory	Type	Description
name	Yes	String	Specifies the gateway name. Minimum: **0** Maximum: **64**
description	No	String	Provides supplementary information about the connect gateway. Minimum: **0** Maximum: **255**
address_family	No	String	Specifies the address family. If this parameter is left blank, the default value **ipv4** is used. Default: **ipv4**

Response Parameters

Status code: 201

Table 4-259 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
connect_gateway	**ConnectGateway Response** object	Specifies the connect gateway.

Table 4-260 ConnectGatewayResponse

Parameter	Type	Description
id	String	Specifies the unique ID of the connect gateway.
tenant_id	String	Specifies the tenant ID.
name	String	Specifies the gateway name.
description	String	Provides supplementary information about the connect gateway.
address_family	String	Specifies the address family. • **ipv4**: Only IPv4 is supported. • **dual**: IPv4 and IPv6 are supported.
status	String	Specifies the connect gateway status. • **DOWN**: The connect gateway is not in use or the associated device goes down. • **ACTIVE**: The connect gateway is normal. • **ERROR**: The connect gateway is abnormal.
access_site	String	Specifies the access site of the connect gateway.
bgp_asn	Long	Specifies the BGP ASN.
current_geip_count	Integer	Specifies the number of global EIPs bound to the connect gateway.
created_time	String	Specifies the time when the connect gateway was created.
updated_time	String	Specifies the time when the connect gateway was updated.
gcb_id	String	Specifies the global connection bandwidth ID.
gateway_site	String	Specifies the gateway location.

Example Requests

Creating a connect gateway

```
POST https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/connect-gateways

{
  "connect_gateway" : {
    "name" : "cgw-test",
    "description" : "",
    "address_family" : "dual"
  }
}
```

Example Responses

Status code: 201

Created

- Connect gateway that has been created

```
{
  "request_id" : "c31651e323414fa89c5cfba267a3035b",
  "connect_gateway" : {
    "name" : "cgw-test",
    "id" : "934aa302-5f1a-44c8-855b-20f715e2dbf3",
    "description" : "",
    "created_time" : "2024-12-11T22:12:15Z",
    "updated_time" : null,
    "tenant_id" : "b197c48159d44a66b32c538c3f8da89a",
    "status" : "DOWN",
    "bgp_asn" : 139144,
    "address_family" : "dual",
    "access_site" : null,
    "current_geip_count" : 0,
    "gcb_id" : null,
    "gateway_site" : null
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Creating a connect gateway

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class CreateConnectGatewaySolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
```



```
environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateConnectGatewayRequest request = new CreateConnectGatewayRequest();
        CreateConnectGatewayRequestBody body = new CreateConnectGatewayRequestBody();
        CreateConnectGateway connectGatewaybody = new CreateConnectGateway();
        connectGatewaybody.withName("cgw-test")
            .withDescription("")
            .withAddressFamily(CreateConnectGateway.AddressFamilyEnum.fromValue("dual"));
        body.withConnectGateway(connectGatewaybody);
        request.withBody(body);
        try {
            CreateConnectGatewayResponse response = client.createConnectGateway(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Creating a connect gateway

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()
```



```
    try:
        request = CreateConnectGatewayRequest()
        connectGatewaybody = CreateConnectGateway(
            name="cgw-test",
            description="",
            address_family="dual"
        )
        request.body = CreateConnectGatewayRequestBody(
            connect_gateway=connectGatewaybody
        )
        response = client.create_connect_gateway(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Creating a connect gateway

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateConnectGatewayRequest{}
    descriptionConnectGateway:= ""
    addressFamilyConnectGateway:= model.GetCreateConnectGatewayAddressFamilyEnum().DUAL
    connectGatewaybody := &model.CreateConnectGateway{
        Name: "cgw-test",
        Description: &descriptionConnectGateway,
        AddressFamily: &addressFamilyConnectGateway,
    }
    request.Body = &model.CreateConnectGatewayRequestBody{
        ConnectGateway: connectGatewaybody,
    }
    response, err := client.CreateConnectGateway(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
```



```
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
201	Created

Error Codes

See **Error Codes**.

4.9 Global EIPs

4.9.1 Querying the Global EIPs Bound to a Connect Gateway

Function

This API is used to query the global EIPs bound to a connect gateway.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/connect-gateways/{connect_gateway_id}/binding-global-eips

Table 4-261 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**
connect_gateway_id	Yes	String	Specifies the connect gateway ID.

Table 4-262 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Specifies the number of records returned on each page. Value range: 1 to 2000 Minimum: **1** Maximum: **2000** Default: **2000**
offset	No	Integer	Specifies the pagination offset. Minimum: **1** Maximum: **1000**
marker	No	String	Specifies the ID of the last resource record on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with **limit**. Minimum: **0** Maximum: **36**
page_reverse	No	Boolean	Specifies the pagination parameter.
fields	No	Array of strings	Specifies the list of fields to be displayed. Array Length: **1 - 5**
ext_fields	No	Array of strings	show response ext-fields Array Length: **0 - 5**
sort_key	No	String	Specifies the sorting field. Default: **id** Minimum: **0** Maximum: **36**
sort_dir	No	Array of strings	Specifies the sorting order of returned results. There are two options: **asc** (default) and **desc**.
status	No	Array of strings	Specifies the status by which instances are queried. Array Length: **1 - 5**

Parameter	Mandatory	Type	Description
global_eip_id	No	Array of strings	Specifies the global EIP ID.
global_eip_segment_id	No	Array of strings	Specifies the ID of the global EIP range.

Request Parameters

Table 4-263 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-264 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
global_eips	Array of **ListBindingGeip** objects	Lists the bound global EIPs.
total_count	Integer	Specifies the total number of records.
page_info	**PageInfo** object	Specifies the pagination query information.

Table 4-265 ListBindingGeip

Parameter	Type	Description
global_eip_id	String	Specifies the global EIP ID.
global_eip_segment_id	String	Specifies the ID of the global EIP range.
status	String	Specifies whether the global EIP has been bound.
type	String	Specifies the global EIP type. The value can be **IP_ADDRESS** or **IP_SEGMENT**.
error_message	String	Specifies the cause of the failure to bind the global EIP.
cidr	String	Specifies the global EIP and its subnet mask.
address_family	String	Specifies the address family of the global EIP.
ie_vtep_ip	String	Specifies the VTEP IP address of the CloudPond cluster.
created_time	String	Specifies the time when the global EIP was bound.
gcb_id	String	Specifies the global connection bandwidth ID.

Table 4-266 PageInfo

Parameter	Type	Description
previous_marker	String	Specifies the marker of the previous page. The value is the resource UUID. Minimum: **0** Maximum: **36**
current_count	Integer	Specifies the number of resources in the current list. Minimum: **0** Maximum: **2000**
next_marker	String	Specifies the marker of the next page. The value is the resource UUID. If the value is empty, the resource is on the last page. Minimum: **0** Maximum: **36**

Example Requests

Querying the global EIPs bound to a connect gateway

```
GET https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/connect-gateways/
934aa302-5f1a-44c8-855b-20f715e2dbf3/binding-global-eips
```

Example Responses

Status code: 200

OK

- The bound global EIPs that have been queried

```
{
  "request_id" : "7609b2aa4ca77535aec53255a249b640",
  "global_eips" : [ {
    "created_time" : "2024-12-12T07:23:07.000Z",
    "global_eip_segment_id" : "d9157a57-95f7-4183-b0d3-a3897d3587b0",
    "status" : "BIND_SUCCESSFULLY",
    "type" : "IP_SEGMENT",
    "error_message" : null,
    "address_family" : "ipv4",
    "ie_vtep_ip" : "26.150.134.64",
    "cidr" : "215.255.202.176/28"
  } ],
  "total_count" : 1,
  "page_info" : {
    "previous_marker" : null,
    "current_count" : 1
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;


public class ListGlobalEipsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
```



```
            .withAk(ak)
            .withSk(sk);

    DcClient client = DcClient.newBuilder()
            .withCredential(auth)
            .withRegion(DcRegion.valueOf("<YOUR REGION>"))
            .build();
    ListGlobalEipsRequest request = new ListGlobalEipsRequest();
    request.withConnectGatewayId("{connect_gateway_id}");
    try {
        ListGlobalEipsResponse response = client.listGlobalEips(request);
        System.out.println(response.toString());
    } catch (ConnectionException e) {
        e.printStackTrace();
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
  }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListGlobalEipsRequest()
        request.connect_gateway_id = "{connect_gateway_id}"
        response = client.list_global_eips(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
```

```
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListGlobalEipsRequest{}
    request.ConnectGatewayId = "{connect_gateway_id}"
    response, err := client.ListGlobalEips(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.9.2 Binding Global EIPs to a Connect Gateway

Function

This API is used to bind global EIPs to a connect gateway.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/dcaas/connect-gateways/{connect_gateway_id}/binding-global-eips

Table 4-267 Path Parameters

Parameter	Mandatory	Type	Description
connect_gateway_id	Yes	String	Specifies the connect gateway ID.
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**

Request Parameters

Table 4-268 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-269 Request body parameters

Parameter	Mandatory	Type	Description
gcb_id	No	String	Specifies the global connection bandwidth ID. Minimum: **0** Maximum: **36**

Parameter	Mandatory	Type	Description
global_eips	No	Array of **BindingGeipBody** objects	Global Eips Request Object.

Table 4-270 BindingGeipBody

Parameter	Mandatory	Type	Description
global_eip_id	Yes	String	Specifies the global EIP ID. Minimum: **0** Maximum: **36**
type	No	String	Specifies the subnet type of the global EIP. Default: **IP_ADDRESS**

Response Parameters

Status code: 201

Table 4-271 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
global_eips	**ListBindingGeip** object	Lists the global EIPs.

Table 4-272 ListBindingGeip

Parameter	Type	Description
global_eip_id	String	Specifies the global EIP ID.
global_eip_segment_id	String	Specifies the ID of the global EIP range.
status	String	Specifies whether the global EIP has been bound.
type	String	Specifies the global EIP type. The value can be **IP_ADDRESS** or **IP_SEGMENT**.
error_message	String	Specifies the cause of the failure to bind the global EIP.

Parameter	Type	Description
cidr	String	Specifies the global EIP and its subnet mask.
address_family	String	Specifies the address family of the global EIP.
ie_vtep_ip	String	Specifies the VTEP IP address of the CloudPond cluster.
created_time	String	Specifies the time when the global EIP was bound.
gcb_id	String	Specifies the global connection bandwidth ID.

Example Requests

Binding global EIPs to a connect gateway

```
POST https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/connect-gateways/
934aa302-5f1a-44c8-855b-20f715e2dbf3/binding-global-eips

{
  "global_eips" : [ {
    "global_eip_id" : "d9157a57-95f7-4183-b0d3-a3897d3587b0",
    "type" : "IP_SEGMENT"
  } ],
  "gcb_id" : "8a25d596-022a-4ba4-ab07-1bd14aa076b4"
}
```

Example Responses

Status code: 201

CREATED

- The global EIPs that have been bound

```
{
  "request_id" : "90a2730218b5f585386320973dd4ead6",
  "global_eips" : [ {
    "global_eip_id" : "d9157a57-95f7-4183-b0d3-a3897d3587b0",
    "status" : "BINDING",
    "type" : "IP_ADDRESS",
    "created_time" : "2024-12-11T23:19:17.000Z"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Binding global EIPs to a connect gateway

```
package com.huaweicloud.sdk.test;
```



```
import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class BindGlobalEipsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        BindGlobalEipsRequest request = new BindGlobalEipsRequest();
        request.withConnectGatewayId("{connect_gateway_id}");
        CreateBindingGeipRequestBody body = new CreateBindingGeipRequestBody();
        List<BindingGeipBody> listbodyGlobalEips = new ArrayList<>();
        listbodyGlobalEips.add(
            new BindingGeipBody()
                .withGlobalEipId("d9157a57-95f7-4183-b0d3-a3897d3587b0")
                .withType(BindingGeipBody.TypeEnum.fromValue("IP_SEGMENT"))
        );
        body.withGlobalEips(listbodyGlobalEips);
        body.withGcbId("8a25d596-022a-4ba4-ab07-1bd14aa076b4");
        request.withBody(body);
        try {
            BindGlobalEipsResponse response = client.bindGlobalEips(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Binding global EIPs to a connect gateway

```
# coding: utf-8

import os
```



```
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = BindGlobalEipsRequest()
        request.connect_gateway_id = "{connect_gateway_id}"
        listGlobalEipsbody = [
            BindingGeipBody(
                global_eip_id="d9157a57-95f7-4183-b0d3-a3897d3587b0",
                type="IP_SEGMENT"
            )
        ]
        request.body = CreateBindingGeipRequestBody(
            global_eips=listGlobalEipsbody,
            gcb_id="8a25d596-022a-4ba4-ab07-1bd14aa076b4"
        )
        response = client.bind_global_eips(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Binding global EIPs to a connect gateway

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
```



```
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.BindGlobalEipsRequest{}
    request.ConnectGatewayId = "{connect_gateway_id}"
    typeGlobalEips:= model.GetBindingGeipBodyTypeEnum().IP_SEGMENT
    var listGlobalEipsbody = []model.BindingGeipBody{
        {
            GlobalEipId: "d9157a57-95f7-4183-b0d3-a3897d3587b0",
            Type: &typeGlobalEips,
        },
    }
    gcbIdCreateBindingGeipRequestBody:= "8a25d596-022a-4ba4-ab07-1bd14aa076b4"
    request.Body = &model.CreateBindingGeipRequestBody{
        GlobalEips: &listGlobalEipsbody,
        GcbId: &gcbIdCreateBindingGeipRequestBody,
    }
    response, err := client.BindGlobalEips(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
201	CREATED

Error Codes

See **Error Codes**.

4.9.3 Unbinding Global EIPs from a Connect Gateway

Function

This API is used to unbind global EIPs from a connect gateway.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/dcaas/connect-gateways/{connect_gateway_id}/unbinding-global-eips

Table 4-273 Path Parameters

Parameter	Mandatory	Type	Description
connect_gateway_id	Yes	String	Specifies the connect gateway ID.
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**

Request Parameters

Table 4-274 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-275 Request body parameters

Parameter	Mandatory	Type	Description
global_eips	No	Array of **UnbindingGeipBody** objects	Global EIPs Request Objects.

Table 4-276 UnbindingGeipBody

Parameter	Mandatory	Type	Description
global_eip_id	Yes	String	Specifies the global EIP ID. Minimum: **0** Maximum: **36**

Response Parameters

Status code: 201

Table 4-277 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID.
global_eips	**ListBindingGeip** object	Lists the global EIPs.

Table 4-278 ListBindingGeip

Parameter	Type	Description
global_eip_id	String	Specifies the global EIP ID.
global_eip_segment_id	String	Specifies the ID of the global EIP range.
status	String	Specifies whether the global EIP has been bound.
type	String	Specifies the global EIP type. The value can be **IP_ADDRESS** or **IP_SEGMENT**.
error_message	String	Specifies the cause of the failure to bind the global EIP.
cidr	String	Specifies the global EIP and its subnet mask.
address_family	String	Specifies the address family of the global EIP.
ie_vtep_ip	String	Specifies the VTEP IP address of the CloudPond cluster.
created_time	String	Specifies the time when the global EIP was bound.

Parameter	Type	Description
gcb_id	String	Specifies the global connection bandwidth ID.

Example Requests

Unbinding global EIPs from a connect gateway

```
POST https://{dc_endpoint}/v3/b197c48159d44a66b32c538c3f8da89a/dcaas/connect-gateways/934aa302-5f1a-44c8-855b-20f715e2dbf3/unbinding-global-eips

{
  "global_eips" : [ {
    "global_eip_id" : "d9157a57-95f7-4183-b0d3-a3897d3587b0"
  } ]
}
```

Example Responses

Status code: 201

CREATED

- The global EIPs that have been unbound from the connect gateway

```
{
  "request_id" : "5855caee4fde7a13d50e0b947b845f70",
  "global_eips" : [ {
    "global_eip_id" : "d9157a57-95f7-4183-b0d3-a3897d3587b0",
    "status" : "UNBINDING",
    "type" : "IP_ADDRESS"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Unbinding global EIPs from a connect gateway

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class UnbindGlobalEipsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
```



```
environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        UnbindGlobalEipsRequest request = new UnbindGlobalEipsRequest();
        request.withConnectGatewayId("{connect_gateway_id}");
        CreateUnbindingGeipRequestBody body = new CreateUnbindingGeipRequestBody();
        List<UnbindingGeipBody> listbodyGlobalEips = new ArrayList<>();
        listbodyGlobalEips.add(
            new UnbindingGeipBody()
                .withGlobalEipId("d9157a57-95f7-4183-b0d3-a3897d3587b0")
        );
        body.withGlobalEips(listbodyGlobalEips);
        request.withBody(body);
        try {
            UnbindGlobalEipsResponse response = client.unbindGlobalEips(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Unbinding global EIPs from a connect gateway

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
```



```
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UnbindGlobalEipsRequest()
        request.connect_gateway_id = "{connect_gateway_id}"
        listGlobalEipsbody = [
            UnbindingGeipBody(
                global_eip_id="d9157a57-95f7-4183-b0d3-a3897d3587b0"
            )
        ]
        request.body = CreateUnbindingGeipRequestBody(
            global_eips=listGlobalEipsbody
        )
        response = client.unbind_global_eips(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Unbinding global EIPs from a connect gateway

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UnbindGlobalEipsRequest{}
    request.ConnectGatewayId = "{connect_gateway_id}"
    var listGlobalEipsbody = []model.UnbindingGeipBody{
        {
            GlobalEipId: "d9157a57-95f7-4183-b0d3-a3897d3587b0",
        },
    }
    request.Body = &model.CreateUnbindingGeipRequestBody{
        GlobalEips: &listGlobalEipsbody,
    }
    response, err := client.UnbindGlobalEips(request)
```



```
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
201	CREATED

Error Codes

See **Error Codes**.

4.10 Global DC Gateway Route Tables

4.10.1 Querying Global DC Gateway Route Tables

Function

This API is used to query the route tables for a global DC gateway.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/dcaas/gdgw/{gdgw_id}/routetables

Table 4-279 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**
gdgw_id	Yes	String	Specifies the global DC gateway ID.

Table 4-280 Query Parameters

Parameter	Mandatory	Type	Description
fields	No	Array of strings	Specifies the list of fields to be displayed. Array Length: **1 - 5**
ext_fields	No	Array of strings	show response ext-fields Array Length: **0 - 5**
nexthop	No	Array of strings	Specifies the next hop ID.
destination	No	Array of strings	Specifies the destination.
address_family	No	Array of strings	Specifies the address family.

Request Parameters

Table 4-281 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Response Parameters

Status code: 200

Table 4-282 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID. Minimum: **0** Maximum: **36**

Parameter	Type	Description
gdgw_routetable	Array of **CommonRoutetable** objects	Specifies the route table for the global DC gateway. Array Length: **0 - 2000**

Table 4-283 CommonRoutetable

Parameter	Type	Description
id	String	Specifies the route ID. Minimum: **36** Maximum: **36**
tenant_id	String	Specifies the tenant ID. Minimum: **64** Maximum: **64**
gateway_id	String	Specifies the gateway ID. Minimum: **36** Maximum: **36**
destination	String	Specifies the subnet the route is destined for. Minimum: **64** Maximum: **64**
nexthop	String	Specifies the next hop ID. Minimum: **36** Maximum: **36**
obtain_mode	String	Specifies the route type. • **customized**: default route • **specific**: custom route • **bgp**: BGP route
status	String	Specifies the route status. • **ACTIVE**: The route has been delivered. • **ERROR**: Failed to deliver the route. • **PENDING_CREATE**: The route is to be delivered.
address_family	String	Specifies the address family. • **ipv4**: IPv4 addresses • **ipv6**: IPv6 addresses

Parameter	Type	Description
description	String	Describes the route. Minimum: **0** Maximum: **1024**
type	String	Specifies the next hop type. • **vif_peer**: virtual interface peer • **gdgw**: global DC gateway Minimum: **0** Maximum: **255**

Example Requests

Querying the route tables for a global DC gateway

```
GET https://{dc_endpoint}/v3/4bd6efdb0fb747b39aa2c0162c112226/dcaas/gdgw/0851a5e0-6623-42c2-bb02-b8956e313dd8/routetables
```

Example Responses

Status code: 200

OK

- Response body for querying global DC gateway route tables

```
{
  "request_id" : "409ed40b-7ccf-4514-8ca8-af2b994e4023",
  "gdgw_routetable" : [ {
    "id" : "14d55a22-9d08-46af-bc2e-f965f9558234",
    "description" : "IPv4 subnet route",
    "tenant_id" : "00000000000000000000000000000000",
    "gateway_id" : "5791e3c8-b43d-4751-bfeb-a643e40e6086",
    "destination" : "x.x.0.0/16",
    "nexthop" : "409ed40b-7ccf-4514-8ca8-af2b994e4023",
    "type" : "vif_peer",
    "obtain_mode" : "customized",
    "status" : "ACTIVE",
    "address_family" : "ipv4"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
```



```
import com.huaweicloud.sdk.dc.v3.model.*;


public class ListGdgwRouteTablesSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
        ListGdgwRouteTablesRequest request = new ListGdgwRouteTablesRequest();
        request.withGdgwId("{gdgw_id}");
        try {
            ListGdgwRouteTablesResponse response = client.listGdgwRouteTables(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()
```



```
    try:
        request = ListGdgwRouteTablesRequest()
        request.gdgw_id = "{gdgw_id}"
        response = client.list_gdgw_route_tables(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListGdgwRouteTablesRequest{}
    request.GdgwId = "{gdgw_id}"
    response, err := client.ListGdgwRouteTables(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.10.2 Modifying Global DC Gateway Route Tables

Function

This API is used to modify the route tables for a global DC gateway.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v3/{project_id}/dcaas/gdgw/{gdgw_id}/routetables

Table 4-284 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Specifies the project ID. Minimum: **0** Maximum: **36**
gdgw_id	Yes	String	Specifies the global DC gateway ID.

Request Parameters

Table 4-285 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	Specifies the user token. To obtain the token, see section "Obtaining the User Token" in the *Identity and Access Management API Reference*. The token is the value of **X-Subject-Token** in the response header. Minimum: **0** Maximum: **10240**

Table 4-286 Request body parameters

Parameter	Mandatory	Type	Description
dry_run	No	Boolean	Specifies whether dry run is allowed.
gdgw_routetable	No	**GdgwRouteTableRequest** object	Specifies the global DC gateway route table whose routes are to be modified.

Table 4-287 GdgwRouteTableRequest

Parameter	Mandatory	Type	Description
add_routes	No	Array of objects	Specifies the routes to be added. Array Length: **0 - 100**
del_routes	No	Array of objects	Specifies the routes to be deleted. Array Length: **0 - 100**

Parameter	Mandatory	Type	Description
update_routes	No	Array of objects	Route to be updated Only the additional information about the route is updated. The route update operation of the switch is not performed. Currently, the route description can be updated. Array Length: **0 - 100**

Table 4-288 add_routes

Parameter	Mandatory	Type	Description
type	Yes	String	Specifies the next hop type. • **vif_peer**: virtual interface peer • **gdgw**: global DC gateway
destination	Yes	String	Specifies the subnet the route is destined for.
nexthop	Yes	String	Specifies the next hop ID.
description	No	String	Provides supplementary information about the route.

Table 4-289 del_routes

Parameter	Mandatory	Type	Description
type	Yes	String	Specifies the next hop type. • **vif_peer**: virtual interface peer • **gdgw**: global DC gateway
destination	Yes	String	Specifies the subnet the route is destined for.
nexthop	Yes	String	Specifies the next hop ID.

Table 4-290 update_routes

Parameter	Mandatory	Type	Description
destination	Yes	String	Specifies the subnet the route is destined for.
nexthop	Yes	String	Specifies the next hop ID.
description	No	String	Provides supplementary information about the route.

Response Parameters

Status code: 200

Table 4-291 Response body parameters

Parameter	Type	Description
request_id	String	Specifies the request ID. Minimum: **0** Maximum: **36**
gdgw_routetable	Array of **CommonRoutetable** objects	Specifies the ID of the route table for the global DC gateway. Array Length: **0 - 2000**

Table 4-292 CommonRoutetable

Parameter	Type	Description
id	String	Specifies the route ID. Minimum: **36** Maximum: **36**
tenant_id	String	Specifies the tenant ID. Minimum: **64** Maximum: **64**
gateway_id	String	Specifies the gateway ID. Minimum: **36** Maximum: **36**
destination	String	Specifies the subnet the route is destined for. Minimum: **64** Maximum: **64**

Parameter	Type	Description
nexthop	String	Specifies the next hop ID. Minimum: **36** Maximum: **36**
obtain_mode	String	Specifies the route type. • **customized**: default route • **specific**: custom route • **bgp**: BGP route
status	String	Specifies the route status. • **ACTIVE**: The route has been delivered. • **ERROR**: Failed to deliver the route. • **PENDING_CREATE**: The route is to be delivered.
address_family	String	Specifies the address family. • **ipv4**: IPv4 addresses • **ipv6**: IPv6 addresses
description	String	Describes the route. Minimum: **0** Maximum: **1024**
type	String	Specifies the next hop type. • **vif_peer**: virtual interface peer • **gdgw**: global DC gateway Minimum: **0** Maximum: **255**

Example Requests

Updating the route tables for a global DC gateway

```
PUT https://{dc_endpoint}/v3/4bd6efdb0fb747b39aa2c0162c112226/dcaas/gdgw/0851a5e0-6623-42c2-bb02-b8956e313dd8/routetables

{
  "gdgw_routetable" : {
    "add_routes" : [ {
      "destination" : "1.1.1.0/24",
      "nexthop" : "b9060822-06bf-4c48-995d-29a3fb04a3c3",
      "type" : "vif_peer",
      "description" : ""
    } ]
  }
}
```


Example Responses

Status code: 200

OK

- Response body for updating the route tables for a global DC gateway

```
{
  "request_id" : "d365091f89df06c8737bd81a72efc8b2",
  "gdgw_routetable" : [ {
    "id" : "94912503-0a97-48ee-909b-6676129a565e",
    "description" : "",
    "tenant_id" : "4bd6efdb0fb747b39aa2c0162c112226",
    "gateway_id" : "0851a5e0-6623-42c2-bb02-b8956e313dd8",
    "destination" : "1.1.1.0/24",
    "nexthop" : "b9060822-06bf-4c48-995d-29a3fb04a3c3",
    "type" : "vif_peer",
    "obtain_mode" : "specific",
    "status" : "PENDING_CREATE",
    "address_family" : "ipv4"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Updating the route tables for a global DC gateway

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.dc.v3.region.DcRegion;
import com.huaweicloud.sdk.dc.v3.*;
import com.huaweicloud.sdk.dc.v3.model.*;

import java.util.List;
import java.util.ArrayList;

public class UpdateGdgwRouteTableSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        DcClient client = DcClient.newBuilder()
                .withCredential(auth)
                .withRegion(DcRegion.valueOf("<YOUR REGION>"))
                .build();
```



```
        UpdateGdgwRouteTableRequest request = new UpdateGdgwRouteTableRequest();
        request.withGdgwId("{gdgw_id}");
        UpdateGdgwRoutetableRequestBody body = new UpdateGdgwRoutetableRequestBody();
        List<AddGdgwRouteAction> listGdgwRoutetableAddRoutes = new ArrayList<>();
        listGdgwRoutetableAddRoutes.add(
            new AddRoutes()
                .withDestination("1.1.1.0/24")
                .withDescription("")
                .withType(AddRoutes.TypeEnum.fromValue("vif_peer"))
                .withNexthop("b9060822-06bf-4c48-995d-29a3fb04a3c3")
        );
        GdgwRouteTableRequest gdgwRoutetablebody = new GdgwRouteTableRequest();
        gdgwRoutetablebody.withAddRoutes(listGdgwRoutetableAddRoutes);
        body.withGdgwRoutetable(gdgwRoutetablebody);
        request.withBody(body);
        try {
            UpdateGdgwRouteTableResponse response = client.updateGdgwRouteTable(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Updating the route tables for a global DC gateway

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkdc.v3.region.dc_region import DcRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkdc.v3 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = DcClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(DcRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = UpdateGdgwRouteTableRequest()
        request.gdgw_id = "{gdgw_id}"
        listAddRoutesGdgwRoutetable = [
            AddRoutes(
                destination="1.1.1.0/24",
                description="",
                type="vif_peer",
```



```
            nexthop="b9060822-06bf-4c48-995d-29a3fb04a3c3"
        )
    ]
    gdgwRoutetablebody = GdgwRouteTableRequest(
        add_routes=listAddRoutesGdgwRoutetable
    )
    request.body = UpdateGdgwRoutetableRequestBody(
        gdgw_routetable=gdgwRoutetablebody
    )
    response = client.update_gdgw_route_table(request)
    print(response)
except exceptions.ClientRequestException as e:
    print(e.status_code)
    print(e.request_id)
    print(e.error_code)
    print(e.error_msg)
```

Go

Updating the route tables for a global DC gateway

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    dc "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/dc/v3/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := dc.NewDcClient(
        dc.DcClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateGdgwRouteTableRequest{}
    request.GdgwId = "{gdgw_id}"
    descriptionAddRoutes:= ""
    typeAddRoutes:= model.GetAddRoutesTypeEnum().VIF_PEER
    var listAddRoutesGdgwRoutetable = []model.AddRoutes{
        {
            Destination: "1.1.1.0/24",
            Description: &descriptionAddRoutes,
            Type: &typeAddRoutes,
            Nexthop: "b9060822-06bf-4c48-995d-29a3fb04a3c3",
        },
    }
    gdgwRoutetablebody := &model.GdgwRouteTableRequest{
        AddRoutes: &listAddRoutesGdgwRoutetable,
    }
    request.Body = &model.UpdateGdgwRoutetableRequestBody{
```



```
        GdgwRoutetable: gdgwRoutetablebody,
    }
    response, err := client.UpdateGdgwRouteTable(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

5 Public Parameters

5.1 Common Status Codes

Successful Response	Message	Description
200	OK	Normal response code for GET and PUT operations
201	Created	Normal response code for POST operations
204	No Content	Normal response code for DELETE operations

Error Response	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the 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.
406 Not Acceptable	The response generated by the server could not be received by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication so that the request can be processed.

Error Response	Description
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	The request is not completed because the service is abnormal.
501 Not Implemented	The request is not completed because the server does not support the requested function.
502 Bad Gateway	The request is not completed because the server receives an invalid response from an upstream server.
503 Service Unavailable	The request is not completed because the system is out of service temporarily.
504 Gateway Timeout	A gateway timed out.

5.2 Error Codes

Status Code	Error Code	Description	Solution
400	DC.0000	The request body is abnormal.	Correct the parameter settings and send the request again.
400	DC.0001	Request parameter error.	Correct the parameter settings and send the request again.
400	DC.0002	The resource does not exist.	Correct the parameter settings and send the request again.
400	DC.0003	System error.	Correct the parameter settings and send the request again.
400	DC.0004	Invalid IP address.	Correct the parameter settings and send the request again.
400	DC.0005	Failed to call the VPC API.	Correct the parameter settings and send the request again.

Status Code	Error Code	Description	Solution
400	DC.0006	Failed to call the MO API.	Correct the parameter settings and send the request again.
400	DC.0007	The VPC does not exist.	Correct the parameter settings and send the request again.
400	DC.0008	The BGP ASN is out of range.	Correct the parameter settings and send the request again.
400	DC.0009	Invalid policy.	Contact technical support.
400	DC.0010	The VPC_VNI does not exist.	Contact technical support.
400	DC.0011	The AGENT is abnormal.	Correct the parameter settings and send the request again.
400	DC.0012	Failed to call the CBC API.	Contact technical support.
400	DC.0013	You have no permission to operate the field.	Contact technical support.
400	DC.1000	Insufficient connection bandwidth.	Contact technical support.
400	DC.1001	A VLAN is specified for a non-hosted connection.	Contact technical support.
400	DC.1002	Failed to create a hosted connection.	Contact technical support.
400	DC.1003	A VLAN is not specified for a hosted connection.	Contact technical support.
400	DC.1004	A non-operations connection is selected for creating a hosted connection.	Contact technical support.
400	DC.1005	The connection is abnormal.	Contact technical support.
400	DC.1006	The device and type cannot be modified when the connection is in use.	Contact technical support.
400	DC.1007	The connection is in use.	Contact technical support.

Status Code	Error Code	Description	Solution
400	DC.1008	Hosted connection VLANs conflict.	Contact technical support.
400	DC.1010	Connection bandwidth is decreased.	Contact technical support.
400	DC.1011	Connection bandwidth cannot be changed.	Contact technical support.
400	DC.1012	The connection does not exist.	Contact technical support.
400	DC.1014	A redundant connection is set for a non-standard connection.	Contact technical support.
400	DC.1015	The connection or LAG does not exist.	Contact technical support.
400	DC.1017	The VLAN ID of the hosted connection is 0.	Contact technical support.
400	DC.1019	The connection quota has been used up.	Contact technical support.
400	DC.1100	The local endpoint group ID of the virtual gateway is invalid.	Contact technical support.
400	DC.1101	The number of local subnets exceeds the limit.	Contact technical support.
400	DC.1102	The standby device is specified when the active device is not specified.	Contact technical support.
400	DC.1103	The active and standby devices are the same.	Contact technical support.
400	DC.1104	The device information cannot be updated for the virtual gateway.	Contact technical support.
400	DC.1105	The local CIDR block overlap with the remote CIDR block.	Contact technical support.
400	DC.1106	The virtual gateway is in use.	Contact technical support.
400	DC.1107	Virtual gateway VLANs are exhausted.	Contact technical support.
400	DC.1108	Virtual gateway VNIs are exhausted.	Contact technical support.

Status Code	Error Code	Description	Solution
400	DC.1109	Virtual gateway VRFs are exhausted.	Contact technical support.
400	DC.1110	A virtual gateway has been associated with the VPC.	Contact technical support.
400	DC.1111	The virtual gateway does not exist.	Contact technical support.
400	DC.1112	The devices used by the virtual gateway are not in active/standby mode.	Contact technical support.
400	DC.1113	The virtual gateway is in the cutover state.	Contact technical support.
400	DC.1114	**traffic_mode** cannot be updated for VLANs or virtual gateways with a single VTEP device.	Contact technical support.
400	DC.1115	The VNI of the virtual gateway does not exist.	Contact technical support.
400	DC.1116	Failed to update the route gateway.	Contact technical support.
400	DC.1117	The virtual gateway has been associated with two connections and cannot be associated with more connections.	Contact technical support.
400	DC.1118	The virtual gateway is being operated (locked).	Contact technical support.
400	DC.1119	Failed to create the route gateway device group.	Contact technical support.
400	DC.1120	The **main_az_list** configuration item is incorrect.	Contact technical support.
400	DC.1200	No LAG or connection is specified for the virtual interface.	Contact technical support.
400	DC.1201	The connection does not match the virtual gateway type.	Contact technical support.
400	DC.1202	Virtual interfaces of the **double ipsec** type cannot be created.	Contact technical support.

Status Code	Error Code	Description	Solution
400	DC.1203	No ASN is specified for the BGP virtual interface.	Contact technical support.
400	DC.1204	Creating virtual interfaces is not supported for operations connections.	Contact technical support.
400	DC.1205	The status of the resource associated with the virtual interface is abnormal.	Contact technical support.
400	DC.1206	The hosted connection has been associated with a virtual interface.	Contact technical support.
400	DC.1207	The VLAN of the virtual interface is inconsistent with that of the hosted connection.	Contact technical support.
400	DC.1208	The bandwidth of the virtual interface associated with a hosted connection cannot be modified.	Contact technical support.
400	DC.1209	Virtual interface VLANs conflict.	Contact technical support.
400	DC.1210	The virtual interface status cannot be changed.	Contact technical support.
400	DC.1211	The virtual interface does not exist.	Contact technical support.
400	DC.1212	The virtual gateway is in a different group from the connection.	Contact technical support.
400	DC.1213	The virtual interface does not match the tenant.	Contact technical support.
400	DC.1214	The virtual interface has been used.	Contact technical support.
400	DC.1215	The virtual interface type does not match.	Contact technical support.
400	DC.1216	The local gateway is invalid.	Contact technical support.
400	DC.1217	The CloudPond edge site ID of the connection does not match that of the local gateway.	Contact technical support.

Status Code	Error Code	Description	Solution
400	DC.1218	The local gateway does not match.	Contact technical support.
400	DC.1219	A virtual interface with VLAN 0 is created.	Contact technical support.
400	DC.1220	The **vif email** field on the public network is empty.	Contact technical support.
400	DC.1221	The selected virtual gateway device does not support access from Direct Connect locations.	Contact technical support.
400	DC.1222	Insufficient POP VNIs.	Contact technical support.
400	DC.1223	The local BGP ASN is the same as the remote BGP ASN.	Contact technical support.
400	DC.1224	The virtual interface of the connection terminated at a Direct Connect location does not support VLAN 0.	Contact technical support.
400	DC.1225	The number of virtual interfaces for which traffic statistics collection is enabled reaches the limit.	Contact technical support.
400	DC.1226	Traffic statistics collection cannot be enabled on Layer 2 remote interfaces that have no sub-interfaces.	Contact technical support.
400	DC.1227	Traffic statistics cannot be updated because the virtual interface is abnormal.	Contact technical support.
400	DC.1400	The number of endpoint groups reaches the limit.	Contact technical support.
400	DC.1401	Duplicate CIDR blocks.	Contact technical support.
400	DC.1402	The endpoint group is in use.	Contact technical support.
400	DC.1403	The endpoint group does not exist.	Contact technical support.

6 Appendix

6.1 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. Log in to the management console.
2. Click the username and select **My Credentials** from the drop-down list. On the **API Credentials** page, view the project ID in the project list.

Figure 6-1 Viewing the project ID