Enterprise Router

API Reference

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Contents

1 Before You Start

1.1 Overview

Welcome to *Enterprise Router API Reference*. An enterprise router connects virtual private clouds (VPCs) and on-premises networks to build a central hub network that features high-specification, high-bandwidth, and high-performance. Enterprise routers use the Border Gateway Protocol (BGP) to learn routes, dynamically select routes, or switch between connections, thereby significantly improving network scalability and O&M efficiency and ensuring service continuity.

A number of APIs are provided for you to perform operations on enterprise routers, such as creating an enterprise router, attaching an instance to an enterprise router, creating a route table, and adding routes. For details about all supported operations, see **API Overview**.

If you plan to call enterprise router APIs, ensure that you are familiar with enterprise router concepts. For details, see **What's an Enterprise Router?**

1.2 API Calling

Enterprise Router supports Representational State Transfer (REST) APIs, allowing you to call APIs over HTTPS. For details about API calling, see **Calling APIs**.

1.3 Endpoints

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

1.4 Constraints

The number of enterprise routers you can create is determined by your quota. To view or increase the quota, see **Increasing Quotas**.

For more constraints, see API description.

1.5 Concepts

- Account

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

- User

  An IAM user is created by an account in IAM to use cloud services. Each IAM user has its own identity credentials (password and access keys).

  API authentication requires information such as the account name, username, and password.

- Region

  Regions are divided based on geographical location and network latency. Public services, such as Elastic Cloud Server (ECS), Elastic Volume Service (EVS), Object Storage Service (OBS), Virtual Private Cloud (VPC), Elastic IP (EIP), and Image Management Service (IMS), are shared within the same region. Regions are classified into universal regions and dedicated regions. A universal region provides universal cloud services for common tenants. A dedicated region provides specific services for specific tenants.

  For details, see **Region and AZ**.

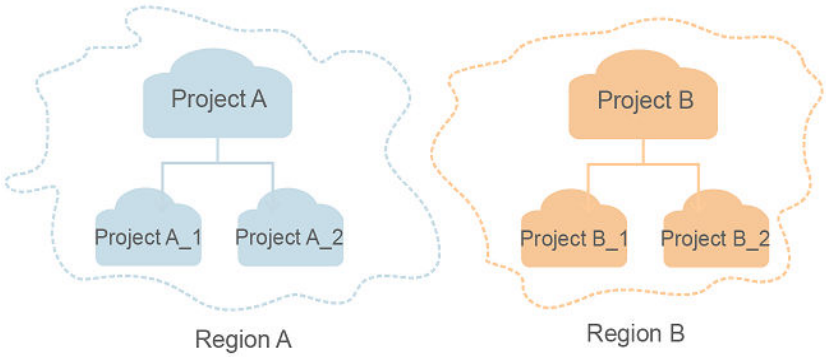
- AZ

  An AZ comprises of one or more physical data centers equipped with independent ventilation, fire, water, and electricity facilities. Computing, network, storage, and other resources in an AZ are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical fibers to allow you to build cross-AZ high-availability systems.

- Project

  A project corresponds to a region. Default projects are defined 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 create resources in subprojects. Then you can assign users the permissions required to access only the resources in the specific subprojects.

Figure 1-1 Project isolation 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

Enterprise Router APIs allow you to use all Enterprise Router functions.

Table 2-1 API description

Resource	Description
Enterprise router	Use APIs to query, create, update, or delete an enterprise router, or query the enterprise router list.
VPC attachment	Use APIs to query, create, update, or delete a VPC attachment, change the subnet of a VPC attachment, or query the VPC attachment list.
Other type of attachments (such as virtual gateway attachments and peering connection attachments)	Use APIs to query or update an attachment or query the attachment list.
Route table	Use APIs to query, create, update, or delete a route table, or query the route table list.
Association	Use APIs to create or delete an association, or query the association list.
Propagation	Use APIs to create or delete a propagation, or query the propagation list.
Route	Use APIs to query, add, update, or delete a static route, or query the static route list.
Tag	Use APIs to query project tags, or query, create, or delete resource tags.
Quota	Use APIs to query used quotas of enterprise routers and VPC attachments.

Resource	Description
AZ	Use APIs to query the list of AZs where enterprise routers can be created.
Flow log	Use APIs to create, query, enable, and disable flow logs.

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 **obtaining a user token** 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

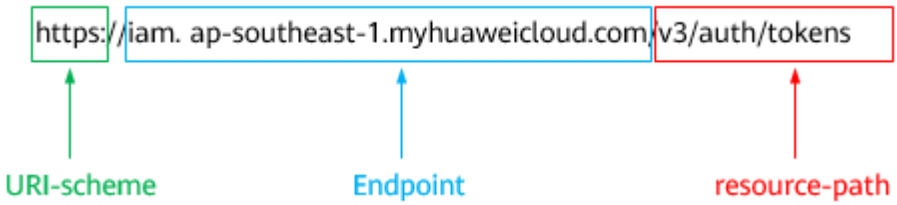
Parameter	Description
URI-scheme	Protocol used to transmit requests. All APIs use HTTPS.
Endpoint	Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from **Regions and Endpoints**. For example, the endpoint of 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.

For example, to obtain an IAM token 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/auth/tokens) in the URI of the API used to **obtain a user token**. Then, construct the URI as follows:

```
https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
```

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 used to **obtain a user token**, the request method is **POST**. The request is as follows:

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
```

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 API used to **obtain a user token** does not require authentication. Therefore, only the **Content-Type** field needs to be added to requests for calling the API. An example of such requests is as follows:

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
Content-Type: application/json
```

(Optional) Request Body

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

The request body varies between APIs. Some APIs do not require the request body, such as the APIs requested using the GET and DELETE methods.

In the case of the API used to **obtain a user token**, the request parameters and parameter description can be obtained from the API request. The following provides an example request with a body included. Replace *username*,

domainname, *$ADMIN_PASS* (login password), and *xxxxxxxxxxxxxxxxx* (project name) with the actual values. Obtain a project name from **Regions and Endpoints**.

NOTE

The **scope** parameter specifies where a token takes effect. You can set **scope** to an account or a project under an account. In the following example, the token takes effect only for the resources in a specified project. For more information about this API, see **Obtaining a User Token**.

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
Content-Type: application/json

{
    "auth": {
        "identity": {
            "methods": [
                "password"
            ],
            "password": {
                "user": {
                    "name": "username",
                    "password": "$ADMIN_PASS",     //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"
                    }
                }
            }
        },
        "scope": {
            "project": {
                "name": "xxxxxxxxxxxxxxxxx"
            }
        }
    }
}
```

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:

- Token authentication: Requests are authenticated using tokens.
- 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

NOTE

The validity period of a token is 24 hours. When using a token for authentication, cache it to avoid frequently calls to the API.

A token specifies temporary permissions in a computer system. During authentication using a token, the token is added to request headers to get

permissions for calling the API. You can obtain a token by calling the API for **Obtaining a User Token**.

Enterprise Router 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": "********",  // IAM user password
                    "domain": {
                        "name": "domainname"  // Name of the account that the IAM user belongs to
                    }
                }
            }
        },
        "scope": {
            "project": {
                "name": "xxxxxxxx"    // Project name
            }
        }
    }
}
```

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

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/projects
Content-Type: application/json
X-Auth-Token: ABCDEFJ....
```

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: is a unique identifier associated with the SK. which is a unique identifier used together with an SK to sign requests cryptographically.
- SK: secret access key, which is used together 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.

3.3 Response

Status Code

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

A status code is a group of digits, ranging from 1xx to 5xx. It indicates the status of a request. For more information, see **Status Codes**.

For example, if status code **201** is returned for calling the API used to **obtain a user token**, the request is successful.

Response Header

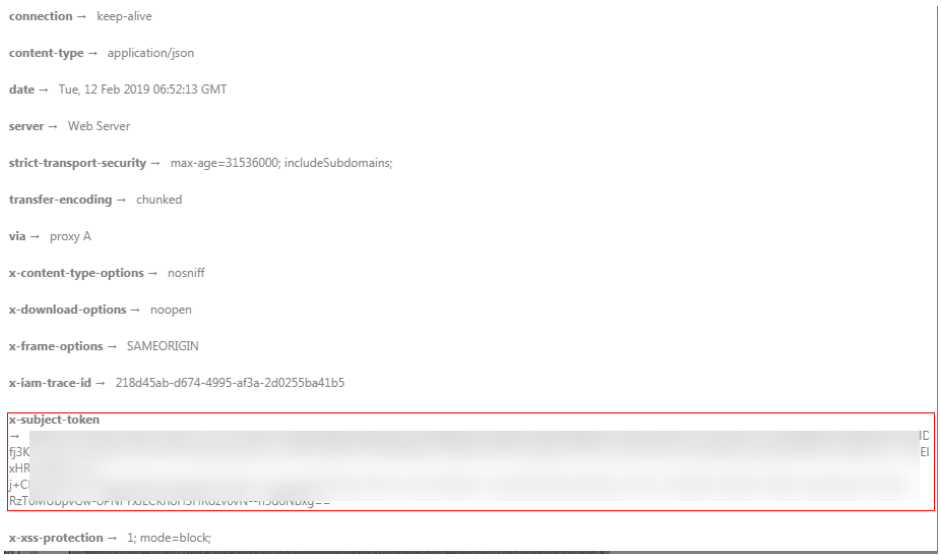
Similar to a request, a response also has a header, for example, **Content-Type**.

Figure 3-2 shows the response header fields for the API used to **obtain a user token**. 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 obtaining a user token



(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 **obtain a user token**.


```
{
    "token": {
        "expires_at": "2019-02-13T06:52:13.855000Z",
        "methods": [
            "password"
        ],
        "catalog": [
            {
                "endpoints": [
                    {
                        "region_id": "az-01",
.....
```

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 APIs

4.1 Enterprise Routers

4.1.1 Creating an Enterprise Router

Function

This API is used to create an enterprise router. If both Default Route Table Association and Default Route Table Propagation are enabled, the system will create a route table as both the default association route table and the default propagation route table.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/enterprise-router/instances

Table 4-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

Request Parameters

Table 4-2 Request header parameters

Parameter	Mandatory	Type	Description
X-Client-Token	No	String	Idempotence identifier Minimum: **1** Maximum: **64**

Table 4-3 Request body parameters

Parameter	Mandatory	Type	Description
instance	Yes	**CreateEnterpriseRouter** object	Enterprise router

Table 4-4 CreateEnterpriseRouter

Parameter	Mandatory	Type	Description
name	Yes	String	Enterprise router name. The value can contain 1 to 64 characters, including letters, digits, underscores (_), hyphens (-), and periods (.). Minimum: **1** Maximum: **64**
description	No	String	Description of an enterprise router Minimum: **0** Maximum: **255**
asn	Yes	Long	Enterprise router BGP ASN
enterprise_project_id	No	String	Enterprise project ID
charge_mode	No	String	Billing mode Default: **postPaid**
tags	No	Array of **Tag** objects	Tag information

Parameter	Mandatory	Type	Description
enable_default_propagation	No	Boolean	Whether to enable the Default Route Table Propagation function. The default value is **false**, indicating that the function is disabled. Default: **false**
enable_default_association	No	Boolean	Whether to enable the Default Route Table Association function. The default value is **false**, indicating that the function is disabled. Default: **false**
availability_zone_ids	Yes	Array of strings	AZs where the enterprise router is located Minimum: **0** Maximum: **128**
auto_accept_shared_attachments	No	Boolean	Whether to enable Auto Accept Shared Attachments. The default value is **false**, indicating that the function is disabled. Default: **false**

Table 4-5 Tag

Parameter	Mandatory	Type	Description
key	No	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**

Parameter	Mandatory	Type	Description
value	No	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Response Parameters

Status code: 202

Table 4-6 Response header parameters

Parameter	Type	Description
X-Client-Token	-	Idempotence identifier

Table 4-7 Response body parameters

Parameter	Type	Description
instance	**EnterpriseRouter** object	Enterprise router
request_id	String	Request ID

Table 4-8 EnterpriseRouter

Parameter	Type	Description
id	String	Enterprise router ID
name	String	Enterprise router name
description	String	Description of an enterprise router
state	String	Enterprise router status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**

Parameter	Type	Description
tags	Array of **Tag** objects	Tag information
charge_mode	String	Billing mode Default: **postPaid**
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS
enterprise_project_id	String	Enterprise project ID
project_id	String	Project ID
asn	Long	Enterprise router BGP ASN
enable_default_propagation	Boolean	Whether to enable the Default Route Table Propagation function. The default value is **false**, indicating that the function is disabled.
enable_default_association	Boolean	Whether to enable the Default Route Table Association function. The default value is **false**, indicating that the function is disabled.
default_propagation_route_table_id	String	Default propagation route table ID
default_association_route_table_id	String	Default association route table ID
availability_zone_ids	Array of strings	AZs where the enterprise router is located
auto_accept_shared_attachments	Boolean	Whether to automatically accept shared attachments. The default value is **false**, indicating that the function is disabled.

Table 4-9 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**

Parameter	Type	Description
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Example Requests

Creating an enterprise router

```
POST https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/instances

{
  "instance" : {
    "name" : "my_er",
    "description" : "this is my first enterprise router",
    "asn" : 64512,
    "enable_default_association" : true,
    "enable_default_propagation" : true,
    "tags" : [ {
      "key" : "key1",
      "value" : "value1"
    } ],
    "availability_zone_ids" : [ "az1", "az2" ]
  }
}
```

Example Responses

Status code: 202

Accepted

```
{
  "instance" : {
    "id" : "94c2b814-99dc-939a-e811-ae84c61ea3ff",
    "name" : "my_er",
    "description" : "this is my first enterprise router",
    "asn" : 64512,
    "project_id" : "08d5a9564a704afda6039ae2babbef3c",
    "enable_default_association" : true,
    "enable_default_propagation" : true,
    "default_association_route_table_id" : "7f7f738f-453c-40b1-be26-28e7b9e390c1",
    "default_propagation_route_table_id" : "7f7f738f-453c-40b1-be26-28e7b9e390c1",
    "auto_accept_shared_attachments" : false,
    "created_at" : "2019-09-06 02:11:13Z",
    "updated_at" : "2019-09-06 02:11:13Z",
    "tags" : [ {
      "key" : "key1",
      "value" : "value1"
    } ],
    "enterprise_project_id" : 0,
    "availability_zone_ids" : [ "az1", "az2" ]
  },
  "request_id" : "14c2b814-99dc-939a-e811-ae84c61ea3f4"
}
```


SDK Sample Code

The SDK sample code is as follows.

Java

Creating an enterprise router

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;

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

public class CreateEnterpriseRouterSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateEnterpriseRouterRequest request = new CreateEnterpriseRouterRequest();
        CreateEnterpriseRouterRequestBody body = new CreateEnterpriseRouterRequestBody();
        List<String> listInstanceAvailabilityZoneIds = new ArrayList<>();
        listInstanceAvailabilityZoneIds.add("az1");
        listInstanceAvailabilityZoneIds.add("az2");
        List<Tag> listInstanceTags = new ArrayList<>();
        listInstanceTags.add(
            new Tag()
                .withKey("key1")
                .withValue("value1")
        );
        CreateEnterpriseRouter instancebody = new CreateEnterpriseRouter();
        instancebody.withName("my_er")
            .withDescription("this is my first enterprise router")
            .withAsn(64512L)
            .withTags(listInstanceTags)
            .withEnableDefaultPropagation(true)
            .withEnableDefaultAssociation(true)
            .withAvailabilityZoneIds(listInstanceAvailabilityZoneIds);
        body.withInstance(instancebody);
        request.withBody(body);
        try {
            CreateEnterpriseRouterResponse response = client.createEnterpriseRouter(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 an enterprise router

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = CreateEnterpriseRouterRequest()
        listAvailabilityZoneIdsInstance = [
            "az1",
            "az2"
        ]
        listTagsInstance = [
            Tag(
                key="key1",
                value="value1"
            )
        ]
        instancebody = CreateEnterpriseRouter(
            name="my_er",
            description="this is my first enterprise router",
            asn=64512,
            tags=listTagsInstance,
            enable_default_propagation=True,
            enable_default_association=True,
            availability_zone_ids=listAvailabilityZoneIdsInstance
        )
        request.body = CreateEnterpriseRouterRequestBody(
            instance=instancebody
        )
        response = client.create_enterprise_router(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 an enterprise router

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateEnterpriseRouterRequest{}
    var listAvailabilityZoneIdsInstance = []string{
        "az1",
        "az2",
    }
    keyTags:= "key1"
    valueTags:= "value1"
    var listTagsInstance = []model.Tag{
        {
            Key: &keyTags,
            Value: &valueTags,
        },
    }
    descriptionInstance:= "this is my first enterprise router"
    enableDefaultPropagationInstance:= true
    enableDefaultAssociationInstance:= true
    instancebody := &model.CreateEnterpriseRouter{
        Name: "my_er",
        Description: &descriptionInstance,
        Asn: int64(64512),
        Tags: &listTagsInstance,
        EnableDefaultPropagation: &enableDefaultPropagationInstance,
        EnableDefaultAssociation: &enableDefaultAssociationInstance,
        AvailabilityZoneIds: listAvailabilityZoneIdsInstance,
    }
    request.Body = &model.CreateEnterpriseRouterRequestBody{
        Instance: instancebody,
    }
    response, err := client.CreateEnterpriseRouter(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
202	Accepted

Error Codes

See **Error Codes**.

4.1.2 Updating an Enterprise Router

Function

This API is used to update basic information about the enterprise router.

Constraints

Information (except name and description) can be updated only when the enterprise router is in the available state.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v3/{project_id}/enterprise-router/instances/{er_id}

Table 4-10 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID

Request Parameters

Table 4-11 Request body parameters

Parameter	Mandatory	Type	Description
instance	No	**UpdateEnterpriseRouter** object	Request body for updating an enterprise router

Table 4-12 UpdateEnterpriseRouter

Parameter	Mandatory	Type	Description
name	No	String	Enterprise router name Minimum: **1** Maximum: **64**
description	No	String	Description of an enterprise router Minimum: **0** Maximum: **255**
enable_default_propagation	No	Boolean	Whether to enable Default Route Table Propagation.
enable_default_association	No	Boolean	Whether to enable Default Route Table Association.
default_propagation_route_table_id	No	String	Default propagation route table ID
default_association_route_table_id	No	String	Default association route table ID
auto_accept_shared_attachments	No	Boolean	Whether to automatically accept shared attachments. The default value is **false**, indicating that the function is disabled.

Response Parameters

Status code: 200

Table 4-13 Response body parameters

Parameter	Type	Description
instance	**EnterpriseRouter** object	Enterprise router
request_id	String	Request ID

Table 4-14 EnterpriseRouter

Parameter	Type	Description
id	String	Enterprise router ID
name	String	Enterprise router name
description	String	Description of an enterprise router
state	String	Enterprise router status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
tags	Array of **Tag** objects	Tag information
charge_mode	String	Billing mode Default: **postPaid**
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS
enterprise_project_id	String	Enterprise project ID
project_id	String	Project ID
asn	Long	Enterprise router BGP ASN
enable_default_propagation	Boolean	Whether to enable the Default Route Table Propagation function. The default value is **false**, indicating that the function is disabled.
enable_default_association	Boolean	Whether to enable the Default Route Table Association function. The default value is **false**, indicating that the function is disabled.
default_propagation_route_table_id	String	Default propagation route table ID

Parameter	Type	Description
default_association_route_table_id	String	Default association route table ID
availability_zone_ids	Array of strings	AZs where the enterprise router is located
auto_accept_shared_attachments	Boolean	Whether to automatically accept shared attachments. The default value is **false**, indicating that the function is disabled.

Table 4-15 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Example Requests

Updating an enterprise router to enable Default Route Table Association and Default Route Table Propagation and specify route table

```
PUT https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/instances/94c2b814-99dc-939a-e811-ae84c61ea3ff

{
  "instance" : {
    "enable_default_association" : true,
    "enable_default_propagation" : true,
    "default_propagation_route_table_id" : "94c2b814-99dc-939a-e811-ae84c61ea3ff",
    "default_association_route_table_id" : "94c2b814-99dc-939a-e811-ae84c61ea3ff"
  }
}
```

Example Responses

Status code: 200

OK

```
{
  "instance" : {
    "id" : "94c2b814-99dc-939a-e811-ae84c61ea3ff",
    "name" : "my_er",
    "description" : "this is my first enterprise router",
    "project_id" : "08d5a9564a704afda6039ae2babbef3c",
    "state" : "pending",
    "asn" : 64512,
    "enable_default_association" : true,
    "enable_default_propagation" : true,
    "default_propagation_route_table_id" : "94c2b814-99dc-939a-e811-ae84c61ea3ff",
    "default_association_route_table_id" : "94c2b814-99dc-939a-e811-ae84c61ea3ff",
    "auto_accept_shared_attachments" : false,
    "availability_zone_ids" : [ "az1" ],
    "created_at" : "2019-09-06 02:11:13Z",
    "updated_at" : "2019-09-06 02:11:13Z"
  },
  "request_id" : "14c2b814-99dc-939b-e81c-ae84c61ea3f7"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Updating an enterprise router to enable Default Route Table Association and Default Route Table Propagation and specify route table

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class UpdateEnterpriseRouterSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateEnterpriseRouterRequest request = new UpdateEnterpriseRouterRequest();
        UpdateEnterpriseRouterRequestBody body = new UpdateEnterpriseRouterRequestBody();
        UpdateEnterpriseRouter instancebody = new UpdateEnterpriseRouter();
        instancebody.withEnableDefaultPropagation(true)
            .withEnableDefaultAssociation(true)
```



```
            .withDefaultPropagationRouteTableId("94c2b814-99dc-939a-e811-ae84c61ea3ff")
            .withDefaultAssociationRouteTableId("94c2b814-99dc-939a-e811-ae84c61ea3ff");
        body.withInstance(instancebody);
        request.withBody(body);
        try {
            UpdateEnterpriseRouterResponse response = client.updateEnterpriseRouter(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 an enterprise router to enable Default Route Table Association and Default Route Table Propagation and specify route table

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = UpdateEnterpriseRouterRequest()
        instancebody = UpdateEnterpriseRouter(
            enable_default_propagation=True,
            enable_default_association=True,
            default_propagation_route_table_id="94c2b814-99dc-939a-e811-ae84c61ea3ff",
            default_association_route_table_id="94c2b814-99dc-939a-e811-ae84c61ea3ff"
        )
        request.body = UpdateEnterpriseRouterRequestBody(
            instance=instancebody
        )
        response = client.update_enterprise_router(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 an enterprise router to enable Default Route Table Association and Default Route Table Propagation and specify route table

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateEnterpriseRouterRequest{}
    enableDefaultPropagationInstance:= true
    enableDefaultAssociationInstance:= true
    defaultPropagationRouteTableIdInstance:= "94c2b814-99dc-939a-e811-ae84c61ea3ff"
    defaultAssociationRouteTableIdInstance:= "94c2b814-99dc-939a-e811-ae84c61ea3ff"
    instancebody := &model.UpdateEnterpriseRouter{
        EnableDefaultPropagation: &enableDefaultPropagationInstance,
        EnableDefaultAssociation: &enableDefaultAssociationInstance,
        DefaultPropagationRouteTableId: &defaultPropagationRouteTableIdInstance,
        DefaultAssociationRouteTableId: &defaultAssociationRouteTableIdInstance,
    }
    request.Body = &model.UpdateEnterpriseRouterRequestBody{
        Instance: instancebody,
    }
    response, err := client.UpdateEnterpriseRouter(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 Querying Details About an Enterprise Router

Function

This API is used to query details about an enterprise router.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/instances/{er_id}

Table 4-16 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID

Request Parameters

None

Response Parameters

Status code: 200

Table 4-17 Response body parameters

Parameter	Type	Description
instance	**EnterpriseRouter** object	Enterprise router
request_id	String	Request ID

Table 4-18 EnterpriseRouter

Parameter	Type	Description
id	String	Enterprise router ID
name	String	Enterprise router name
description	String	Description of an enterprise router
state	String	Enterprise router status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
tags	Array of **Tag** objects	Tag information
charge_mode	String	Billing mode Default: **postPaid**
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS
enterprise_project_id	String	Enterprise project ID
project_id	String	Project ID
asn	Long	Enterprise router BGP ASN
enable_default_propagation	Boolean	Whether to enable the Default Route Table Propagation function. The default value is **false**, indicating that the function is disabled.
enable_default_association	Boolean	Whether to enable the Default Route Table Association function. The default value is **false**, indicating that the function is disabled.
default_propagation_route_table_id	String	Default propagation route table ID
default_association_route_table_id	String	Default association route table ID
availability_zone_ids	Array of strings	AZs where the enterprise router is located
auto_accept_shared_attachments	Boolean	Whether to automatically accept shared attachments. The default value is **false**, indicating that the function is disabled.

Table 4-19 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Example Requests

Querying details about an enterprise router with a specified ID

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/instances/
08d5a9564a704afda6039ae2babbef3c
```

Example Responses

Status code: 200

OK

```
{
  "instance" : {
    "id" : "94c2b814-99dc-939a-e811-ae84c61ea3ff",
    "name" : "my_er",
    "description" : "this is my first enterprise router",
    "project_id" : "08d5a9564a704afda6039ae2babbef3c",
    "state" : "pending",
    "asn" : 64512,
    "enable_default_association" : true,
    "enable_default_propagation" : true,
    "default_association_route_table_id" : "7f7f738f-453c-40b1-be26-28e7b9e390c1",
    "default_propagation_route_table_id" : "7f7f738f-453c-40b1-be26-28e7b9e390c1",
    "auto_accept_shared_attachments" : false,
    "availability_zone_ids" : [ "az1" ],
    "created_at" : "2019-09-06 02:11:13Z",
    "updated_at" : "2019-09-06 02:11:13Z"
  },
  "request_id" : "14c2b814-99dc-939b-e81c-ae84c61ea3f7"
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class ShowEnterpriseRouterSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowEnterpriseRouterRequest request = new ShowEnterpriseRouterRequest();
        try {
            ShowEnterpriseRouterResponse response = client.showEnterpriseRouter(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")
```



```
    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ShowEnterpriseRouterRequest()
        response = client.show_enterprise_router(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowEnterpriseRouterRequest{}
    response, err := client.ShowEnterpriseRouter(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 Querying Enterprise Routers

Function

This API is used to query enterprise routers.

Constraints

Parameters **marker** and **limit** are used for pagination query. The two parameters take effect only when they are used together. Only sorting by a single field (**id**, **name**, **description**, **created_at**, or **updated_at**) is supported.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/instances

Table 4-20 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

Table 4-21 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records on each page. Value range: **0** to **2000** Minimum: **0** Maximum: **2000**

Parameter	Mandatory	Type	Description
marker	No	String	ID of the last enterprise router on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with limit. Minimum: **1** Maximum: **128**
enterprise_project_id	No	Array	Enterprise project ID
state	No	Array	Resource status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, **failed** and **freezed**
id	No	Array	Query by resource ID. Multiple resources can be queried at a time.
resource_id	No	Array	Attachment resource IDs
owned_by_self	No	Boolean	Whether the resources belong to the current account. • If the value is **true**, the resources belong to the current account. • If the value is **false**, the resources include those in the current account and those shared with the current account.
sort_key	No	Array	Keyword for sorting. The keyword can be **id**, **name**, or **state**. By default, **id** is used.
sort_dir	No	Array	Sorting order. There are two value options: **asc** (ascending order) and **desc** (descending order). The default value is **asc**.

Request Parameters

None

Response Parameters

Status code: 200

Table 4-22 Response body parameters

Parameter	Type	Description
instances	Array of **EnterpriseRouter** objects	Enterprise routers
page_info	**PageInfo** object	Pagination query information
request_id	String	Request ID

Table 4-23 EnterpriseRouter

Parameter	Type	Description
id	String	Enterprise router ID
name	String	Enterprise router name
description	String	Description of an enterprise router
state	String	Enterprise router status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
tags	Array of **Tag** objects	Tag information
charge_mode	String	Billing mode Default: **postPaid**
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS
enterprise_project_id	String	Enterprise project ID
project_id	String	Project ID
asn	Long	Enterprise router BGP ASN
enable_default_propagation	Boolean	Whether to enable the Default Route Table Propagation function. The default value is **false**, indicating that the function is disabled.

Parameter	Type	Description
enable_default_association	Boolean	Whether to enable the Default Route Table Association function. The default value is **false**, indicating that the function is disabled.
default_propagation_route_table_id	String	Default propagation route table ID
default_association_route_table_id	String	Default association route table ID
availability_zone_ids	Array of strings	AZs where the enterprise router is located
auto_accept_shared_attachments	Boolean	Whether to automatically accept shared attachments. The default value is **false**, indicating that the function is disabled.

Table 4-24 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Table 4-25 PageInfo

Parameter	Type	Description
next_marker	String	Marker of the next page. The value is the resource UUID. If the value is empty, the resource is on the last page.
current_count	Integer	Number of resources in the list

Example Requests

- Querying two records in pagination

  ```
  GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/instances?limit=2&marker=1
  ```

- Querying all enterprise routers

  ```
  GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/instances
  ```

Example Responses

Status code: 200

OK

```
{
  "instances" : [ {
    "id" : "94c2b814-99dc-939a-e811-ae84c61ea3ff",
    "name" : "my_er",
    "description" : "this is my first enterprise router",
    "asn" : 64512,
    "project_id" : "08d5a9564a704afda6039ae2babbef3c",
    "enable_default_association" : true,
    "enable_default_propagation" : true,
    "default_association_route_table_id" : "7f7f738f-453c-40b1-be26-28e7b9e390c1",
    "default_propagation_route_table_id" : "7f7f738f-453c-40b1-be26-28e7b9e390c1",
    "auto_accept_shared_attachments" : false,
    "created_at" : "2019-09-06 02:11:13Z",
    "updated_at" : "2019-09-06 02:11:13Z",
    "tags" : [ {
      "key" : "key",
      "value" : "value"
    } ],
    "enterprise_project_id" : 0,
    "availability_zone_ids" : [ "az1", "az2" ]
  } ],
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9",
  "page_info" : {
    "next_marker" : "2",
    "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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;

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

public class ListEnterpriseRoutersSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ListEnterpriseRoutersRequest request = new ListEnterpriseRoutersRequest();
        request.withLimit(<limit>);
        request.withMarker("<marker>");
        request.withEnterpriseProjectId();
        request.withState();
        request.withId();
        request.withResourceId();
        request.withOwnedBySelf(<owned_by_self>);
        request.withSortKey();
        request.withSortDir();
        try {
            ListEnterpriseRoutersResponse response = client.listEnterpriseRouters(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
```



```
        request = ListEnterpriseRoutersRequest()
        request.limit = <limit>
        request.marker = "<marker>"
        request.enterprise_project_id =
        request.state =
        request.id =
        request.resource_id =
        request.owned_by_self = <OwnedBySelf>
        request.sort_key =
        request.sort_dir =
        response = client.list_enterprise_routers(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListEnterpriseRoutersRequest{}
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    ownedBySelfRequest:= <owned_by_self>
    request.OwnedBySelf = &ownedBySelfRequest
    response, err := client.ListEnterpriseRouters(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**.

4.1.5 Changing Enterprise Router AZs

Function

This API is used to change enterprise router AZs. The AZs can be changed only when the enterprise router is in the **available state**.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/enterprise-router/instances/{er_id}/change-availability-zone-ids

Table 4-26 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID

Request Parameters

Table 4-27 Request body parameters

Parameter	Mandatory	Type	Description
availability_zone_ids	Yes	Array of strings	AZs where the enterprise router is located Minimum: **1** Maximum: **256**

Response Parameters

Status code: 202

Table 4-28 Response body parameters

Parameter	Type	Description
instance	**EnterpriseRouter** object	Enterprise router
request_id	String	Request ID

Table 4-29 EnterpriseRouter

Parameter	Type	Description
id	String	Enterprise router ID
name	String	Enterprise router name
description	String	Description of an enterprise router
state	String	Enterprise router status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
tags	Array of **Tag** objects	Tag information
charge_mode	String	Billing mode Default: **postPaid**
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS

Parameter	Type	Description
enterprise_project_id	String	Enterprise project ID
project_id	String	Project ID
asn	Long	Enterprise router BGP ASN
enable_default_propagation	Boolean	Whether to enable the Default Route Table Propagation function. The default value is **false**, indicating that the function is disabled.
enable_default_association	Boolean	Whether to enable the Default Route Table Association function. The default value is **false**, indicating that the function is disabled.
default_propagation_route_table_id	String	Default propagation route table ID
default_association_route_table_id	String	Default association route table ID
availability_zone_ids	Array of strings	AZs where the enterprise router is located
auto_accept_shared_attachments	Boolean	Whether to automatically accept shared attachments. The default value is **false**, indicating that the function is disabled.

Table 4-30 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Example Requests

Changing Enterprise Router Azs

```
POST https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/instances/cccf35ad-fd0d-4043-aab2-dc28ae56f967/change-availability-zone-ids

{
  "availability_zone_ids" : [ "az1" ]
}
```

Example Responses

Status code: 202

Accepted

```
{
  "instance" : {
    "id" : "94c2b814-99dc-939a-e811-ae84c61ea3ff",
    "name" : "my_er",
    "description" : "this is my first enterprise router",
    "project_id" : "08d5a9564a704afda6039ae2babbef3c",
    "state" : "pending",
    "asn" : 64512,
    "enable_default_association" : true,
    "enable_default_propagation" : true,
    "default_association_route_table_id" : "7f7f738f-453c-40b1-be26-28e7b9e390c1",
    "default_propagation_route_table_id" : "7f7f738f-453c-40b1-be26-28e7b9e390c1",
    "availability_zone_ids" : [ "az1" ],
    "created_at" : "2019-09-06 02:11:13Z",
    "updated_at" : "2019-09-06 02:11:13Z"
  },
  "request_id" : "5f7f738f-453c-40b1-be26-28e7b9e390c2"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Changing Enterprise Router Azs

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;

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

public class ChangeAvailabilityZoneSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ChangeAvailabilityZoneRequest request = new ChangeAvailabilityZoneRequest();
        EnterpriseRouterAZ body = new EnterpriseRouterAZ();
        List<String> listbodyAvailabilityZoneIds = new ArrayList<>();
        listbodyAvailabilityZoneIds.add("az1");
        body.withAvailabilityZoneIds(listbodyAvailabilityZoneIds);
        request.withBody(body);
        try {
            ChangeAvailabilityZoneResponse response = client.changeAvailabilityZone(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

Changing Enterprise Router Azs

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ChangeAvailabilityZoneRequest()
        listAvailabilityZoneIdsbody = [
            "az1"
        ]
        request.body = EnterpriseRouterAZ(
            availability_zone_ids=listAvailabilityZoneIdsbody
        )
```



```
        response = client.change_availability_zone(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

Changing Enterprise Router Azs

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ChangeAvailabilityZoneRequest{}
    var listAvailabilityZoneIdsbody = []string{
        "az1",
    }
    request.Body = &model.EnterpriseRouterAz{
        AvailabilityZoneIds: listAvailabilityZoneIdsbody,
    }
    response, err := client.ChangeAvailabilityZone(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
202	Accepted

Error Codes

See **Error Codes**.

4.1.6 Deleting an Enterprise Router

Function

This API is used to delete an enterprise router.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v3/{project_id}/enterprise-router/instances/{er_id}

Table 4-31 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID

Request Parameters

None

Response Parameters

None

Example Requests

Deleting an enterprise router

```
DELETE https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/instances/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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class DeleteEnterpriseRouterSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteEnterpriseRouterRequest request = new DeleteEnterpriseRouterRequest();
        try {
            DeleteEnterpriseRouterResponse response = client.deleteEnterpriseRouter(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = DeleteEnterpriseRouterRequest()
        response = client.delete_enterprise_router(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteEnterpriseRouterRequest{}
    response, err := client.DeleteEnterpriseRouter(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
202	Accepted

Error Codes

See **Error Codes**.

4.2 VPC Attachments

4.2.1 Creating a VPC Attachment

Function

This API is used to create a VPC attachment for an enterprise router.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/enterprise-router/{er_id}/vpc-attachments

Table 4-32 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID

Request Parameters

Table 4-33 Request header parameters

Parameter	Mandatory	Type	Description
X-Client-Token	No	String	Idempotence identifier Minimum: **1** Maximum: **64**

Table 4-34 Request body parameters

Parameter	Mandatory	Type	Description
vpc_attachment	Yes	**VpcAttachmentCreateRequest** object	VPC attachment

Table 4-35 VpcAttachmentCreateRequest

Parameter	Mandatory	Type	Description
vpc_id	Yes	String	VPC ID. The value contains a maximum of 36 characters in UUID format with hyphens (-).
name	Yes	String	VPC attachment name. The value can contain 1 to 64 characters, including letters, digits, underscores (_), hyphens (-), and periods (.). Minimum: **1** Maximum: **64**
virsubnet_id	Yes	String	VPC subnet ID. The value contains a maximum of 36 characters in UUID format with hyphens (-).
description	No	String	Description. The value can contain no more than 255 characters and cannot contain angle brackets (< or >). Minimum: **0** Maximum: **255**
auto_create_vpc_routes	No	Boolean	The default value is false. If the value is set to true, a route with the enterprise router as the next hop will be automatically added to the route tables of the VPC. Default: **false**
tags	No	Array of **Tag** objects	Tag information

Table 4-36 Tag

Parameter	Mandatory	Type	Description
key	No	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	No	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Response Parameters

Status code: 202

Table 4-37 Response header parameters

Parameter	Type	Description
X-Client-Token	-	Idempotence identifier

Table 4-38 Response body parameters

Parameter	Type	Description
vpc_attachment	**VpcAttachmentDetails** object	VPC attachment
request_id	String	Request ID

Table 4-39 VpcAttachmentDetails

Parameter	Type	Description
id	String	VPC attachment ID
name	String	VPC attachment name
vpc_id	String	VPC id
virsubnet_id	String	VPC subnet ID
auto_create_vpc_routes	Boolean	The default value is **false**. If this parameter is set to **true**, routes with this enterprise router as the next hop and 10.0.0.0/8, 172.16.0.0/12, and 192.168.0.0/16 as the destinations will be automatically added to the route tables of the VPC. Default: **false**
state	String	VPC attachment status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, **failed**, **initiating_request**, **rejected**, and **pending_acceptance**
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS
tags	Array of **Tag** objects	Tag information
description	String	Description of the VPC attachment
project_id	String	Project ID
vpc_project_id	String	ID of the project that the VPC belongs to

Table 4-40 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**

Parameter	Type	Description
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Example Requests

Creating a VPC attachment named **vpc-atta**

```
POST https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/
4ab54142-7c92-48ad-8288-77727a231052/vpc-attachments

{
  "vpc_attachment" : {
    "name" : "vpc-atta",
    "vpc_id" : "b715e131-3371-4e17-a2de-4f669e24439a",
    "virsubnet_id" : "aacdc21d-90f9-45ef-ab48-80ec1bbe15b8"
  }
}
```

Example Responses

Status code: 202

Accepted

```
{
  "vpc_attachment" : {
    "id" : "6f83b848-8331-4271-ac0c-ef94b7686402",
    "name" : "vpc-atta",
    "vpc_id" : "b715e131-3371-4e17-a2de-4f669e24439a",
    "virsubnet_id" : "aacdc21d-90f9-45ef-ab48-80ec1bbe15b8",
    "project_id" : "08d5a9564a704afda6039ae2babbef3c",
    "state" : "pending",
    "auto_create_vpc_routes" : false,
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Creating a VPC attachment named **vpc-atta**

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class CreateVpcAttachmentSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateVpcAttachmentRequest request = new CreateVpcAttachmentRequest();
        CreateVpcAttachmentBody body = new CreateVpcAttachmentBody();
        VpcAttachmentCreateRequest vpcAttachmentbody = new VpcAttachmentCreateRequest();
        vpcAttachmentbody.withVpcId("b715e131-3371-4e17-a2de-4f669e24439a")
            .withName("vpc-atta")
            .withVirsubnetId("aacdc21d-90f9-45ef-ab48-80ec1bbe15b8");
        body.withVpcAttachment(vpcAttachmentbody);
        request.withBody(body);
        try {
            CreateVpcAttachmentResponse response = client.createVpcAttachment(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 VPC attachment named **vpc-atta**

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = CreateVpcAttachmentRequest()
        vpcAttachmentbody = VpcAttachmentCreateRequest(
            vpc_id="b715e131-3371-4e17-a2de-4f669e24439a",
            name="vpc-atta",
            virsubnet_id="aacdc21d-90f9-45ef-ab48-80ec1bbe15b8"
        )
        request.body = CreateVpcAttachmentBody(
            vpc_attachment=vpcAttachmentbody
        )
        response = client.create_vpc_attachment(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 VPC attachment named **vpc-atta**

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateVpcAttachmentRequest{}
    vpcAttachmentbody := &model.VpcAttachmentCreateRequest{
        VpcId: "b715e131-3371-4e17-a2de-4f669e24439a",
        Name: "vpc-atta",
        VirsubnetId: "aacdc21d-90f9-45ef-ab48-80ec1bbe15b8",
    }
```



```
    request.Body = &model.CreateVpcAttachmentBody{
        VpcAttachment: vpcAttachmentbody,
    }
    response, err := client.CreateVpcAttachment(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
202	Accepted

Error Codes

See **Error Codes**.

4.2.2 Updating a VPC Attachment

Function

This API is used to update basic information about a VPC attachment.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v3/{project_id}/enterprise-router/{er_id}/vpc-attachments/{vpc_attachment_id}

Table 4-41 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
vpc_attachment_id	Yes	String	VPC attachment ID

Request Parameters

Table 4-42 Request body parameters

Parameter	Mandatory	Type	Description
vpc_attachment	No	**UpdateVpcAttachmentBody** object	Request body for updating VPC information

Table 4-43 UpdateVpcAttachmentBody

Parameter	Mandatory	Type	Description
description	No	String	Description of the VPC attachment. The value contains a maximum of 36 characters in UUID format with hyphens (-). Minimum: **0** Maximum: **255**
name	No	String	VPC attachment name. The value can contain 1 to 64 characters, including letters, digits, underscores (_), hyphens (-), and periods (.). Minimum: **1** Maximum: **64**

Response Parameters

Status code: 200

Table 4-44 Response body parameters

Parameter	Type	Description
vpc_attachment	**VpcAttachmentDetails** object	VPC attachment
request_id	String	Request ID

Table 4-45 VpcAttachmentDetails

Parameter	Type	Description
id	String	VPC attachment ID
name	String	VPC attachment name
vpc_id	String	VPC id
virsubnet_id	String	VPC subnet ID
auto_create_vpc_routes	Boolean	The default value is **false**. If this parameter is set to **true**, routes with this enterprise router as the next hop and 10.0.0.0/8, 172.16.0.0/12, and 192.168.0.0/16 as the destinations will be automatically added to the route tables of the VPC. Default: **false**
state	String	VPC attachment status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, **failed**, **initiating_request**, **rejected**, and **pending_acceptance**
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS
tags	Array of **Tag** objects	Tag information
description	String	Description of the VPC attachment
project_id	String	Project ID
vpc_project_id	String	ID of the project that the VPC belongs to

Table 4-46 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**

Parameter	Type	Description
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Example Requests

Updating a VPC attachment (changing its name to **new-vpc-attach**)

```
PUT https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/
f1a28dfd-186f-4625-b6b1-f05e5e8609c0/vpc-attachments/3b9724e9-49ec-4d21-9191-3d703133b910

{
  "vpc_attachment" : {
    "name" : "new-vpc-attach"
  }
}
```

Example Responses

Status code: 200

OK

```
{
  "vpc_attachment" : {
    "id" : "3b9724e9-49ec-4d21-9191-3d703133b910",
    "name" : "new-vpc-attach",
    "vpc_id" : "b715e131-3371-4e17-a2de-4f669e24439a",
    "virsubnet_id" : "aacdc21d-90f9-45ef-ab48-80ec1bbe15b8",
    "auto_create_vpc_routes" : false,
    "project_id" : "08d5a9564a704afda6039ae2babbef3c",
    "state" : "available",
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Updating a VPC attachment (changing its name to **new-vpc-attach**)

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class UpdateVpcAttachmentSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateVpcAttachmentRequest request = new UpdateVpcAttachmentRequest();
        UpdateVpcAttachmentRequestBody body = new UpdateVpcAttachmentRequestBody();
        UpdateVpcAttachmentBody vpcAttachmentbody = new UpdateVpcAttachmentBody();
        vpcAttachmentbody.withName("new-vpc-attach");
        body.withVpcAttachment(vpcAttachmentbody);
        request.withBody(body);
        try {
            UpdateVpcAttachmentResponse response = client.updateVpcAttachment(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 VPC attachment (changing its name to **new-vpc-attach**)

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")
```



```
    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = UpdateVpcAttachmentRequest()
        vpcAttachmentbody = UpdateVpcAttachmentBody(
            name="new-vpc-attach"
        )
        request.body = UpdateVpcAttachmentRequestBody(
            vpc_attachment=vpcAttachmentbody
        )
        response = client.update_vpc_attachment(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 VPC attachment (changing its name to **new-vpc-attach**)

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateVpcAttachmentRequest{}
    nameVpcAttachment:= "new-vpc-attach"
    vpcAttachmentbody := &model.UpdateVpcAttachmentBody{
        Name: &nameVpcAttachment,
    }
    request.Body = &model.UpdateVpcAttachmentRequestBody{
        VpcAttachment: vpcAttachmentbody,
    }
    response, err := client.UpdateVpcAttachment(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 VPC Attachment

Function

This API is used to query details about a VPC attachment.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/{er_id}/vpc-attachments/{vpc_attachment_id}

Table 4-47 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
vpc_attachment_id	Yes	String	VPC attachment ID

Request Parameters

None

Response Parameters

Status code: 200

Table 4-48 Response body parameters

Parameter	Type	Description
vpc_attachment	**VpcAttachmentDetails** object	VPC attachment
request_id	String	Request ID

Table 4-49 VpcAttachmentDetails

Parameter	Type	Description
id	String	VPC attachment ID
name	String	VPC attachment name
vpc_id	String	VPC id
virsubnet_id	String	VPC subnet ID
auto_create_vpc_routes	Boolean	The default value is **false**. If this parameter is set to **true**, routes with this enterprise router as the next hop and 10.0.0.0/8, 172.16.0.0/12, and 192.168.0.0/16 as the destinations will be automatically added to the route tables of the VPC. Default: **false**
state	String	VPC attachment status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, **failed**, **initiating_request**, **rejected**, and **pending_acceptance**
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS
tags	Array of **Tag** objects	Tag information
description	String	Description of the VPC attachment
project_id	String	Project ID
vpc_project_id	String	ID of the project that the VPC belongs to

Table 4-50 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Example Requests

Querying details about a VPC attachment

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/
212d3f0b-8496-472d-bc99-05a7c96d6655/vpc-attachments/b70aee08-c671-4cad-9fd5-7381d163bcc8
```

Example Responses

Status code: 200

OK

```
{
  "vpc_attachment" : {
    "id" : "b70aee08-c671-4cad-9fd5-7381d163bcc8",
    "name" : "vpc-attach",
    "vpc_id" : "b715e131-3371-4e17-a2de-4f669e24439a",
    "virsubnet_id" : "aacdc21d-90f9-45ef-ab48-80ec1bbe15b8",
    "project_id" : "08d5a9564a704afda6039ae2babbef3c",
    "state" : "available",
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class ShowVpcAttachmentSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowVpcAttachmentRequest request = new ShowVpcAttachmentRequest();
        try {
            ShowVpcAttachmentResponse response = client.showVpcAttachment(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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



```
    try:
        request = ShowVpcAttachmentRequest()
        response = client.show_vpc_attachment(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowVpcAttachmentRequest{}
    response, err := client.ShowVpcAttachment(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 Querying VPC Attachments

Function

This API is used to query the VPC attachments of the enterprise router.

Constraints

VPC attachments can be queried in the following methods:

- Filtering query is supported. You can query by ID, state, enterprise project ID, and VPC ID. You can query multiple resources at a time or use combined criteria to query resources.
- Pagination query is supported. You can use **limit** and **marker** together for pagination query.
- Only sorting by a single field (**id**, **name**, **description**, **created_at**, or **updated_at**) is supported.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/{er_id}/vpc-attachments

Table 4-51 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID

Table 4-52 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records on each page. Value range: **0** to **2000** Minimum: **0** Maximum: **2000**

Parameter	Mandatory	Type	Description
marker	No	String	ID of the last enterprise router on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with limit. Minimum: **1** Maximum: **128**
state	No	Array	Attachment status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, **failed**, **pending_acceptance**, **rejected**, and **initiating_request**
id	No	Array	Query by resource ID. Multiple resources can be queried at a time.
sort_key	No	Array	Keyword for sorting. The keyword can be **id**, **name**, or **state**. By default, **id** is used.
sort_dir	No	Array	Sorting order. There are two value options: **asc** (ascending order) and **desc** (descending order). The default value is **asc**.
vpc_id	No	Array	VPC id

Request Parameters

None

Response Parameters

Status code: 200

Table 4-53 Response body parameters

Parameter	Type	Description
vpc_attachments	Array of **VpcAttachmentDetails** objects	VPC attachments

Parameter	Type	Description
page_info	**PageInfo** object	Pagination query information
request_id	String	Request ID

Table 4-54 VpcAttachmentDetails

Parameter	Type	Description
id	String	VPC attachment ID
name	String	VPC attachment name
vpc_id	String	VPC id
virsubnet_id	String	VPC subnet ID
auto_create_vpc_routes	Boolean	The default value is **false**. If this parameter is set to **true**, routes with this enterprise router as the next hop and 10.0.0.0/8, 172.16.0.0/12, and 192.168.0.0/16 as the destinations will be automatically added to the route tables of the VPC. Default: **false**
state	String	VPC attachment status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, **failed**, **initiating_request**, **rejected**, and **pending_acceptance**
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS
tags	Array of **Tag** objects	Tag information
description	String	Description of the VPC attachment
project_id	String	Project ID
vpc_project_id	String	ID of the project that the VPC belongs to

Table 4-55 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Table 4-56 PageInfo

Parameter	Type	Description
next_marker	String	Marker of the next page. The value is the resource UUID. If the value is empty, the resource is on the last page.
current_count	Integer	Number of resources in the list

Example Requests

- Querying all VPC attachments in pagination

  ```
  GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/vpc-attachments?limit=10
  ```

- Querying all VPC attachments

  ```
  GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/vpc-attachments
  ```

Example Responses

Status code: 200

OK

```
{
  "vpc_attachments" : [ {
    "id" : "6f83b848-8331-4271-ac0c-ef94b7686402",
    "name" : "vpc-attach-01",
    "vpc_id" : "b715e131-3371-4e17-a2de-4f669e24439a",
    "virsubnet_id" : "aacdc21d-90f9-45ef-ab48-80ec1bbe15b8",
    "project_id" : "08d5a9564a704afda6039ae2babbef3c",
    "state" : "available",
```



```
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z"
  }, {
    "id" : "6f83b848-8331-4271-ac0c-ef94b7686402",
    "name" : "vpc-attach-01",
    "vpc_id" : "4b8567f6-358f-4a7f-8cd3-3cbb82c0b25f",
    "virsubnet_id" : "2b55f334-a15e-43a9-ab11-b34c2dbb6fac",
    "project_id" : "08d5a9564a704afda6039ae2babbef3c",
    "state" : "available",
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z"
  } ],
  "page_info" : {
    "next_marker" : "1",
    "current_count" : 2
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;

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

public class ListVpcAttachmentsSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ListVpcAttachmentsRequest request = new ListVpcAttachmentsRequest();
        request.withVpcId();
        request.withLimit(<limit>);
        request.withMarker("<marker>");
        request.withState();
        request.withId();
        request.withSortKey();
        request.withSortDir();
        try {
            ListVpcAttachmentsResponse response = client.listVpcAttachments(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListVpcAttachmentsRequest()
        request.vpc_id =
        request.limit = <limit>
        request.marker = "<marker>"
        request.state =
        request.id =
        request.sort_key =
        request.sort_dir =
        response = client.list_vpc_attachments(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListVpcAttachmentsRequest{}
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    response, err := client.ListVpcAttachments(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 VPC Attachment

Function

This API is used to delete a VPC attachment.

Constraints

A VPC attachment can only be deleted when it is in the **available**, **deleting**, or **failed** state.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v3/{project_id}/enterprise-router/{er_id}/vpc-attachments/{vpc_attachment_id}

Table 4-57 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
vpc_attachment_id	Yes	String	VPC attachment ID

Request Parameters

None

Response Parameters

None

Example Requests

Deleting a VPC attachment

```
DELETE https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/4ba931b6-5273-4ed9-8eeb-484d16a4786f/vpc-attachments/b70aee08-c671-4cad-9fd5-7381d163bcc8
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;
```



```
public class DeleteVpcAttachmentSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteVpcAttachmentRequest request = new DeleteVpcAttachmentRequest();
        try {
            DeleteVpcAttachmentResponse response = client.deleteVpcAttachment(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = DeleteVpcAttachmentRequest()
        response = client.delete_vpc_attachment(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteVpcAttachmentRequest{}
    response, err := client.DeleteVpcAttachment(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
202	Accepted

Error Codes

See **Error Codes**.

4.3 Other Types of Attachments

4.3.1 Updating an Attachment

Function

This API is used to update basic information about an attachment.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v3/{project_id}/enterprise-router/{er_id}/attachments/{attachment_id}

Table 4-58 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
attachment_id	Yes	String	Attachment ID

Request Parameters

Table 4-59 Request body parameters

Parameter	Mandatory	Type	Description
attachment	No	**UpdateAttachmentBody** object	Change basic information about the attachment.

Table 4-60 UpdateAttachmentBody

Parameter	Mandatory	Type	Description
description	No	String	Description of the attachment. The value contains a maximum of 36 characters in UUID format with hyphens (-). Minimum: **0** Maximum: **255**
name	No	String	Attachment name. The value can contain 1 to 64 characters, including letters, digits, underscores (_), hyphens (-), and periods (.). Minimum: **1** Maximum: **64**

Response Parameters

Status code: 200

Table 4-61 Response body parameters

Parameter	Type	Description
attachment	**AttachmentResponse** object	Attachment basic information
request_id	String	Request ID

Table 4-62 AttachmentResponse

Parameter	Type	Description
name	String	Attachment name
id	String	Attachment ID
description	String	Description
state	String	Attachment status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, **failed**, **pending_acceptance**, **rejected**, and **initiating_request**
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*

Parameter	Type	Description
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS
tags	Array of **Tag** objects	Enterprise router tags
project_id	String	Project ID
resource_id	String	Attached resource ID on its own service console
resource_type	String	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachments. A cloud connection is used to connect two enterprise routers from different regions. • **ecn**: ECN attachment • **cfw**: CFW instance attachment
resource_project_id	String	ID of the project that the resource belongs to

Table 4-63 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Example Requests

Updating an attachment (not a VPC attachment)


```
PUT https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/
212d3f0b-8496-472d-bc99-05a7c96d6655/attachments/b70aee08-c671-4cad-9fd5-7381d163bcc8

{
  "attachment" : {
    "name" : "attachment",
    "description" : "attachment"
  }
}
```

Example Responses

Status code: 200

OK

```
{
  "attachment" : {
    "id" : "b70aee08-c671-4cad-9fd5-7381d163bcc8",
    "name" : "attachment",
    "description" : "attachment",
    "state" : "avaliable",
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z",
    "project_id" : "08d5a9564a704afda6039ae2babbef3c",
    "resource_id" : "b715e131-3371-4e17-a2de-4f669e24439a",
    "resource_type" : "vpc",
    "resource_project_id" : "0605767a9980d5762fbcc00b3537e757"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Updating an attachment (not a VPC attachment)

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class UpdateAttachmentSolution {

    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);
```



```
        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateAttachmentRequest request = new UpdateAttachmentRequest();
        UpdateAttachmentRequestBody body = new UpdateAttachmentRequestBody();
        UpdateAttachmentBody attachmentbody = new UpdateAttachmentBody();
        attachmentbody.withDescription("attachment")
            .withName("attachment");
        body.withAttachment(attachmentbody);
        request.withBody(body);
        try {
            UpdateAttachmentResponse response = client.updateAttachment(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 an attachment (not a VPC attachment)

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = UpdateAttachmentRequest()
        attachmentbody = UpdateAttachmentBody(
            description="attachment",
            name="attachment"
        )
        request.body = UpdateAttachmentRequestBody(
            attachment=attachmentbody
        )
        response = client.update_attachment(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 an attachment (not a VPC attachment)

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateAttachmentRequest{}
    descriptionAttachment:= "attachment"
    nameAttachment:= "attachment"
    attachmentbody := &model.UpdateAttachmentBody{
        Description: &descriptionAttachment,
        Name: &nameAttachment,
    }
    request.Body = &model.UpdateAttachmentRequestBody{
        Attachment: attachmentbody,
    }
    response, err := client.UpdateAttachment(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**.

4.3.2 Querying Details About an Attachment

Function

This API is used to query details about an attachment.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/{er_id}/attachments/{attachment_id}

Table 4-64 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
attachment_id	Yes	String	Attachment ID

Request Parameters

None

Response Parameters

Status code: 200

Table 4-65 Response body parameters

Parameter	Type	Description
attachment	**AttachmentResponse** object	Attachment basic information
request_id	String	Request ID

Table 4-66 AttachmentResponse

Parameter	Type	Description
name	String	Attachment name
id	String	Attachment ID
description	String	Description
state	String	Attachment status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, **failed**, **pending_acceptance**, **rejected**, and **initiating_request**
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS
tags	Array of **Tag** objects	Enterprise router tags
project_id	String	Project ID
resource_id	String	Attached resource ID on its own service console
resource_type	String	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachments. A cloud connection is used to connect two enterprise routers from different regions. • **ecn**: ECN attachment • **cfw**: CFW instance attachment
resource_project_id	String	ID of the project that the resource belongs to

Table 4-67 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Example Requests

Querying details about an attachment

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/
212d3f0b-8496-472d-bc99-05a7c96d6655/attachments/b70aee08-c671-4cad-9fd5-7381d163bcc8
```

Example Responses

Status code: 200

OK

```
{
  "attachment" : {
    "id" : "b70aee08-c671-4cad-9fd5-7381d163bcc8",
    "name" : "vpc attachment",
    "description" : "vpc prod",
    "state" : "avaliable",
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z",
    "project_id" : "08d5a9564a704afda6039ae2babbef3c",
    "resource_id" : "b715e131-3371-4e17-a2de-4f669e24439a",
    "resource_type" : "vpc"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class ShowAttachmentSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowAttachmentRequest request = new ShowAttachmentRequest();
        try {
            ShowAttachmentResponse response = client.showAttachment(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = ErClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(ErRegion.value_of("<YOUR REGION>")) \
```

```
        .build()

    try:
        request = ShowAttachmentRequest()
        response = client.show_attachment(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowAttachmentRequest{}
    response, err := client.ShowAttachment(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 Attachments

Function

This API is used to query the attachments of the enterprise router.

Constraints

- Filtering query is supported. The filtering criteria include **state**, **resource_type**, and **resource_id**. You can query multiple resources at a time or use combined criteria to query resources.
- Pagination query is supported. You can use **limit** and **marker** together for pagination query.
- Only sorting by a single field (**id**, **name**, **description**, **created_at**, or **updated_at**) is supported.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/{er_id}/attachments

Table 4-68 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID

Table 4-69 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records on each page. Value range: **0** to **2000** Minimum: **0** Maximum: **2000**

Parameter	Mandatory	Type	Description
marker	No	String	ID of the last enterprise router on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with limit. Minimum: **1** Maximum: **128**
state	No	Array	Attachment status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, **failed**, **pending_acceptance**, **rejected**, and **initiating_request**
resource_type	No	Array	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachment. A cloud connection is used to connect two enterprise routers from different regions. • **ecn**: ECN attachment • **cfw**: CFW instance attachment
resource_id	No	Array	Attachment resource IDs
sort_key	No	Array	Keyword for sorting. The keyword can be **id**, **name**, or **state**. By default, **id** is used.
sort_dir	No	Array	Sorting order. There are two value options: **asc** (ascending order) and **desc** (descending order). The default value is **asc**.

Request Parameters

None

Response Parameters

Status code: 200

Table 4-70 Response body parameters

Parameter	Type	Description
attachments	Array of **AttachmentDetails** objects	Attachments
page_info	**PageInfo** object	Pagination query information
request_id	String	Request ID

Table 4-71 AttachmentDetails

Parameter	Type	Description
id	String	Attachment ID
name	String	Attachment name
description	String	Attachment description
state	String	Attachment status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, **failed**, **pending_acceptance**, **rejected**, and **initiating_request**
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS
tags	Array of **Tag** objects	Enterprise router tags
project_id	String	Project ID
er_id	String	Enterprise router ID
resource_id	String	Attached resource ID on its own service console

Parameter	Type	Description
resource_type	String	Attachment type. • **vgw**: virtual gateway attachment • **vpn**: VPN gateway attachment • **peering**: peering connection attachment. A cloud connection is used to connect two enterprise routers from different regions. • **ecn**: ECN attachment • **vpc**: VPC attachments • **cfw**: CFW instance attachment
resource_project_id	String	ID of the project that the resource belongs to
associated	Boolean	Whether the attachment is associated.
route_table_id	String	Association route table ID

Table 4-72 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Table 4-73 PageInfo

Parameter	Type	Description
next_marker	String	Marker of the next page. The value is the resource UUID. If the value is empty, the resource is on the last page.
current_count	Integer	Number of resources in the list

Example Requests

Querying attachments

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/
4ab54142-7c92-48ad-8288-77727a231052/attachments
```

Example Responses

Status code: 200

OK

```
{
  "attachments" : [ {
    "id" : "6f83b848-8331-4271-ac0c-ef94b7686402",
    "name" : "vpc-001",
    "description" : "vpc attachment",
    "resource_id" : "b715e131-3371-4e17-a2de-4f669e24439a",
    "resource_type" : "vpc",
    "project_id" : "0605767a9980d5762fbcc00b3537e757",
    "state" : "available",
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z"
  }, {
    "id" : "6f83b848-8331-4271-ac0c-ef94b7686403",
    "name" : "vpc-002",
    "description" : "for test",
    "resource_id" : "4b8567f6-358f-4a7f-8cd3-3cbb82c0b25f",
    "resource_type" : "vpc",
    "project_id" : "0605767a9980d5762fbcc00b3537e757",
    "state" : "available",
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z"
  } ],
  "page_info" : {
    "next_marker" : "1",
    "current_count" : 2
  },
  "request_id" : "b715e131-3371-4e17-a2de-4f669e24439a"
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;

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

public class ListAttachmentsSolution {
```



```
    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAttachmentsRequest request = new ListAttachmentsRequest();
        request.withLimit(<limit>);
        request.withMarker("<marker>");
        request.withState();
        request.withResourceType();
        request.withResourceId();
        request.withSortKey();
        request.withSortDir();
        try {
            ListAttachmentsResponse response = client.listAttachments(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
```



```
    request = ListAttachmentsRequest()
    request.limit = <limit>
    request.marker = "<marker>"
    request.state =
    request.resource_type =
    request.resource_id =
    request.sort_key =
    request.sort_dir =
    response = client.list_attachments(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListAttachmentsRequest{}
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    response, err := client.ListAttachments(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**.

4.4 Route Tables

4.4.1 Creating a Route Table

Function

This API is used to create a route table. A route table is the basis for an enterprise router to send and receive packets. It contains attachment associations, propagations, and routes.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/enterprise-router/{er_id}/route-tables

Table 4-74 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID

Request Parameters

Table 4-75 Request header parameters

Parameter	Mandatory	Type	Description
X-Client-Token	No	String	Idempotence identifier Minimum: **1** Maximum: **64**

Table 4-76 Request body parameters

Parameter	Mandatory	Type	Description
route_table	No	**CreateRouteTable** object	Route table

Table 4-77 CreateRouteTable

Parameter	Mandatory	Type	Description
name	Yes	String	Route table name Minimum: **1** Maximum: **64**
description	No	String	Description of the route table Minimum: **0** Maximum: **255**
tags	No	Array of **Tag** objects	Tag information

Table 4-78 Tag

Parameter	Mandatory	Type	Description
key	No	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	No	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Response Parameters

Status code: 202

Table 4-79 Response header parameters

Parameter	Type	Description
X-Client-Token	-	Idempotence identifier

Table 4-80 Response body parameters

Parameter	Type	Description
route_table	**RouteTable** object	Route table
request_id	String	Request ID

Table 4-81 RouteTable

Parameter	Type	Description
id	String	Route table ID
name	String	Route table name
description	String	Description
is_default_association	Boolean	Whether the route table is the default association route table. Default: **false**
is_default_propagation	Boolean	Whether the route table is the default propagation route table.
state	String	Route table status. The value can be pending, available, deleting, deleted, or failed.
tags	Array of **Tag** objects	Tag
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS

Table 4-82 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Example Requests

Creating a route table

```
POST https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/915a14a6-867b-4af7-83d1-70efceb146f0/route-tables

{
  "route_table" : {
    "name" : "my-route-table",
    "tags" : [ {
      "key" : "key",
      "value" : "value"
    } ]
  }
}
```

Example Responses

Status code: 202

Accepted

```
{
  "route_table" : {
    "id" : "4ab54142-7c92-48ad-8288-77727a231052",
    "name" : "my-route-table",
    "is_default_association" : false,
    "is_default_propagation" : false,
    "state" : "pending",
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z",
    "tags" : [ {
      "key" : "key",
      "value" : "value"
    } ]
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```


SDK Sample Code

The SDK sample code is as follows.

Java

Creating a route table

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;

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

public class CreateRouteTableSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateRouteTableRequest request = new CreateRouteTableRequest();
        CreateRouteTableRequestBody body = new CreateRouteTableRequestBody();
        List<Tag> listRouteTableTags = new ArrayList<>();
        listRouteTableTags.add(
            new Tag()
                .withKey("key")
                .withValue("value")
        );
        CreateRouteTable routeTablebody = new CreateRouteTable();
        routeTablebody.withName("my-route-table")
            .withTags(listRouteTableTags);
        body.withRouteTable(routeTablebody);
        request.withBody(body);
        try {
            CreateRouteTableResponse response = client.createRouteTable(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 route table

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = CreateRouteTableRequest()
        listTagsRouteTable = [
            Tag(
                key="key",
                value="value"
            )
        ]
        routeTablebody = CreateRouteTable(
            name="my-route-table",
            tags=listTagsRouteTable
        )
        request.body = CreateRouteTableRequestBody(
            route_table=routeTablebody
        )
        response = client.create_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

Creating a route table

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateRouteTableRequest{}
    keyTags:= "key"
    valueTags:= "value"
    var listTagsRouteTable = []model.Tag{
        {
            Key: &keyTags,
            Value: &valueTags,
        },
    }
    routeTablebody := &model.CreateRouteTable{
        Name: "my-route-table",
        Tags: &listTagsRouteTable,
    }
    request.Body = &model.CreateRouteTableRequestBody{
        RouteTable: routeTablebody,
    }
    response, err := client.CreateRouteTable(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
202	Accepted

Error Codes

See **Error Codes**.

4.4.2 Updating Route Table Information

Function

This API is used to update basic information about a route table, such as the name and description.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}

Table 4-83 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
route_table_id	Yes	String	Route table ID

Request Parameters

Table 4-84 Request body parameters

Parameter	Mandatory	Type	Description
route_table	No	**UpdateRouteTable** object	Request body for updating a route table

Table 4-85 UpdateRouteTable

Parameter	Mandatory	Type	Description
name	No	String	Route table name Minimum: **1** Maximum: **64**
description	No	String	Description of the route table Minimum: **0** Maximum: **255**

Response Parameters

Status code: 200

Table 4-86 Response body parameters

Parameter	Type	Description
route_table	**RouteTable** object	Route table
request_id	String	Request ID

Table 4-87 RouteTable

Parameter	Type	Description
id	String	Route table ID
name	String	Route table name
description	String	Description
is_default_association	Boolean	Whether the route table is the default association route table. Default: **false**
is_default_propagation	Boolean	Whether the route table is the default propagation route table.
state	String	Route table status. The value can be pending, available, deleting, deleted, or failed.
tags	Array of **Tag** objects	Tag
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS

Table 4-88 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**

Parameter	Type	Description
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Example Requests

Changing the name of a route table of an enterprise router to **new-rtb**

```
PUT https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/
915a14a6-867b-4af7-83d1-70efceb146f5/route-tables/4ab54142-7c92-48ad-8288-77727a231052

{
  "route_table" : {
    "name" : "new-rtb"
  }
}
```

Example Responses

Status code: 200

OK

```
{
  "route_table" : {
    "id" : "4ab54142-7c92-48ad-8288-77727a231052",
    "name" : "new-rtb",
    "is_default_association" : false,
    "is_default_propagation" : false,
    "state" : "pending",
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Changing the name of a route table of an enterprise router to **new-rtb**

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class UpdateRouteTableSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateRouteTableRequest request = new UpdateRouteTableRequest();
        UpdateRouteTableRequestBody body = new UpdateRouteTableRequestBody();
        UpdateRouteTable routeTablebody = new UpdateRouteTable();
        routeTablebody.withName("new-rtb");
        body.withRouteTable(routeTablebody);
        request.withBody(body);
        try {
            UpdateRouteTableResponse response = client.updateRouteTable(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

Changing the name of a route table of an enterprise router to **new-rtb**

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \
```



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

    try:
        request = UpdateRouteTableRequest()
        routeTablebody = UpdateRouteTable(
            name="new-rtb"
        )
        request.body = UpdateRouteTableRequestBody(
            route_table=routeTablebody
        )
        response = client.update_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

Changing the name of a route table of an enterprise router to **new-rtb**

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateRouteTableRequest{}
    nameRouteTable:= "new-rtb"
    routeTablebody := &model.UpdateRouteTable{
        Name: &nameRouteTable,
    }
    request.Body = &model.UpdateRouteTableRequestBody{
        RouteTable: routeTablebody,
    }
    response, err := client.UpdateRouteTable(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**.

4.4.3 Querying Details About a Route Table

Function

This API is used to query details about a route table.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}

Table 4-89 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
route_table_id	Yes	String	Route table ID

Request Parameters

None

Response Parameters

Status code: 200

Table 4-90 Response body parameters

Parameter	Type	Description
route_table	**RouteTable** object	Route table
request_id	String	Request ID

Table 4-91 RouteTable

Parameter	Type	Description
id	String	Route table ID
name	String	Route table name
description	String	Description
is_default_association	Boolean	Whether the route table is the default association route table. Default: **false**
is_default_propagation	Boolean	Whether the route table is the default propagation route table.
state	String	Route table status. The value can be pending, available, deleting, deleted, or failed.
tags	Array of **Tag** objects	Tag
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS

Table 4-92 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**

Parameter	Type	Description
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Example Requests

Querying details about a route table

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/915a14a6-867b-4af7-83d1-70efceb146f6/route-tables/4ab54142-7c92-48ad-8288-77727a231052
```

Example Responses

Status code: 200

OK

```
{
  "route_table" : {
    "id" : "4ab54142-7c92-48ad-8288-77727a231052",
    "name" : "my-route-table",
    "description" : "rtb-for-a",
    "is_default_association" : false,
    "is_default_propagation" : false,
    "state" : "available",
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class ShowRouteTableSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowRouteTableRequest request = new ShowRouteTableRequest();
        try {
            ShowRouteTableResponse response = client.showRouteTable(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ShowRouteTableRequest()
        response = client.show_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

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowRouteTableRequest{}
    response, err := client.ShowRouteTable(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**.

4.4.4 Querying Route Tables

Function

This API is used to query route tables.

Constraints

- Pagination query is supported. The supported query criteria are **state**, **is_default_propagation_route_table**, and **is_default_association_route_table**.
- Only sorting by a single field (**id**, **name**, **description**, **created_at**, or **updated_at**) is supported.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/{er_id}/route-tables

Table 4-93 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID

Table 4-94 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records on each page. Value range: **0** to **2000** Minimum: **0** Maximum: **2000**
marker	No	String	ID of the last enterprise router on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with limit. Minimum: **1** Maximum: **128**
state	No	Array	Status

Parameter	Mandatory	Type	Description
is_default_propagation_table	No	Boolean	Whether the route table is the default propagation route table
is_default_association_table	No	Boolean	Whether the route table is the default association route table
sort_key	No	Array	Keyword for sorting. The keyword can be **id**, **name**, or **state**. By default, **id** is used.
sort_dir	No	Array	Sorting order. There are two value options: **asc** (ascending order) and **desc** (descending order). The default value is **asc**.

Request Parameters

None

Response Parameters

Status code: 200

Table 4-95 Response body parameters

Parameter	Type	Description
route_tables	Array of **RouteTable** objects	Route tables
request_id	String	Request ID
page_info	**PageInfo** object	Pagination query information

Table 4-96 RouteTable

Parameter	Type	Description
id	String	Route table ID
name	String	Route table name
description	String	Description

Parameter	Type	Description
is_default_association	Boolean	Whether the route table is the default association route table. Default: **false**
is_default_propagation	Boolean	Whether the route table is the default propagation route table.
state	String	Route table status. The value can be pending, available, deleting, deleted, or failed.
tags	Array of **Tag** objects	Tag
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS

Table 4-97 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Table 4-98 PageInfo

Parameter	Type	Description
next_marker	String	Marker of the next page. The value is the resource UUID. If the value is empty, the resource is on the last page.
current_count	Integer	Number of resources in the list

Example Requests

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/
915a14a6-867b-4af7-83d1-70efceb146f5/route-tables
```

Example Responses

Status code: 200

OK

```
{
  "route_tables" : [ {
    "id" : "4ab54142-7c92-48ad-8288-77727a231052",
    "is_default_association" : false,
    "is_default_propagation" : false,
    "name" : "my-router-table1",
    "description" : "rtb-for-a",
    "state" : "available",
    "tags" : [ {
      "key" : "key",
      "value" : "value"
    } ]
  }, {
    "id" : "4ab54142-7c92-48ad-8288-77727a231053",
    "is_default_association" : false,
    "is_default_propagation" : false,
    "name" : "my-router-table2",
    "description" : "rtb-for-b",
    "state" : "available",
    "tags" : [ {
      "key" : "key",
      "value" : "value"
    } ]
  } ],
  "page_info" : {
    "next_marker" : "1",
    "current_count" : 2
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;

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

public class ListRouteTablesSolution {
```



```
    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ListRouteTablesRequest request = new ListRouteTablesRequest();
        request.withState();
        request.withIsDefaultPropagationTable(<is_default_propagation_table>);
        request.withIsDefaultAssociationTable(<is_default_association_table>);
        request.withLimit(<limit>);
        request.withMarker("<marker>");
        request.withSortKey();
        request.withSortDir();
        try {
            ListRouteTablesResponse response = client.listRouteTables(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
```

```
    request = ListRouteTablesRequest()
    request.state =
    request.is_default_propagation_table = <IsDefaultPropagationTable>
    request.is_default_association_table = <IsDefaultAssociationTable>
    request.limit = <limit>
    request.marker = "<marker>"
    request.sort_key =
    request.sort_dir =
    response = client.list_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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListRouteTablesRequest{}
    isDefaultPropagationTableRequest:= <is_default_propagation_table>
    request.IsDefaultPropagationTable = &isDefaultPropagationTableRequest
    isDefaultAssociationTableRequest:= <is_default_association_table>
    request.IsDefaultAssociationTable = &isDefaultAssociationTableRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    response, err := client.ListRouteTables(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**.

4.4.5 Deleting a Route Table

Function

This API is used to delete a route table.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}

Table 4-99 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
route_table_id	Yes	String	Route table ID

Request Parameters

None

Response Parameters

None

Example Requests

```
DELETE https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/
4ab54142-7c92-48ad-8288-77727a231056/route-tables/4ab54142-7c92-48ad-8288-77727a231052
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class DeleteRouteTableSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteRouteTableRequest request = new DeleteRouteTableRequest();
        try {
            DeleteRouteTableResponse response = client.deleteRouteTable(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = DeleteRouteTableRequest()
        response = client.delete_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

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteRouteTableRequest{}
    response, err := client.DeleteRouteTable(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
202	Accepted

Error Codes

See **Error Codes**.

4.5 Associations

4.5.1 Creating a Route Association

Function

This API is used to create a route association. Each attachment only can be associated with one route table of its enterprise router for packet forwarding.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/associate

Table 4-100 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
route_table_id	Yes	String	Route table ID

Request Parameters

Table 4-101 Request header parameters

Parameter	Mandatory	Type	Description
X-Client-Token	No	String	Idempotence identifier Minimum: **1** Maximum: **64**

Table 4-102 Request body parameters

Parameter	Mandatory	Type	Description
attachment_id	No	String	Unique ID of the attachment Maximum: **36**
route_policy	No	**ExportRoutePolicy** object	Route that controls outbound traffic

Table 4-103 ExportRoutePolicy

Parameter	Mandatory	Type	Description
export_policy_id	No	String	ID of the route policy that controls outbound traffic Minimum: **0** Maximum: **36**

Response Parameters

Status code: 202

Table 4-104 Response header parameters

Parameter	Type	Description
X-Client-Token	-	Idempotence identifier

Table 4-105 Response body parameters

Parameter	Type	Description
association	**Association** object	Association details

Parameter	Type	Description
request_id	String	Request ID

Table 4-106 Association

Parameter	Type	Description
id	String	Unique association ID Maximum: **36**
route_table_id	String	Unique ID of the route table Maximum: **36**
attachment_id	String	Unique ID of the attachment Maximum: **36**
resource_type	String	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachment. A cloud connection is used to connect two enterprise routers from different regions. • **ecn**: ECN attachment • **cfw**: CFW instance attachment
resource_id	String	Unique ID of the attachment
state	String	Status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
created_at	String	Creation time. It is UTC time in the format of YYYY-MM-DDTHH:MM:SS.
updated_at	String	Update time. It is UTC time in the format of YYYY-MM-DDTHH:MM:SS.
route_policy	**ExportRoutePolicy** object	Route that controls outbound traffic

Table 4-107 ExportRoutePolicy

Parameter	Type	Description
export_policy_id	String	ID of the route policy that controls outbound traffic Minimum: **0** Maximum: **36**

Example Requests

Creating a route table association

```
POST https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/915a14a6-867b-4af7-83d1-70efceb146f8/route-tables/915a14a6-867b-4af7-83d1-70efceb146f9/associate

{
  "attachment_id" : "a5b7d209-dc02-4c46-a51f-805eadd3de64"
}
```

Example Responses

Status code: 202

Accepted

```
{
  "association" : {
    "id" : "915a14a6-867b-4af7-83d1-70efceb146f9",
    "route_table_id" : "91c013e2-d65a-474e-9177-c3e1799ca726",
    "attachment_id" : "a5b7d209-dc02-4c46-a51f-805eadd3de64",
    "resource_type" : "vpc",
    "resource_id" : "4e5fe97c-82bc-432e-87d8-06d7e157dffa",
    "state" : "pending",
    "created_at" : "2020-03-11T15:13:31",
    "updated_at" : "2020-03-11T15:13:31",
    "route_policy" : {
      "export_policy_id" : ""
    }
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f8"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Creating a route table association

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
```



```
import com.huaweicloud.sdk.er.v3.model.*;


public class AssociateRouteTableSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        AssociateRouteTableRequest request = new AssociateRouteTableRequest();
        AssociationRequestBody body = new AssociationRequestBody();
        body.withAttachmentId("a5b7d209-dc02-4c46-a51f-805eadd3de64");
        request.withBody(body);
        try {
            AssociateRouteTableResponse response = client.associateRouteTable(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 route table association

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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



```
    try:
        request = AssociateRouteTableRequest()
        request.body = AssociationRequestBody(
            attachment_id="a5b7d209-dc02-4c46-a51f-805eadd3de64"
        )
        response = client.associate_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

Creating a route table association

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.AssociateRouteTableRequest{}
    attachmentIdAssociationRequestBody:= "a5b7d209-dc02-4c46-a51f-805eadd3de64"
    request.Body = &model.AssociationRequestBody{
        AttachmentId: &attachmentIdAssociationRequestBody,
    }
    response, err := client.AssociateRouteTable(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
202	Accepted

Error Codes

See **Error Codes**.

4.5.2 Querying the Route Associations

Function

This API is used to query route associations.

Constraints

Pagination query is supported. You can query by state, resource type, or attachment ID. Only sorting by a single field (**id**, **created_at**, or **updated_at**) is supported.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/associations

Table 4-108 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
route_table_id	Yes	String	Route table ID

Table 4-109 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records on each page. Value range: **0** to **2000** Minimum: **0** Maximum: **2000**
marker	No	String	ID of the last enterprise router on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with limit. Minimum: **1** Maximum: **128**
attachment_id	No	Array	Attachment ID
resource_type	No	Array	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachment. A cloud connection is used to connect two enterprise routers from different regions. • **ecn**: ECN attachment • **cfw**: CFW instance attachment
state	No	Array	Status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
sort_key	No	Array	Keyword for sorting. The keyword can be **id**, **name**, or **state**. By default, **id** is used.
sort_dir	No	Array	Sorting order. There are two value options: **asc** (ascending order) and **desc** (descending order). The default value is **asc**.

Request Parameters

None

Response Parameters

Status code: 200

Table 4-110 Response body parameters

Parameter	Type	Description
associations	Array of **Association** objects	Route table associations Array Length: **0 - 2000**
request_id	String	Request ID
page_info	**PageInfo** object	Pagination query information

Table 4-111 Association

Parameter	Type	Description
id	String	Unique association ID Maximum: **36**
route_table_id	String	Unique ID of the route table Maximum: **36**
attachment_id	String	Unique ID of the attachment Maximum: **36**
resource_type	String	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachment. A cloud connection is used to connect two enterprise routers from different regions. • **ecn**: ECN attachment • **cfw**: CFW instance attachment
resource_id	String	Unique ID of the attachment
state	String	Status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
created_at	String	Creation time. It is UTC time in the format of YYYY-MM-DDTHH:MM:SS.

Parameter	Type	Description
updated_at	String	Update time. It is UTC time in the format of YYYY-MM-DDTHH:MM:SS.
route_policy	**ExportRoutePolicy** object	Route that controls outbound traffic

Table 4-112 ExportRoutePolicy

Parameter	Type	Description
export_policy_id	String	ID of the route policy that controls outbound traffic Minimum: **0** Maximum: **36**

Table 4-113 PageInfo

Parameter	Type	Description
next_marker	String	Marker of the next page. The value is the resource UUID. If the value is empty, the resource is on the last page.
current_count	Integer	Number of resources in the list

Example Requests

Querying route table associations

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/915a14a6-867b-4af7-83d1-70efceb146f5/route-tables/915a14a6-867b-4af7-83d1-70efceb146f9/associations
```

Example Responses

Status code: 200

OK

```
{
  "associations" : [ {
    "id" : "915a14a6-867b-4af7-83d1-70efceb146f9",
    "route_table_id" : "91c013e2-d65a-474e-9177-c3e1799ca726",
    "attachment_id" : "a5b7d209-dc02-4c46-a51f-805eadd3de64",
    "resource_type" : "vpc",
    "resource_id" : "4e5fe97c-82bc-432e-87d8-06d7e157dffa",
    "state" : "pending",
    "created_at" : "2020-03-11T15:13:31",
    "updated_at" : "2020-03-11T15:13:31",
    "route_policy" : {
      "export_policy_id" : ""
    }
```



```
 } ],
 "page_info" : {
   "next_marker" : "1",
   "current_count" : 1
 },
 "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;

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

public class ListAssociationsSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAssociationsRequest request = new ListAssociationsRequest();
        request.withState();
        request.withLimit(<limit>);
        request.withMarker("<marker>");
        request.withAttachmentId();
        request.withResourceType();
        request.withSortKey();
        request.withSortDir();
        try {
            ListAssociationsResponse response = client.listAssociations(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListAssociationsRequest()
        request.state =
        request.limit = <limit>
        request.marker = "<marker>"
        request.attachment_id =
        request.resource_type =
        request.sort_key =
        request.sort_dir =
        response = client.list_associations(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListAssociationsRequest{}
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    response, err := client.ListAssociations(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**.

4.5.3 Deleting a Route Association

Function

This API is used to delete an association from the route table of an enterprise router for an attachment.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/disassociate

Table 4-114 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
route_table_id	Yes	String	Route table ID

Request Parameters

Table 4-115 Request body parameters

Parameter	Mandatory	Type	Description
attachment_id	No	String	Unique ID of the attachment Maximum: **36**
route_policy	No	**ExportRoutePolicy** object	Route that controls outbound traffic

Table 4-116 ExportRoutePolicy

Parameter	Mandatory	Type	Description
export_policy_id	No	String	ID of the route policy that controls outbound traffic Minimum: **0** Maximum: **36**

Response Parameters

None

Example Requests

Deleting a route table association

```
POST https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/915a14a6-867b-4af7-83d1-70efceb146f8/route-tables/915a14a6-867b-4af7-83d1-70efceb146f9/disassociate

{
  "attachment_id" : "2609ec92-ac19-4467-a527-7f9e690e7836"
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Deleting a route table association

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class DisassociateRouteTableSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        DisassociateRouteTableRequest request = new DisassociateRouteTableRequest();
        AssociationRequestBody body = new AssociationRequestBody();
        body.withAttachmentId("2609ec92-ac19-4467-a527-7f9e690e7836");
        request.withBody(body);
        try {
            DisassociateRouteTableResponse response = client.disassociateRouteTable(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

Deleting a route table association

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
```



```
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = DisassociateRouteTableRequest()
        request.body = AssociationRequestBody(
            attachment_id="2609ec92-ac19-4467-a527-7f9e690e7836"
        )
        response = client.disassociate_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

Deleting a route table association

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DisassociateRouteTableRequest{}
    attachmentIdAssociationRequestBody:= "2609ec92-ac19-4467-a527-7f9e690e7836"
```



```
    request.Body = &model.AssociationRequestBody{
        AttachmentId: &attachmentIdAssociationRequestBody,
    }
    response, err := client.DisassociateRouteTable(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
202	Accepted

Error Codes

See **Error Codes**.

4.6 Propagations

4.6.1 Creating a Route Propagation

Function

This API is used to create a route propagation. A propagation can be created for each attachment to propagate routes to one or more route tables on an enterprise router.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/enable-propagations

Table 4-117 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

Parameter	Mandatory	Type	Description
er_id	Yes	String	Enterprise router ID
route_table_id	Yes	String	Route table ID

Request Parameters

Table 4-118 Request header parameters

Parameter	Mandatory	Type	Description
X-Client-Token	No	String	Idempotence identifier Minimum: **1** Maximum: **64**

Table 4-119 Request body parameters

Parameter	Mandatory	Type	Description
attachment_id	No	String	Unique ID of the attachment
route_policy	No	**ImportRoutePolicy** object	Route that controls inbound traffic

Table 4-120 ImportRoutePolicy

Parameter	Mandatory	Type	Description
import_policy_id	No	String	ID of the route policy that controls inbound traffic Minimum: **0** Maximum: **36**

Response Parameters

Status code: 202

Table 4-121 Response header parameters

Parameter	Type	Description
X-Client-Token	-	Idempotence identifier

Table 4-122 Response body parameters

Parameter	Type	Description
propagation	**Propagation** object	Propagation details
request_id	String	Request ID

Table 4-123 Propagation

Parameter	Type	Description
id	String	Unique association ID
project_id	String	Project ID
er_id	String	Enterprise router ID
route_table_id	String	Unique ID of the route table
attachment_id	String	Unique ID of the attachment
resource_type	String	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachment. A cloud connection is used to connect two enterprise routers from different regions.
resource_id	String	Unique ID of the attachment
route_policy	**ImportRoutePolicy** object	Route that controls inbound traffic
state	String	Status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
created_at	String	Creation time. It is UTC time in the format of YYYY-MM-DDTHH:MM:SS.
updated_at	String	Update time. It is UTC time in the format of YYYY-MM-DDTHH:MM:SS.

Table 4-124 ImportRoutePolicy

Parameter	Type	Description
import_policy_id	String	ID of the route policy that controls inbound traffic Minimum: **0** Maximum: **36**

Example Requests

Creating a route propagation

```
POST https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/ad838a5e-dbef-22cc-b1d9-cb46bef77ae8/route-tables/915a14a6-867b-4af7-83d1-70efceb146f9/enable-propagations

{
  "attachment_id" : "a5b7d209-dc02-4c46-a51f-805eadd3de64"
}
```

Example Responses

Status code: 202

Accepted

```
{
  "propagation" : {
    "id" : "915a14a6-867b-4af7-83d1-70efceb146f9",
    "route_table_id" : "91c013e2-d65a-474e-9177-c3e1799ca726",
    "attachment_id" : "a5b7d209-dc02-4c46-a51f-805eadd3de64",
    "resource_type" : "vpc",
    "resource_id" : "4e5fe97c-82bc-432e-87d8-06d7e157dffa",
    "route_policy" : {
      "import_policy_id" : ""
    },
    "state" : "pending",
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Creating a route propagation

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
```



```
import com.huaweicloud.sdk.er.v3.model.*;


public class EnablePropagationSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        EnablePropagationRequest request = new EnablePropagationRequest();
        PropagationRequestBody body = new PropagationRequestBody();
        body.withAttachmentId("a5b7d209-dc02-4c46-a51f-805eadd3de64");
        request.withBody(body);
        try {
            EnablePropagationResponse response = client.enablePropagation(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 route propagation

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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



```
    try:
        request = EnablePropagationRequest()
        request.body = PropagationRequestBody(
            attachment_id="a5b7d209-dc02-4c46-a51f-805eadd3de64"
        )
        response = client.enable_propagation(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 route propagation

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.EnablePropagationRequest{}
    attachmentIdPropagationRequestBody:= "a5b7d209-dc02-4c46-a51f-805eadd3de64"
    request.Body = &model.PropagationRequestBody{
        AttachmentId: &attachmentIdPropagationRequestBody,
    }
    response, err := client.EnablePropagation(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
202	Accepted

Error Codes

See **Error Codes**.

4.6.2 Querying Route Propagations

Function

This API is used to query route propagations.

Constraints

Pagination query is supported. You can query by state, resource type, or attachment ID. Only sorting by a single field (**id**, **created_at**, or **updated_at**) is supported.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/propagations

Table 4-125 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
route_table_id	Yes	String	Route table ID

Table 4-126 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records on each page. Value range: **0** to **2000** Minimum: **0** Maximum: **2000**
marker	No	String	ID of the last enterprise router on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with limit. Minimum: **1** Maximum: **128**
attachment_id	No	Array	Attachment ID
resource_type	No	Array	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachment. A cloud connection is used to connect two enterprise routers from different regions. • **ecn**: ECN attachment • **cfw**: CFW instance attachment
state	No	Array	Resource status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, **failed** and **freezed**
sort_key	No	Array	Keyword for sorting. The keyword can be **id**, **name**, or **state**. By default, **id** is used.
sort_dir	No	Array	Sorting order. There are two value options: **asc** (ascending order) and **desc** (descending order). The default value is **asc**.

Request Parameters

None

Response Parameters

Status code: 200

Table 4-127 Response body parameters

Parameter	Type	Description
propagations	Array of **Propagation** objects	Route propagations Array Length: **0 - 2000**
request_id	String	Request ID
page_info	**PageInfo** object	Pagination query information

Table 4-128 Propagation

Parameter	Type	Description
id	String	Unique association ID
project_id	String	Project ID
er_id	String	Enterprise router ID
route_table_id	String	Unique ID of the route table
attachment_id	String	Unique ID of the attachment
resource_type	String	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachment. A cloud connection is used to connect two enterprise routers from different regions.
resource_id	String	Unique ID of the attachment
route_policy	**ImportRoutePolicy** object	Route that controls inbound traffic
state	String	Status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**

Parameter	Type	Description
created_at	String	Creation time. It is UTC time in the format of YYYY-MM-DDTHH:MM:SS.
updated_at	String	Update time. It is UTC time in the format of YYYY-MM-DDTHH:MM:SS.

Table 4-129 ImportRoutePolicy

Parameter	Type	Description
import_policy_id	String	ID of the route policy that controls inbound traffic Minimum: **0** Maximum: **36**

Table 4-130 PageInfo

Parameter	Type	Description
next_marker	String	Marker of the next page. The value is the resource UUID. If the value is empty, the resource is on the last page.
current_count	Integer	Number of resources in the list

Example Requests

Querying route table propagations

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/7dec531a-7714-11eb-9439-0242ac130002/route-tables/91c013e2-d65a-474e-9177-c3e1799ca726/propagations
```

Example Responses

Status code: 200

OK

```
{
  "propagations" : [ {
    "id" : "915a14a6-867b-4af7-83d1-70efceb146f9",
    "er_id" : "7dec531a-7714-11eb-9439-0242ac130002",
    "route_table_id" : "91c013e2-d65a-474e-9177-c3e1799ca726",
    "attachment_id" : "a5b7d209-dc02-4c46-a51f-805eadd3de64",
    "resource_type" : "vpc",
    "resource_id" : "4e5fe97c-82bc-432e-87d8-06d7e157dffa",
    "route_policy" : {
      "import_policy_id" : ""
    },
    "state" : "pending",
```



```
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z"
  } ],
  "page_info" : {
    "next_marker" : "1",
    "current_count" : 1
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;

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

public class ListPropagationsSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ListPropagationsRequest request = new ListPropagationsRequest();
        request.withLimit(<limit>);
        request.withMarker("<marker>");
        request.withAttachmentId();
        request.withResourceType();
        request.withState();
        request.withSortKey();
        request.withSortDir();
        try {
            ListPropagationsResponse response = client.listPropagations(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListPropagationsRequest()
        request.limit = <limit>
        request.marker = "<marker>"
        request.attachment_id =
        request.resource_type =
        request.state =
        request.sort_key =
        request.sort_dir =
        response = client.list_propagations(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListPropagationsRequest{}
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    response, err := client.ListPropagations(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**.

4.6.3 Deleting a Route Propagation

Function

This API is used to delete a propagation from the route table of an enterprise router for an attachment.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/disable-propagations

Table 4-131 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
route_table_id	Yes	String	Route table ID

Request Parameters

Table 4-132 Request body parameters

Parameter	Mandatory	Type	Description
attachment_id	No	String	Unique ID of the attachment
route_policy	No	**ImportRoutePolicy** object	Route that controls inbound traffic

Table 4-133 ImportRoutePolicy

Parameter	Mandatory	Type	Description
import_policy_id	No	String	ID of the route policy that controls inbound traffic Minimum: **0** Maximum: **36**

Response Parameters

None

Example Requests

Deleting a route table propagation

```
POST https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/ad838a5e-dbef-22cc-b1d9-cb46bef77ae8/route-tables/915a14a6-867b-4af7-83d1-70efceb146f9/disable-propagations

{
  "attachment_id" : "a5b7d209-dc02-4c46-a51f-805eadd3de64"
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Deleting a route table propagation

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class DisablePropagationSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        DisablePropagationRequest request = new DisablePropagationRequest();
        PropagationRequestBody body = new PropagationRequestBody();
        body.withAttachmentId("a5b7d209-dc02-4c46-a51f-805eadd3de64");
        request.withBody(body);
        try {
            DisablePropagationResponse response = client.disablePropagation(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

Deleting a route table propagation

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
```

```
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = DisablePropagationRequest()
        request.body = PropagationRequestBody(
            attachment_id="a5b7d209-dc02-4c46-a51f-805eadd3de64"
        )
        response = client.disable_propagation(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

Deleting a route table propagation

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DisablePropagationRequest{}
    attachmentIdPropagationRequestBody:= "a5b7d209-dc02-4c46-a51f-805eadd3de64"
```



```
    request.Body = &model.PropagationRequestBody{
        AttachmentId: &attachmentIdPropagationRequestBody,
    }
    response, err := client.DisablePropagation(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
202	Accepted

Error Codes

See **Error Codes**.

4.7 Routes

4.7.1 Creating a Static Route

Function

This API is used to create a static route. Static routes are manually created, and valid routes are preferred routes.

Constraints

If **is_blackhole** is set to **false**, the **attachment_id** parameter must be carried. If **is_blackhole** is set to **true**, the **attachment_id** parameter cannot be passed.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/static-routes

Table 4-134 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
route_table_id	Yes	String	Route table ID

Request Parameters

Table 4-135 Request header parameters

Parameter	Mandatory	Type	Description
X-Client-Token	No	String	Idempotence identifier Minimum: **1** Maximum: **64**

Table 4-136 Request body parameters

Parameter	Mandatory	Type	Description
route	Yes	**CreateRoute** object	Request body for creating a route

Table 4-137 CreateRoute

Parameter	Mandatory	Type	Description
destination	Yes	String	Destination address of the route Minimum: **0** Maximum: **256**
attachment_id	No	String	ID of the attachment that the next hop of the route points to
is_blackhole	No	Boolean	Whether the route is a blackhole route. The default value is false.

Response Parameters

Status code: 202

Table 4-138 Response header parameters

Parameter	Type	Description
X-Client-Token	-	Idempotence identifier

Table 4-139 Response body parameters

Parameter	Type	Description
route	**Route** object	Route
request_id	String	Request ID

Table 4-140 Route

Parameter	Type	Description
id	String	Route ID
type	String	Route type. The value is **static**.
state	String	Route status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
is_blackhole	Boolean	Whether the route is a blackhole route
destination	String	Destination address of the route
attachments	Array of **RouteAttachment** objects	Next hops
route_table_id	String	Route table ID
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS

Table 4-141 RouteAttachment

Parameter	Type	Description
resource_id	String	Attached resource ID

Parameter	Type	Description
resource_type	String	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachment. A cloud connection is used to connect two enterprise routers from different regions. • **cfw**: CFW instance attachment • **ecn**: ECN attachment
attachment_id	String	Attachment ID

Example Requests

Creating a static route

```
POST https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/route-tables/0d1748a0-5188-11e5-b86f-a51b5f125b84/static-routes

{
  "route" : {
    "destination" : "192.168.0.0/16",
    "is_blackhole" : false,
    "attachment_id" : "b70aee08-c671-4cad-9fd5-7381d163bcc8"
  }
}
```

Example Responses

Status code: 202

Accepted

```
{
  "route" : {
    "id" : "9b3b38a9-1c9d-4f01-9429-81af6b545289",
    "type" : "static",
    "destination" : "192.168.0.0/16",
    "attachments" : [ {
      "resource_id" : "9c4ab06a-0ab4-4fad-93a8-f733f3a4433d",
      "resource_type" : "vpc",
      "attachment_id" : "b70aee08-c671-4cad-9fd5-7381d163bcc8"
    } ],
    "route_table_id" : "0d1748a0-5188-11e5-b86f-a51b5f125b84",
    "is_blackhole" : false,
    "state" : "pending",
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Creating a static route

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class CreateStaticRouteSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateStaticRouteRequest request = new CreateStaticRouteRequest();
        CreateRouteRequestBody body = new CreateRouteRequestBody();
        CreateRoute routebody = new CreateRoute();
        routebody.withDestination("192.168.0.0/16")
            .withAttachmentId("b70aee08-c671-4cad-9fd5-7381d163bcc8")
            .withIsBlackhole(false);
        body.withRoute(routebody);
        request.withBody(body);
        try {
            CreateStaticRouteResponse response = client.createStaticRoute(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 static route

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdker.v3.region.er_region import ErRegion
```



```
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = CreateStaticRouteRequest()
        routebody = CreateRoute(
            destination="192.168.0.0/16",
            attachment_id="b70aee08-c671-4cad-9fd5-7381d163bcc8",
            is_blackhole=False
        )
        request.body = CreateRouteRequestBody(
            route=routebody
        )
        response = client.create_static_route(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 static route

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
```



```
        Build())

    request := &model.CreateStaticRouteRequest{}
    attachmentIdRoute:= "b70aee08-c671-4cad-9fd5-7381d163bcc8"
    isBlackholeRoute:= false
    routebody := &model.CreateRoute{
        Destination: "192.168.0.0/16",
        AttachmentId: &attachmentIdRoute,
        IsBlackhole: &isBlackholeRoute,
    }
    request.Body = &model.CreateRouteRequestBody{
        Route: routebody,
    }
    response, err := client.CreateStaticRoute(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
202	Accepted

Error Codes

See **Error Codes**.

4.7.2 Updating a Static Route

Function

This API is used to update a static route.

Constraints

If **is_blackhole** is set to **false**, the **attachment_id** parameter must be carried. If **is_blackhole** is set to **true**, the **attachment_id** parameter cannot be passed.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/static-routes/{route_id}

Table 4-142 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
route_table_id	Yes	String	Route table ID
route_id	Yes	String	Route ID

Request Parameters

Table 4-143 Request body parameters

Parameter	Mandatory	Type	Description
route	Yes	**UpdateRoute** object	Route

Table 4-144 UpdateRoute

Parameter	Mandatory	Type	Description
attachment_id	No	String	Next hop of the route
is_blackhole	No	Boolean	Whether the route is a blackhole route

Response Parameters

Status code: 202

Table 4-145 Response body parameters

Parameter	Type	Description
route	**Route** object	Route
request_id	String	Request ID

Table 4-146 Route

Parameter	Type	Description
id	String	Route ID
type	String	Route type. The value is **static**.

Parameter	Type	Description
state	String	Route status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
is_blackhole	Boolean	Whether the route is a blackhole route
destination	String	Destination address of the route
attachments	Array of **RouteAttachment** objects	Next hops
route_table_id	String	Route table ID
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS

Table 4-147 RouteAttachment

Parameter	Type	Description
resource_id	String	Attached resource ID
resource_type	String	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachment. A cloud connection is used to connect two enterprise routers from different regions. • **cfw**: CFW instance attachment • **ecn**: ECN attachment
attachment_id	String	Attachment ID

Example Requests

Modifying a static route

```
PUT https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/route-tables/19d334b7-78c1-4e0e-ba29-b797e641e23c/static-routes/9b3b38a9-1c9d-4f01-9429-81af6b545289

{
  "route" : {
    "is_blackhole" : false,
    "attachment_id" : "b70aee08-c671-4cad-9fd5-7381d163bcc8"
```



```
  }
}
```

Example Responses

Status code: 202

Accepted

```
{
  "route" : {
    "id" : "9b3b38a9-1c9d-4f01-9429-81af6b545289",
    "type" : "static",
    "destination" : "192.168.0.0/16",
    "attachments" : [ {
      "resource_id" : "9c4ab06a-0ab4-4fad-93a8-f733f3a4433d",
      "resource_type" : "vpc",
      "attachment_id" : "b70aee08-c671-4cad-9fd5-7381d163bcc8"
    } ],
    "route_table_id" : "19d334b7-78c1-4e0e-ba29-b797e641e23c",
    "is_blackhole" : false,
    "state" : "pending",
    "created_at" : "2020-03-11T15:13:31",
    "updated_at" : "2020-03-11T15:13:31"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Modifying a static route

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class UpdateStaticRouteSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
```



```
            .build();
        UpdateStaticRouteRequest request = new UpdateStaticRouteRequest();
        UpdateRouteRequestBody body = new UpdateRouteRequestBody();
        UpdateRoute routebody = new UpdateRoute();
        routebody.withAttachmentId("b70aee08-c671-4cad-9fd5-7381d163bcc8")
            .withIsBlackhole(false);
        body.withRoute(routebody);
        request.withBody(body);
        try {
            UpdateStaticRouteResponse response = client.updateStaticRoute(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

Modifying a static route

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = UpdateStaticRouteRequest()
        routebody = UpdateRoute(
            attachment_id="b70aee08-c671-4cad-9fd5-7381d163bcc8",
            is_blackhole=False
        )
        request.body = UpdateRouteRequestBody(
            route=routebody
        )
        response = client.update_static_route(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

Modifying a static route

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateStaticRouteRequest{}
    attachmentIdRoute:= "b70aee08-c671-4cad-9fd5-7381d163bcc8"
    isBlackholeRoute:= false
    routebody := &model.UpdateRoute{
        AttachmentId: &attachmentIdRoute,
        IsBlackhole: &isBlackholeRoute,
    }
    request.Body = &model.UpdateRouteRequestBody{
        Route: routebody,
    }
    response, err := client.UpdateStaticRoute(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
202	Accepted

Error Codes

See **Error Codes**.

4.7.3 Querying Details About a Static Route

Function

This API is used to query details about a static route.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/static-routes/{route_id}

Table 4-148 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
route_table_id	Yes	String	Route table ID
route_id	Yes	String	Route ID

Request Parameters

None

Response Parameters

Status code: 200

Table 4-149 Response body parameters

Parameter	Type	Description
route	**Route** object	Route
request_id	String	Request ID

Table 4-150 Route

Parameter	Type	Description
id	String	Route ID

Parameter	Type	Description
type	String	Route type. The value is **static**.
state	String	Route status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
is_blackhole	Boolean	Whether the route is a blackhole route
destination	String	Destination address of the route
attachments	Array of **RouteAttachment** objects	Next hops
route_table_id	String	Route table ID
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS

Table 4-151 RouteAttachment

Parameter	Type	Description
resource_id	String	Attached resource ID
resource_type	String	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachment. A cloud connection is used to connect two enterprise routers from different regions. • **cfw**: CFW instance attachment • **ecn**: ECN attachment
attachment_id	String	Attachment ID

Example Requests

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/route-tables/19d334b7-78c1-4e0e-ba29-b797e641e23c/static-routes/19d334b7-78c1-4e0e-ba29-b797e641e23c
```

Example Responses

Status code: 200

OK

```
{
  "route" : {
    "id" : "19d334b7-78c1-4e0e-ba29-b797e641e23c",
    "type" : "static",
    "destination" : "192.168.0.0/16",
    "attachments" : [ {
      "resource_id" : "9c4ab06a-0ab4-4fad-93a8-f733f3a4433d",
      "resource_type" : "VPC",
      "attachment_id" : "9b3b38a9-1c9d-4f01-9429-81af6b545289"
    } ],
    "route_table_id" : "19d334b7-78c1-4e0e-ba29-b797e641e23c",
    "is_blackhole" : false,
    "state" : "pending",
    "created_at" : "2020-03-11T15:13:31",
    "updated_at" : "2020-03-11T15:13:31"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class ShowStaticRouteSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowStaticRouteRequest request = new ShowStaticRouteRequest();
        try {
            ShowStaticRouteResponse response = client.showStaticRoute(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ShowStaticRouteRequest()
        response = client.show_static_route(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowStaticRouteRequest{}
    response, err := client.ShowStaticRoute(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 Querying Static Routes

Function

This API is used to query static routes.

Constraints

- Pagination query is supported. The supported query criteria are **destination**, **attachment_id**, **resource_type**, and **type**.
- Only sorting by a single field (**id**, **destination**, **created_at**, or **updated_at**) is supported.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/static-routes

Table 4-152 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
route_table_id	Yes	String	Route table ID

Table 4-153 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records on each page. Value range: **0** to **2000** Minimum: **0** Maximum: **2000**
marker	No	String	ID of the last enterprise router on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with limit. Minimum: **1** Maximum: **128**
destination	No	Array	Destination address of the route
attachment_id	No	Array	Attachment ID
resource_type	No	Array	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachment. A cloud connection is used to connect two enterprise routers from different regions. • **ecn**: ECN attachment • **cfw**: CFW instance attachment

Parameter	Mandatory	Type	Description
sort_key	No	Array	Keyword for sorting. The keyword can be **id**, **name**, or **state**. By default, **id** is used.
sort_dir	No	Array	Sorting order. There are two value options: **asc** (ascending order) and **desc** (descending order). The default value is **asc**.

Request Parameters

None

Response Parameters

Status code: 200

Table 4-154 Response body parameters

Parameter	Type	Description
routes	Array of **Route** objects	Routes
request_id	String	Request ID
page_info	**PageInfo** object	Pagination query information

Table 4-155 Route

Parameter	Type	Description
id	String	Route ID
type	String	Route type. The value is **static**.
state	String	Route status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
is_blackhole	Boolean	Whether the route is a blackhole route
destination	String	Destination address of the route
attachments	Array of **RouteAttachment** objects	Next hops

Parameter	Type	Description
route_table_id	String	Route table ID
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of YYYY-MM-DDTHH:MM:SS

Table 4-156 RouteAttachment

Parameter	Type	Description
resource_id	String	Attached resource ID
resource_type	String	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachment. A cloud connection is used to connect two enterprise routers from different regions. • **cfw**: CFW instance attachment • **ecn**: ECN attachment
attachment_id	String	Attachment ID

Table 4-157 PageInfo

Parameter	Type	Description
next_marker	String	Marker of the next page. The value is the resource UUID. If the value is empty, the resource is on the last page.
current_count	Integer	Number of resources in the list

Example Requests

Querying static routes

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/route-tables/915a14a6-867b-4af7-83d1-70efceb146f5/static-routes
```

Example Responses

Status code: 200

OK

```
{
  "routes" : [ {
    "id" : "9b3b38a9-1c9d-4f01-9429-81af6b545289",
    "type" : "static",
    "destination" : "192.168.0.0/16",
    "attachments" : [ {
      "resource_id" : "9c4ab06a-0ab4-4fad-93a8-f733f3a4433d",
      "resource_type" : "vpc",
      "attachment_id" : "9b3b38a9-1c9d-4f01-9429-81af6b545289"
    } ],
    "route_table_id" : "19d334b7-78c1-4e0e-ba29-b797e641e23c",
    "state" : "pending",
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z"
  } ],
  "page_info" : {
    "next_marker" : "1",
    "current_count" : 1
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;

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

public class ListStaticRoutesSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ListStaticRoutesRequest request = new ListStaticRoutesRequest();
        request.withLimit(<limit>);
        request.withMarker("<marker>");
        request.withDestination();
        request.withAttachmentId();
```

```
        request.withResourceType();
        request.withSortKey();
        request.withSortDir();
        try {
            ListStaticRoutesResponse response = client.listStaticRoutes(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListStaticRoutesRequest()
        request.limit = <limit>
        request.marker = "<marker>"
        request.destination =
        request.attachment_id =
        request.resource_type =
        request.sort_key =
        request.sort_dir =
        response = client.list_static_routes(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"
```



```
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListStaticRoutesRequest{}
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    response, err := client.ListStaticRoutes(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 Querying Effective Routes

Function

This API is used to query effective routes. Pagination query is supported. Effective routes are preferred routes.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/routes

Table 4-158 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
route_table_id	Yes	String	Route table ID

Table 4-159 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records on each page. Value range: **0** to **2000** Minimum: **0** Maximum: **2000**
marker	No	String	ID of the last route on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with limit. Minimum: **1** Maximum: **128**
destination	No	Array	Destination address of the route

Parameter	Mandatory	Type	Description
resource_type	No	Array	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachment. A cloud connection is used to connect two enterprise routers from different regions. • **ecn**: ECN attachment • **cfw**: CFW instance attachment

Request Parameters

None

Response Parameters

Status code: 200

Table 4-160 Response body parameters

Parameter	Type	Description
routes	Array of **EffectiveRoute** objects	Routes
request_id	String	Request ID
page_info	**PageInfo** object	Pagination query information

Table 4-161 EffectiveRoute

Parameter	Type	Description
route_id	String	Route ID
destination	String	Destination address of the route

Parameter	Type	Description
next_hops	Array of **RouteAttachment** objects	Next hops of the routes
is_blackhole	Boolean	Whether the route is a blackhole route
route_type	String	Route type. Value options: **static** and **propagation**

Table 4-162 RouteAttachment

Parameter	Type	Description
resource_id	String	Attached resource ID
resource_type	String	Attachment type. • **vpc**: VPC attachment • **vpn**: VPN gateway attachment • **vgw**: virtual gateway attachment • **peering**: peering connection attachment. A cloud connection is used to connect two enterprise routers from different regions. • **cfw**: CFW instance attachment • **ecn**: ECN attachment
attachment_id	String	Attachment ID

Table 4-163 PageInfo

Parameter	Type	Description
next_marker	String	Marker of the next page. The value is the resource UUID. If the value is empty, the resource is on the last page.
current_count	Integer	Number of resources in the list

Example Requests

Querying effective routes

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/route-tables/915a14a6-867b-4af7-83d1-70efceb146f9/routes
```


Example Responses

Status code: 200

OK

```
{
  "routes" : [ {
    "route_id" : "9b3b38a9-1c9d-4f01-9429-81af6b545289",
    "destination" : "192.168.0.0/16",
    "next_hops" : [ {
      "resource_id" : "9c4ab06a-0ab4-4fad-93a8-f733f3a4433d",
      "resource_type" : "vpc",
      "attachment_id" : "9b3b38a9-1c9d-4f01-9429-81af6b545289"
    } ],
    "is_blackhole" : false,
    "route_type" : "static"
  } ],
  "page_info" : {
    "next_marker" : "1",
    "current_count" : 1
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;

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

public class ListEffectiveRoutesSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ListEffectiveRoutesRequest request = new ListEffectiveRoutesRequest();
        request.withLimit(<limit>);
        request.withMarker("<marker>");
```



```
        request.withDestination();
        request.withResourceType();
        try {
            ListEffectiveRoutesResponse response = client.listEffectiveRoutes(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListEffectiveRoutesRequest()
        request.limit = <limit>
        request.marker = "<marker>"
        request.destination =
        request.resource_type =
        response = client.list_effective_routes(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListEffectiveRoutesRequest{}
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    response, err := client.ListEffectiveRoutes(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**.

4.7.6 Deleting a Static Route

Function

This API is used to delete a static route.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/static-routes/{route_id}

Table 4-164 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
route_table_id	Yes	String	Route table ID
route_id	Yes	String	Route ID

Request Parameters

None

Response Parameters

None

Example Requests

```
DELETE https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/route-tables/3ddb4dc2-174e-4d43-9328-b805d5c0c774/static-routes/19d334b7-78c1-4e0e-ba29-b797e641e23c
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class DeleteStaticRouteSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteStaticRouteRequest request = new DeleteStaticRouteRequest();
        try {
            DeleteStaticRouteResponse response = client.deleteStaticRoute(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = DeleteStaticRouteRequest()
        response = client.delete_static_route(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteStaticRouteRequest{}
    response, err := client.DeleteStaticRoute(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
202	Accepted

Error Codes

See **Error Codes**.

4.8 Tags

4.8.1 Querying Project Tags

Function

This API is used to query tags of resources of a specific type.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/{resource_type}/tags

Table 4-165 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
resource_type	Yes	String	Resource type. • **instance**: enterprise router • **route-table**: route table • **vpc-attachment**: VPC attachment • **vgw-attachment**: virtual gateway attachment • **peering-attachment**: peering connection attachment • **vpn-attachment**: VPN gateway attachment

Request Parameters

None

Response Parameters

Status code: 200

Table 4-166 Response body parameters

Parameter	Type	Description
tags	Array of **Tags** objects	Tags

Table 4-167 Tags

Parameter	Type	Description
key	String	Tag key, which cannot be empty and can contain a maximum of 127 Unicode characters.
values	Array of strings	Tag values. Each value can contain a maximum of 255 Unicode characters.

Example Requests

Querying tags of an enterprise router

```
https://{erouter_endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/instance/tags
```

Example Responses

Status code: 200

OK

```
{
  "tags" : [ {
    "key" : "keys",
    "values" : [ "value" ]
  }, {
    "key" : "key3",
    "values" : [ "value3", "value33" ]
  }, {
    "key" : "key1",
    "values" : [ "value1" ]
  }, {
    "key" : "key2",
    "values" : [ "value2", "value22" ]
  } ]
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = ErClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(ErRegion.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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            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 Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.8.2 Querying Resource Tags

Function

This API is used to query tags of resources of a specific type.

Calling Method

For details, see **Calling APIs**.

URI

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

Table 4-168 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
resource_id	Yes	String	Resource ID
resource_type	Yes	String	Resource type. • **instance**: enterprise router • **route-table**: route table • **vpc-attachment**: VPC attachment • **vgw-attachment**: virtual gateway attachment • **peering-attachment**: peering connection attachment • **vpn-attachment**: VPN gateway attachment

Request Parameters

None

Response Parameters

Status code: 200

Table 4-169 Response body parameters

Parameter	Type	Description
tags	Array of **Tag** objects	Tags

Table 4-170 Tag

Parameter	Type	Description
key	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Example Requests

Querying tags of an enterprise router

```
https://{erouter_endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/instance/f1a28dfd-186f-4625-b6b1-f05e5e8609c0/tags
```

Example Responses

Status code: 200

OK

```
{
  "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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = ErClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(ErRegion.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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            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 Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.8.3 Creating Resource Tags

Function

This API is used to create tags for resources of a specific type.

Constraints

- A resource can have up to 10 tags.
- This API is idempotent.
- If a tag to be created has the same key as an existing tag, the tag will be created and overwrite the existing one.

Calling Method

For details, see **Calling APIs**.

URI

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

Table 4-171 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
resource_id	Yes	String	Resource ID
resource_type	Yes	String	Resource type. • **instance**: enterprise router • **route-table**: route table • **vpc-attachment**: VPC attachment • **vgw-attachment**: virtual gateway attachment • **peering-attachment**: peering connection attachment • **vpn-attachment**: VPN gateway attachment

Request Parameters

Table 4-172 Request body parameters

Parameter	Mandatory	Type	Description
tag	Yes	**Tag** object	Resource tag

Table 4-173 Tag

Parameter	Mandatory	Type	Description
key	No	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	No	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Response Parameters

None

Example Requests

Creating tags for a resource

```
POST https://{erouter-endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/instance/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

Creating tags for a resource

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.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

Creating tags for a resource

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = ErClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(ErRegion.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

Creating tags for a resource

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateResourceTagRequest{}
    keyTag:= "key1"
    valueTag:= "value1"
    tagbody := &model.Tag{
        Key: &keyTag,
        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 Codes

Status Code	Description
204	No Content

Error Codes

See **Error Codes**.

4.8.4 Batch Creating Resource Tags

Function

- Batch adding or deleting tags for specified instances.
- The tag management service needs to use this API to manage tags of instances in batches.
- There are a maximum of 20 tags on a resource

Calling Method

For details, see **Calling APIs**.

URI

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

Table 4-174 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
resource_id	Yes	String	Resource ID
resource_type	Yes	String	Resource type. • **instance**: enterprise router • **route-table**: route table • **vpc-attachment**: VPC attachment • **vgw-attachment**: virtual gateway attachment • **peering-attachment**: peering connection attachment • **vpn-attachment**: VPN gateway attachment

Request Parameters

Table 4-175 Request body parameters

Parameter	Mandatory	Type	Description
action	Yes	String	Operation action. Value options: **create** and **delete**
tags	No	Array of **Tag** objects	Tag list

Table 4-176 Tag

Parameter	Mandatory	Type	Description
key	No	String	Tag key. The value can contain a maximum of 36 Unicode characters, including uppercase letters, lowercase letters, digits, hyphens (-), and underscores (_). Minimum: **1** Maximum: **128**
value	No	String	Tag value. • Tag values consist of letters, digits, spaces, and special characters _.:=+-@ • Tag values can contain 0 to 255 characters. • Tag values can be left blank or set to **null**. Minimum: **0** Maximum: **255**

Response Parameters

None

Example Requests

- Batch adding resource tags

```
POST https://{erouter-endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/instance/3320166e-b937-40cc-a35c-02cd3f2b3ee2/tags/action

{
  "action" : "create",
  "tags" : [ {
    "key" : "key1",
    "value" : "value1"
  }, {
    "key" : "key2",
    "value" : "value2"
  } ]
}
```

- Batch deleting resource tags

```
POST https://{erouter-endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/instance/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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = ErClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(ErRegion.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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
```



```
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = ErClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(ErRegion.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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.BatchCreateResourceTagsRequest{}
    keyTags:= "key1"
    valueTags:= "value1"
    keyTags1:= "key2"
    valueTags1:= "value2"
    var listTagsbody = []model.Tag{
        {
            Key: &keyTags,
            Value: &valueTags,
        },
        {
            Key: &keyTags1,
            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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.BatchCreateResourceTagsRequest{}
    keyTags:= "key1"
    keyTags1:= "key2"
    valueTags:= "value3"
```



```
    var listTagsbody = []model.Tag{
        {
            Key: &keyTags,
        },
        {
            Key: &keyTags1,
            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 Codes

Status Code	Description
204	No Content

Error Codes

See **Error Codes**.

4.8.5 Deleting Resource Tags

Function

This API is used to delete tags for resources of a specific type.

Constraints

This API is idempotent. The key cannot be left blank or be an empty string.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v3/{project_id}/{resource_type}/{resource_id}/tags/{key}

Table 4-177 Path Parameters

Parameter	Mandatory	Type	Description
key	Yes	String	Tag key
project_id	Yes	String	Project ID
resource_id	Yes	String	Resource ID
resource_type	Yes	String	Resource type. • **instance**: enterprise router • **route-table**: route table • **vpc-attachment**: VPC attachment • **vgw-attachment**: virtual gateway attachment • **peering-attachment**: peering connection attachment • **vpn-attachment**: VPN gateway attachment

Request Parameters

None

Response Parameters

None

Example Requests

```
DELETE https://{erouter-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.er.v3.region.ErRegion;
```



```
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

    client = ErClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(ErRegion.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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            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 Codes

Status Code	Description
204	No Content

Error Codes

See **Error Codes**.

4.9 Resource Quotas

4.9.1 Querying Quotas

Function

This API is used to query the used quotas of resources, such as enterprise routers and VPC attachments.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/quotas

Table 4-178 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

Table 4-179 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records on each page. Value range: **0** to **2000** Minimum: **0** Maximum: **2000**
marker	No	String	ID of the last enterprise router on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with limit. Minimum: **1** Maximum: **128**

Parameter	Mandatory	Type	Description
type	No	Array	You can query the quotas of the following resources: • **er_instance**: total and used quotas of enterprise routers • **dc_attachment**: total and used quotas of Direct Connect gateway attachments • **vpc_attachment**: total and used quotas of VPC attachments • **vpn_attachment**: total and used quotas of VPN gateways • **peering_attachment**: total and used quotas of peering connection attachments • **can_attachment**: total and used quotas of intelligent access gateway attachments • **route_table**: total and used quotas of route tables • **static_route**: total and used quotas of static routes • **vpc_er**: total and used quotas of enterprise routers that a VPC can be attached to • **flow_log**: total and used quotas of flow logs that can be created for each attachment
erId	No	Object	Enterprise router ID
routeTableId	No	Object	Route table ID
vpcId	No	Object	VPC ID

Request Parameters

None

Response Parameters

Status code: 200

Table 4-180 Response body parameters

Parameter	Type	Description
quotas	Array of **Quota** objects	Used quota details

Table 4-181 Quota

Parameter	Type	Description
quota_key	String	Quota type
quota_limit	Long	Available quota. The value **-1** indicates that there is no quota limit.
used	Long	Used quota
unit	String	Measurement unit of used quotas

Example Requests

Querying the resource quotas

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/quotas
```

Example Responses

Status code: 200

OK

```
{
  "quotas" : [ {
    "quota_key" : "er_instance",
    "quota_limit" : 1,
    "used" : 0,
    "unit" : "count"
  }, {
    "quota_key" : "dc_attachment",
    "quota_limit" : 2,
    "used" : 0,
    "unit" : "count"
  }, {
    "quota_key" : "route_table",
    "quota_limit" : 20,
    "used" : 5,
    "unit" : "count"
  }, {
    "quota_key" : "static_route",
    "quota_limit" : 500,
    "used" : 2,
    "unit" : "count"
  }, {
    "quota_key" : "connect_attachment",
    "quota_limit" : 20,
    "used" : 0,
    "unit" : "count"
  }, {
```



```
    "quota_key" : "vpn_attachment",
    "quota_limit" : 10,
    "used" : 0,
    "unit" : "count"
  }, {
    "quota_key" : "flow_log",
    "quota_limit" : 20,
    "used" : 4,
    "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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowQuotasRequest request = new ShowQuotasRequest();
        request.withType();
        request.withErId();
        request.withRouteTableId();
        request.withVpcId();
        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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ShowQuotasRequest()
        request.type =
        request.er_id =
        request.route_table_id =
        request.vpc_id =
        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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            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 Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.10 AZs

4.10.1 Querying AZs

Function

This API is used to query AZs where enterprise routers can be created. An enterprise router can be created only when an AZ is in the available state.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/availability-zones

Table 4-182 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

Table 4-183 Query Parameters

Parameter	Mandatory	Type	Description
instance_id	No	String	Enterprise router ID
bandwidth_size	No	Integer	Bandwidth size, in Mbit/s Minimum: **-1**

Request Parameters

None

Response Parameters

Status code: 200

Table 4-184 Response body parameters

Parameter	Type	Description
availability_zones	Array of **AvailableZone** objects	AZ list
request_id	String	Request ID

Table 4-185 AvailableZone

Parameter	Type	Description
code	String	AZ code
state	String	Whether the AZ is available. Value options: **available** and **unavailable**

Example Requests

Querying AZs

```
GET https://{erouter_endpoint}/v3/0605767a9980d5762fbcc00b3537e757/enterprise-router/availability-zones
```


Example Responses

Status code: 200

OK

```
{
  "availability_zones" : [ {
    "code" : "az1",
    "state" : "available"
  }, {
    "code" : "az2",
    "state" : "unavailable"
  } ]
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class ListAvailabilityZoneSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAvailabilityZoneRequest request = new ListAvailabilityZoneRequest();
        request.withInstanceId("<instance_id>");
        try {
            ListAvailabilityZoneResponse response = client.listAvailabilityZone(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListAvailabilityZoneRequest()
        request.instance_id = "<instance_id>"
        response = client.list_availability_zone(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
```



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

    request := &model.ListAvailabilityZoneRequest{}
    instanceIdRequest:= "<instance_id>"
    request.InstanceId = &instanceIdRequest
    response, err := client.ListAvailabilityZone(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**.

4.11 Flow Logs

4.11.1 Creating a Flow Log

Function

This API is used to create a flow log for an enterprise router.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/enterprise-router/{er_id}/flow-logs

Table 4-186 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

Parameter	Mandatory	Type	Description
er_id	Yes	String	Enterprise router ID

Request Parameters

Table 4-187 Request header parameters

Parameter	Mandatory	Type	Description
X-Client-Token	No	String	Idempotence identifier Minimum: **1** Maximum: **64**

Table 4-188 Request body parameters

Parameter	Mandatory	Type	Description
flow_log	Yes	**FlowLogRequest** object	Request body for creating a flow log

Table 4-189 FlowLogRequest

Parameter	Mandatory	Type	Description
name	Yes	String	Flow log name Minimum: **1** Maximum: **64**
description	No	String	Flow log description Minimum: **0** Maximum: **255**
resource_type	Yes	String	Type of resource whose flow logs are collected. • VPC attachments • Virtual gateway attachments • Peering connection attachments
resource_id	Yes	String	Resource ID

Parameter	Mandatory	Type	Description
log_group_id	Yes	String	Log group ID. Obtain the log group ID by referring to the *Log Tank Service User Guide*.
log_stream_id	Yes	String	Log stream ID. Obtain the log stream ID by referring to the *Log Tank Service User Guide*.
log_store_type	Yes	String	Flow log storage type. LTS: Logs are stored on LTS servers.

Response Parameters

Status code: 202

Table 4-190 Response header parameters

Parameter	Type	Description
X-Client-Token	-	Idempotence identifier

Table 4-191 Response body parameters

Parameter	Type	Description
flow_log	**FlowLog** object	Flow log details
request_id	String	Request ID

Table 4-192 FlowLog

Parameter	Type	Description
id	String	Flow log ID
name	String	Flow log name
description	String	Flow log description
project_id	String	Project ID of the flow log task creator
resource_type	String	Resource type. The value is **attachment**.
resource_id	String	Resource ID
log_group_id	String	Log group ID

Parameter	Type	Description
log_stream_id	String	Log stream ID
log_store_type	String	Flow log storage type. LTS is used for log storage.
log_aggregation_interval	Integer	Log aggregation time, in seconds. The value ranges from **60** to **600**.
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
state	String	Flow log status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
enabled	Boolean	Whether to enable flow logs. The value can be **true** or **false**.

Example Requests

Creating a flow log

```
POST https://{erouter_endpoint}/v3/0605767a9980d5762fbcc00b3537e757/enterprise-router/
a43c55e9-4911-4030-90e1-5c2bf6ae6fe2/flow-logs

{
  "flow_log" : {
    "name" : "flow-log",
    "description" : "flow log test",
    "resource_type" : "attachment",
    "resource_id" : "6f83b848-8331-4271-ac0c-ef94b7686402",
    "log_group_id" : "0139393c-eeb2-49f0-bbd4-c5faec6b1497",
    "log_stream_id" : "d22c3b44-2f71-470f-83f3-96a8af6956ad",
    "log_store_type" : "LTS"
  }
}
```

Example Responses

Status code: 202

Accepted

```
{
  "flow_log" : {
    "id" : "b216bc1d-5963-41a7-89f9-779a5128c5ac",
    "name" : "flow_log",
    "project_id" : "0605767a9980d5762fbcc00b3537e757",
    "resource_type" : "attachment",
    "resource_id" : "6f83b848-8331-4271-ac0c-ef94b7686402",
    "log_group_id" : "0139393c-eeb2-49f0-bbd4-c5faec6b1497",
    "log_stream_id" : "d22c3b44-2f71-470f-83f3-96a8af6956ad",
    "log_store_type" : "LTS",
    "log_aggregation_interval" : 600,
    "created_at" : "2020-03-11T15:13:31Z",
```



```
    "updated_at" : "2022-03-11T15:13:31Z",
    "state" : "available",
    "enabled" : true,
    "description" : "Flow Logs"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Creating a flow log

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class CreateFlowLogSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateFlowLogRequest request = new CreateFlowLogRequest();
        CreateFlowLogRequestBody body = new CreateFlowLogRequestBody();
        FlowLogRequest flowLogbody = new FlowLogRequest();
        flowLogbody.withName("flow-log")
            .withDescription("flow log test")
            .withResourceType(FlowLogRequest.ResourceTypeEnum.fromValue("attachment"))
            .withResourceId("6f83b848-8331-4271-ac0c-ef94b7686402")
            .withLogGroupId("0139393c-eeb2-49f0-bbd4-c5faec6b1497")
            .withLogStreamId("d22c3b44-2f71-470f-83f3-96a8af6956ad")
            .withLogStoreType(FlowLogRequest.LogStoreTypeEnum.fromValue("LTS"));
        body.withFlowLog(flowLogbody);
        request.withBody(body);
        try {
            CreateFlowLogResponse response = client.createFlowLog(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 flow log

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = CreateFlowLogRequest()
        flowLogbody = FlowLogRequest(
            name="flow-log",
            description="flow log test",
            resource_type="attachment",
            resource_id="6f83b848-8331-4271-ac0c-ef94b7686402",
            log_group_id="0139393c-eeb2-49f0-bbd4-c5faec6b1497",
            log_stream_id="d22c3b44-2f71-470f-83f3-96a8af6956ad",
            log_store_type="LTS"
        )
        request.body = CreateFlowLogRequestBody(
            flow_log=flowLogbody
        )
        response = client.create_flow_log(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 flow log

```
package main

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



```
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateFlowLogRequest{}
    descriptionFlowLog:= "flow log test"
    flowLogbody := &model.FlowLogRequest{
        Name: "flow-log",
        Description: &descriptionFlowLog,
        ResourceType: model.GetFlowLogRequestResourceTypeEnum().ATTACHMENT,
        ResourceId: "6f83b848-8331-4271-ac0c-ef94b7686402",
        LogGroupId: "0139393c-eeb2-49f0-bbd4-c5faec6b1497",
        LogStreamId: "d22c3b44-2f71-470f-83f3-96a8af6956ad",
        LogStoreType: model.GetFlowLogRequestLogStoreTypeEnum().LTS,
    }
    request.Body = &model.CreateFlowLogRequestBody{
        FlowLog: flowLogbody,
    }
    response, err := client.CreateFlowLog(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
202	Accepted

Error Codes

See **Error Codes**.

4.11.2 Querying Flow Logs

Function

This API is used to query the flow log list.

Constraints

- Filtering query is supported. You can use **resource_type**, **resource_id**, and **enterprise_project_id** for query. You can query multiple resources at a time or use combined criteria to query resources.
- Pagination query is supported. You can use **limit** and **marker** together for query.
- Sorting by a single field. You can use **id**, **name**, or **state** to sort resources. Sorting by multiple fields is not supported.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/{er_id}/flow-logs

Table 4-193 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID

Table 4-194 Query Parameters

Parameter	Mandatory	Type	Description
resource_type	No	String	Resource type
resource_id	No	Array	Attachment resource IDs
limit	No	Integer	Number of records on each page. Value range: **0** to **2000** Minimum: **0** Maximum: **2000**

Parameter	Mandatory	Type	Description
marker	No	String	ID of the last enterprise router on the previous page. If this parameter is left blank, the first page is queried. This parameter must be used together with limit. Minimum: **1** Maximum: **128**
sort_key	No	Array	Keyword for sorting. The keyword can be **id**, **name**, or **state**. By default, **id** is used.
sort_dir	No	Array	Sorting order. There are two value options: **asc** (ascending order) and **desc** (descending order). The default value is **asc**.

Request Parameters

None

Response Parameters

Status code: 200

Table 4-195 Response body parameters

Parameter	Type	Description
flow_logs	Array of **FlowLog** objects	Flow log details
request_id	String	Request ID
page_info	**PageInfo** object	Pagination query information

Table 4-196 FlowLog

Parameter	Type	Description
id	String	Flow log ID
name	String	Flow log name

Parameter	Type	Description
description	String	Flow log description
project_id	String	Project ID of the flow log task creator
resource_type	String	Resource type. The value is **attachment**.
resource_id	String	Resource ID
log_group_id	String	Log group ID
log_stream_id	String	Log stream ID
log_store_type	String	Flow log storage type. LTS is used for log storage.
log_aggregation_interval	Integer	Log aggregation time, in seconds. The value ranges from **60** to **600**.
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
state	String	Flow log status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
enabled	Boolean	Whether to enable flow logs. The value can be **true** or **false**.

Table 4-197 PageInfo

Parameter	Type	Description
next_marker	String	Marker of the next page. The value is the resource UUID. If the value is empty, the resource is on the last page.
current_count	Integer	Number of resources in the list

Example Requests

Querying flow logs

```
GET https://{erouter_endpoint}/v3/0605767a9980d5762fbcc00b3537e757/enterprise-router/a43c55e9-4911-4030-90e1-5c2bf6ae6fe2/flow-logs
```

Example Responses

Status code: 200

OK


```
{
  "flow_logs" : [ {
    "id" : "b216bc1d-5963-41a7-89f9-779a5128c5ac",
    "name" : "flow_log",
    "project_id" : "0605767a9980d5762fbcc00b3537e757",
    "resource_type" : "attachment",
    "resource_id" : "6f83b848-8331-4271-ac0c-ef94b7686402",
    "log_group_id" : "0139393c-eeb2-49f0-bbd4-c5faec6b1497",
    "log_stream_id" : "d22c3b44-2f71-470f-83f3-96a8af6956ad",
    "log_store_type" : "LTS",
    "log_aggregation_interval" : 600,
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2022-03-11T15:13:31Z",
    "state" : "available",
    "enabled" : true,
    "description" : "Flow Logs"
  } ],
  "page_info" : {
    "next_marker" : "1",
    "current_count" : 1
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```


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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;

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

public class ListFlowLogsSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ListFlowLogsRequest request = new ListFlowLogsRequest();
        request.withResourceType(ListFlowLogsRequest.ResourceTypeEnum.fromValue("<resource_type>"));
        request.withResourceId();
        request.withLimit(<limit>);
        request.withMarker("<marker>");
```

```
        request.withSortKey();
        request.withSortDir();
        try {
            ListFlowLogsResponse response = client.listFlowLogs(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListFlowLogsRequest()
        request.resource_type = "<resource_type>"
        request.resource_id =
        request.limit = <limit>
        request.marker = "<marker>"
        request.sort_key =
        request.sort_dir =
        response = client.list_flow_logs(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
```



```
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListFlowLogsRequest{}
    resourceTypeRequest:= model.GetListFlowLogsRequestResourceTypeEnum().<RESOURCE_TYPE>
    request.ResourceType = &resourceTypeRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    markerRequest:= "<marker>"
    request.Marker = &markerRequest
    response, err := client.ListFlowLogs(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**.

4.11.3 Querying Details About a Flow Log

Function

This API is used to query details about a flow log.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/enterprise-router/{er_id}/flow-logs/{flow_log_id}

Table 4-198 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
flow_log_id	Yes	String	Flow log ID

Request Parameters

None

Response Parameters

Status code: 200

Table 4-199 Response body parameters

Parameter	Type	Description
flow_log	**FlowLog** object	Flow log details
request_id	String	Request ID

Table 4-200 FlowLog

Parameter	Type	Description
id	String	Flow log ID
name	String	Flow log name
description	String	Flow log description
project_id	String	Project ID of the flow log task creator
resource_type	String	Resource type. The value is **attachment**.
resource_id	String	Resource ID
log_group_id	String	Log group ID

Parameter	Type	Description
log_stream_id	String	Log stream ID
log_store_type	String	Flow log storage type. LTS is used for log storage.
log_aggregation_interval	Integer	Log aggregation time, in seconds. The value ranges from **60** to **600**.
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
state	String	Flow log status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
enabled	Boolean	Whether to enable flow logs. The value can be **true** or **false**.

Example Requests

Querying flow logs

```
GET https://{erouter_endpoint}/v3/0605767a9980d5762fbcc00b3537e757/enterprise-router/
a43c55e9-4911-4030-90e1-5c2bf6ae6fe2/flow-logs/b216bc1d-5963-41a7-89f9-779a5128c5ac
```

Example Responses

Status code: 200

OK

```
{
  "flow_log" : {
    "id" : "b216bc1d-5963-41a7-89f9-779a5128c5ac",
    "name" : "flow_log",
    "project_id" : "0605767a9980d5762fbcc00b3537e757",
    "resource_type" : "attachment",
    "resource_id" : "6f83b848-8331-4271-ac0c-ef94b7686402",
    "log_group_id" : "0139393c-eeb2-49f0-bbd4-c5faec6b1497",
    "log_stream_id" : "d22c3b44-2f71-470f-83f3-96a8af6956ad",
    "log_store_type" : "LTS",
    "log_aggregation_interval" : 600,
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2022-03-11T15:13:31Z",
    "state" : "available",
    "enabled" : true,
    "description" : "Flow Logs"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class ShowFlowLogSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowFlowLogRequest request = new ShowFlowLogRequest();
        try {
            ShowFlowLogResponse response = client.showFlowLog(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")
```



```
    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ShowFlowLogRequest()
        response = client.show_flow_log(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowFlowLogRequest{}
    response, err := client.ShowFlowLog(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**.

4.11.4 Updating a Flow Log

Function

This API is used to update a flow log.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v3/{project_id}/enterprise-router/{er_id}/flow-logs/{flow_log_id}

Table 4-201 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
flow_log_id	Yes	String	Flow log ID

Request Parameters

Table 4-202 Request body parameters

Parameter	Mandatory	Type	Description
name	No	String	Flow log name Minimum: **1** Maximum: **64**
description	No	String	Minimum: **0** Maximum: **255**

Response Parameters

Status code: 200

Table 4-203 Response body parameters

Parameter	Type	Description
flow_log	**FlowLog** object	Flow log details
request_id	String	Request ID

Table 4-204 FlowLog

Parameter	Type	Description
id	String	Flow log ID
name	String	Flow log name
description	String	Flow log description
project_id	String	Project ID of the flow log task creator
resource_type	String	Resource type. The value is **attachment**.
resource_id	String	Resource ID
log_group_id	String	Log group ID
log_stream_id	String	Log stream ID
log_store_type	String	Flow log storage type. LTS is used for log storage.
log_aggregation_interval	Integer	Log aggregation time, in seconds. The value ranges from **60** to **600**.
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
state	String	Flow log status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
enabled	Boolean	Whether to enable flow logs. The value can be **true** or **false**.

Example Requests

Updating a flow log


```
PUT https://{erouter_endpoint}/v3/0605767a9980d5762fbcc00b3537e757/enterprise-router/
6f83b848-8331-4271-ac0c-ef94b7686402/flow_logs/b216bc1d-5963-41a7-89f9-779a5128c5ac

{
  "name" : "flow_log_update",
  "description" : "flow log update test"
}
```

Example Responses

Status code: 200

OK

```
{
  "flow_log" : {
    "id" : "b216bc1d-5963-41a7-89f9-779a5128c5ac",
    "name" : "flow_log_update",
    "project_id" : "0605767a9980d5762fbcc00b3537e757",
    "resource_type" : "attachment",
    "resource_id" : "6f83b848-8331-4271-ac0c-ef94b7686402",
    "log_group_id" : "0139393c-eeb2-49f0-bbd4-c5faec6b1497",
    "log_stream_id" : "d22c3b44-2f71-470f-83f3-96a8af6956ad",
    "log_store_type" : "LTS",
    "log_aggregation_interval" : 600,
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2022-03-11T15:13:31Z",
    "state" : "available",
    "enabled" : true,
    "description" : "flow log update test"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Updating a flow log

```
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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class UpdateFlowLogSolution {

    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);

    ErClient client = ErClient.newBuilder()
            .withCredential(auth)
            .withRegion(ErRegion.valueOf("<YOUR REGION>"))
            .build();
    UpdateFlowLogRequest request = new UpdateFlowLogRequest();
    UpdateFlowLogRequestBody body = new UpdateFlowLogRequestBody();
    body.withDescription("flow log update test");
    body.withName("flow_log_update");
    request.withBody(body);
    try {
        UpdateFlowLogResponse response = client.updateFlowLog(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 flow log

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = UpdateFlowLogRequest()
        request.body = UpdateFlowLogRequestBody(
            description="flow log update test",
            name="flow_log_update"
        )
        response = client.update_flow_log(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 flow log

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateFlowLogRequest{}
    descriptionUpdateFlowLogRequestBody:= "flow log update test"
    nameUpdateFlowLogRequestBody:= "flow_log_update"
    request.Body = &model.UpdateFlowLogRequestBody{
        Description: &descriptionUpdateFlowLogRequestBody,
        Name: &nameUpdateFlowLogRequestBody,
    }
    response, err := client.UpdateFlowLog(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**.

4.11.5 Deleting a Flow Log

Function

This API is used to delete a flow log.

Constraints

A flow log can be deleted only when it is in the **available**, **deleting**, or **failed** state.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v3/{project_id}/enterprise-router/{er_id}/flow-logs/{flow_log_id}

Table 4-205 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
flow_log_id	Yes	String	Flow log ID

Request Parameters

None

Response Parameters

None

Example Requests

Deleting a flow log

```
DELETE https://{erouter_endpoint}/v3/0605767a9980d5762fbcc00b3537e757/enterprise-router/6f83b848-8331-4271-ac0c-ef94b7686402/flow_logs/b216bc1d-5963-41a7-89f9-779a5128c5ac
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class DeleteFlowLogSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteFlowLogRequest request = new DeleteFlowLogRequest();
        try {
            DeleteFlowLogResponse response = client.deleteFlowLog(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = DeleteFlowLogRequest()
        response = client.delete_flow_log(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteFlowLogRequest{}
    response, err := client.DeleteFlowLog(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
202	Accepted

Error Codes

See **Error Codes**.

4.11.6 Enabling Flow Logs

Function

This API is used to enable flow logs.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/enterprise-router/{er_id}/flow-logs/{flow_log_id}/enable

Table 4-206 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
flow_log_id	Yes	String	Flow log ID

Request Parameters

None

Response Parameters

Status code: 202

Table 4-207 Response body parameters

Parameter	Type	Description
flow_log	**FlowLog** object	Flow log details

Parameter	Type	Description
request_id	String	Request ID

Table 4-208 FlowLog

Parameter	Type	Description
id	String	Flow log ID
name	String	Flow log name
description	String	Flow log description
project_id	String	Project ID of the flow log task creator
resource_type	String	Resource type. The value is **attachment**.
resource_id	String	Resource ID
log_group_id	String	Log group ID
log_stream_id	String	Log stream ID
log_store_type	String	Flow log storage type. LTS is used for log storage.
log_aggregation_interval	Integer	Log aggregation time, in seconds. The value ranges from **60** to **600**.
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
state	String	Flow log status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
enabled	Boolean	Whether to enable flow logs. The value can be **true** or **false**.

Example Requests

Enabling flow logs

```
POST https://{erouter_endpoint}/v3/0605767a9980d5762fbcc00b3537e757/enterprise-router/
a43c55e9-4911-4030-90e1-5c2bf6ae6fe2/flow-logs/b216bc1d-5963-41a7-89f9-779a5128c5ac/enable
```

Example Responses

Status code: 202

Accepted


```
{
  "flow_log" : {
    "id" : "b216bc1d-5963-41a7-89f9-779a5128c5ac",
    "name" : "flow_log_update",
    "project_id" : "0605767a9980d5762fbcc00b3537e757",
    "resource_type" : "attachment",
    "resource_id" : "6f83b848-8331-4271-ac0c-ef94b7686402",
    "log_group_id" : "0139393c-eeb2-49f0-bbd4-c5faec6b1497",
    "log_stream_id" : "d22c3b44-2f71-470f-83f3-96a8af6956ad",
    "log_store_type" : "LTS",
    "log_aggregation_interval" : 600,
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2022-03-11T15:13:31Z",
    "state" : "available",
    "enabled" : true,
    "description" : "Flow Logs"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class EnableFlowLogSolution {

    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);

        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        EnableFlowLogRequest request = new EnableFlowLogRequest();
        try {
            EnableFlowLogResponse response = client.enableFlowLog(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = EnableFlowLogRequest()
        response = client.enable_flow_log(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
```



```
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.EnableFlowLogRequest{}
    response, err := client.EnableFlowLog(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
202	Accepted

Error Codes

See **Error Codes**.

4.11.7 Disabling Flow Logs

Function

This API is used to disable flow logs.

Calling Method

For details, see **Calling APIs**.

URI

POST /v3/{project_id}/enterprise-router/{er_id}/flow-logs/{flow_log_id}/disable

Table 4-209 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
er_id	Yes	String	Enterprise router ID
flow_log_id	Yes	String	Flow log ID

Request Parameters

None

Response Parameters

Status code: 202

Table 4-210 Response body parameters

Parameter	Type	Description
flow_log	**FlowLog** object	Flow log details
request_id	String	Request ID

Table 4-211 FlowLog

Parameter	Type	Description
id	String	Flow log ID
name	String	Flow log name
description	String	Flow log description
project_id	String	Project ID of the flow log task creator
resource_type	String	Resource type. The value is **attachment**.
resource_id	String	Resource ID
log_group_id	String	Log group ID
log_stream_id	String	Log stream ID
log_store_type	String	Flow log storage type. LTS is used for log storage.
log_aggregation_interval	Integer	Log aggregation time, in seconds. The value ranges from **60** to **600**.
created_at	String	Creation time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
updated_at	String	Update time in the format of *YYYY-MM-DDTHH:mm:ss.sssZ*
state	String	Flow log status. Value options: **pending**, **available**, **modifying**, **deleting**, **deleted**, and **failed**
enabled	Boolean	Whether to enable flow logs. The value can be **true** or **false**.

Example Requests

Disabling flow logs

```
POST https://{erouter_endpoint}/v3/0605767a9980d5762fbcc00b3537e757/enterprise-router/
a43c55e9-4911-4030-90e1-5c2bf6ae6fe2/flow-logs/b216bc1d-5963-41a7-89f9-779a5128c5ac/disable
```

Example Responses

Status code: 202

Accepted

```
{
  "flow_log" : {
    "id" : "b216bc1d-5963-41a7-89f9-779a5128c5ac",
    "name" : "flow_log_update",
    "project_id" : "0605767a9980d5762fbcc00b3537e757",
    "resource_type" : "attachment",
    "resource_id" : "6f83b848-8331-4271-ac0c-ef94b7686402",
    "log_group_id" : "0139393c-eeb2-49f0-bbd4-c5faec6b1497",
    "log_stream_id" : "d22c3b44-2f71-470f-83f3-96a8af6956ad",
    "log_store_type" : "LTS",
    "log_aggregation_interval" : 600,
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2022-03-11T15:13:31Z",
    "state" : "available",
    "enabled" : true,
    "description" : "Flow Logs"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

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.er.v3.region.ErRegion;
import com.huaweicloud.sdk.er.v3.*;
import com.huaweicloud.sdk.er.v3.model.*;


public class DisableFlowLogSolution {

    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);
```



```
        ErClient client = ErClient.newBuilder()
                .withCredential(auth)
                .withRegion(ErRegion.valueOf("<YOUR REGION>"))
                .build();
        DisableFlowLogRequest request = new DisableFlowLogRequest();
        try {
            DisableFlowLogResponse response = client.disableFlowLog(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 huaweicloudsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdker.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 = __import__('os').getenv("CLOUD_SDK_AK")
    sk = __import__('os').getenv("CLOUD_SDK_SK")

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = DisableFlowLogRequest()
        response = client.disable_flow_log(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"
    er "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/v3/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/er/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 := er.NewErClient(
        er.ErClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DisableFlowLogRequest{}
    response, err := client.DisableFlowLog(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
202	Accepted

Error Codes

See **Error Codes**.

5 Permissions Policies and Supported Actions

5.1 Introduction

This topic describes fine-grained permissions management for your Enterprise Router resources. If your account does not need individual IAM users, you may skip this topic.

By default, new IAM users do not have any permissions assigned. You need to add a user to one or more groups, and assign policies or roles to these groups. The user then inherits permissions from the groups. After authorization, the user can perform specified operations on cloud services based on the permissions.

You can grant users permissions by using **roles** and **policies**. Roles: A type of coarse-grained authorization mechanism that defines service-level permissions based on user responsibilities. There are only a limited number of roles for granting permissions to users. Policies: A type of fine-grained authorization mechanism that defines permissions required to perform operations on specific cloud resources under certain conditions. This mechanism allows for more flexible policy-based authorization and secure access control.

NOTE

Policy-based authorization is useful if you want to allow or deny the access to an API.

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

5.2 Supported Actions in RBAC

This topic describes the actions supported by Enterprise Router in RBAC.

Supported Actions

Enterprise Router provides system-defined policies that can be directly used. You can also create custom policies to work with system-defined policies for more refined access control. Actions supported by policies are specific to APIs. Common concepts related to policies include:

- Permissions: allow or deny operations on specified resources under specific conditions.
- APIs: REST APIs that can be called by a user who has been granted specific permissions.
- Actions: specific operations that are allowed or denied.
- Related actions: actions on which a specific action depends. When assigning permissions for the action to a user, you also need to assign permissions for the dependent actions.
- IAM projects or enterprise projects: type of projects for which an action will take effect. For example, if you set the authorization scope of a custom policy to both IAM projects and enterprise projects, the policy takes effect for user groups in either IAM or enterprise projects. If the authorization scope is set to IAM projects only, the custom policy will take effect only for user groups in IAM projects. Administrators can check whether an action supports IAM projects or enterprise projects in the action list. "√" indicates that the action supports the project and "×" indicates that the action does not support the project. For details about the differences between IAM and enterprise management, see **Differences Between IAM and Enterprise Management**

Enterprise Router supports the following actions that can be defined in custom policies:

- **Enterprise Routers**
- **VPC Attachments**
- **Other Types of Attachments**
- **Route Tables**
- **Associations**
- **Propagations**
- **Routes**
- **Flow Logs**
- **Tags**
- **Quota Management**

5.3 Enterprise Routers

Permission	API	Action	IAM Project	Enterprise Project
Creating an enterprise router	POST /v3/{project_id}/enterprise-router/instances	er:instances:create	√	√

Permission	API	Action	IAM Project	Enterprise Project
Updating an enterprise router	PUT /v3/{project_id}/enterprise-router/instances/{enterprise_router_id}	er:instances:update	√	√
Querying details about an enterprise router	GET /v3/{project_id}/enterprise-router/instances/{enterprise_router_id}	er:instances:get	√	√
Querying the enterprise router list	GET /v3/{project_id}/enterprise-router/instances	er:instances:list	√	√
Changing the AZs of an enterprise router	POST /v3/{project_id}/enterprise-router/instances/{enterprise_router_id}/change-availability-zone-ids	er:instances:changeAZ	√	√
Deleting an enterprise router	DELETE /v3/{project_id}/enterprise-router/instances/{enterprise_router_id}	er:instances:delete	√	√

5.4 VPC Attachments

Permission	API	Action	Project	Enterprise Project
Creating a VPC attachment	POST /v3/{project_id}/enterprise-router/{er_id}/vpc-attachments	er:attachments:create	√	√
Updating a VPC attachment	PUT /v3/{project_id}/enterprise-router/{er_id}/vpc-attachments/{vpc_attachment_id}	er:attachments:update	√	√
Querying details about a VPC attachment	GET /v3/{project_id}/enterprise-router/{er_id}/vpc-attachments/{vpc_attachment_id}	er:attachments:get	√	√

Permission	API	Action	Project	Enterprise Project
Querying the VPC attachment list	GET /v3/{project_id}/enterprise-router/{er_id}/vpc-attachments	er:attachments:list	√	√
Deleting a VPC attachment	DELETE /v3/{project_id}/enterprise-router/{er_id}/vpc-attachments/{vpc_attachment_id}	er:attachments:delete	√	√

5.5 Other Types of Attachments

Permission	API	Action	IAM Project	Enterprise Project
Updating an attachment	PUT /v3/{project_id}/enterprise-router/{er_id}/attachments/{attachment_id}	er:attachments:update	√	√
Querying details about an attachment	GET /v3/{project_id}/enterprise-router/{er_id}/attachments/{attachment_id}	er:attachments:get	√	√
Querying the attachment list	GET /v3/{project_id}/enterprise-router/{er_id}/attachments	er:attachments:list	√	√

5.6 Route Tables

Permission	API	Action	IAM Project	Enterprise Project
Creating a route table	POST /v3/{project_id}/enterprise-router/{er_id}/route-tables	er:routeTables:create	√	√
Updating a route table	PUT /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}	er:routeTables:update	√	√

Permission	API	Action	IAM Project	Enterprise Project
Querying details about a route table	GET /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}	er:routeTables:get	√	√
Querying the route table list	GET /v3/{project_id}/enterprise-router/{er_id}/route-tables	er:routeTables:list	√	√
Deleting a route table	DELETE /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}	er:routeTables:delete	√	√

5.7 Associations

Permission	API	Action	IAM Project	Enterprise Project
Creating an association	POST /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/associate	er:associations:associate	√	√
Querying the association list	GET /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/associations	er:associations:list	√	√
Deleting an association	POST /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/disassociate	er:associations:disassociate	√	√

5.8 Propagations

Permission	API	Action	IAM Project	Enterprise Project
Creating a propagation	POST /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/enable-propagations	er:propagations:enable	√	√

Permission	API	Action	IAM Project	Enterprise Project
Querying the propagation list	GET /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/propagations	er:propagations:list	√	√
Deleting a propagation	POST /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/disable-propagations	er:propagations:disable	√	√

5.9 Routes

Permission	API	Action	IAM Project	Enterprise Project
Creating a static route	POST /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/static-routes	er:routes:create	√	√
Updating a static route	PUT /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/static-routes/{route_id}	er:routes:update	√	√
Querying details about a static route	GET /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/static-routes/{route_id}	er:routes:get	√	√
Querying static routes	GET /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/static-routes	er:routes:list	√	√
Querying effective routes	GET /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/routes	er:routes:list	√	√
Deleting a static route	DELETE /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/static-routes/{route_id}	er:routes:delete	√	√

5.10 Flow Logs

Permission	API	Action	IAM Project	Enterprise Project
Creating a flow log	POST /v3/{project_id}/enterprise-router/{er_id}/flow-logs	er:flowlogs:create	√	√
Querying the flow log list	GET /v3/{project_id}/enterprise-router/{er_id}/flow-logs	er:flowlogs:list	√	√
Querying details about a flow log	GET /v3/{project_id}/enterprise-router/{er_id}/flow-logs/{flow_log_id}	er:flowlogs:show	√	√
Updating a flow log	PUT /v3/{project_id}/enterprise-router/{er_id}/flow-logs/{flow_log_id}	er:flowlogs:update	√	√
Deleting a flow log	DELETE /v3/{project_id}/enterprise-router/{er_id}/flow-logs/{flow_log_id}	er:flowlogs:delete	√	√
Enabling flow logging	POST /v3/{project_id}/enterprise-router/{er_id}/flow-logs/{flow_log_id}/enable	er:flowlogs:enable	√	√
Disabling flow logging	POST /v3/{project_id}/enterprise-router/{er_id}/flow-logs/{flow_log_id}/disable	er:flowlogs:disable	√	√

5.11 Tags

Permission	API	Action	IAM Project	Enterprise Project
Querying tags by resource type	GET /v3/{project_id}/{resource_type}/tags	er:tags:list	√	√

Permission	API	Action	IAM Project	Enterprise Project
Querying resource tags	GET /v3/{project_id}/{resource_type}/{resource_id}/tags	er:tags:get	√	√
Creating a resource tag	POST /v3/{project_id}/{resource_type}/{resource_id}/tags	er:tags:create	√	√
Adding or deleting resource tags in batches	POST /v3/{project_id}/{resource_type}/{resource_id}/tags/action	er:tags:create	√	√
Deleting a resource tag	POST /v3/{project_id}/{resource_type}/{resource_id}/tags/{key}	er:tags:delete	√	√

5.12 Quota Management

Permission	API	Action	IAM Project	Enterprise Project
Querying quotas	GET /v3/{project_id}/enterprise-router/quotas	er:quotas:list	√	√

A Appendixes

A.1 Status Codes

Table A-1 Normal status codes

Status Code	Message	Description
200	OK	Normal response code for the GET, PUT, and POST operations
201	Created	Normal response code for POST operations
202	Accepted	Operations that take a long time to process. The request has been accepted but the processing is not complete.
204	No Content	Normal response code for DELETE operations

Table A-2 Abnormal status codes

Status Code	Message	Description
400	Bad Request	The server failed to process the request.
401	Unauthorized	You must enter a username and the password to access the requested page.
403	Forbidden	Access to the requested page is forbidden.
404	Not Found	The requested page was not found.
405	Method Not Allowed	The request method is not allowed.

Status Code	Message	Description
406	Not Acceptable	Response generated by the server is not acceptable to the client.
407	Proxy Authentication Required	You must use the proxy server for authentication. Then, the request can be processed.
408	Request Timeout	The request timed out.
409	Conflict	The request could not be processed due to a conflict.
500	Internal Server Error	The request is not completed because an exception occurs.
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 the upstream server.
503	Service Unavailable	The request is not completed because the system is temporarily abnormal.
504	Gateway Timeout	The gateway timed out.

A.2 Error Codes

If an error code starting with APIGW is returned after you call an API, rectify the fault by referring to the instructions provided in **API Gateway Error Codes**.

Status Code	Error Codes	Error Message	Description	Solution
400	ER.04001003	The enterprise router is unavailable or is being operated.	The enterprise router is unavailable or is being operated.	Check whether the enterprise router is available and try again.
400	ER.04001104	The default route table association function is not enabled.	The default route table association function is not enabled.	Enable the default route table association function and try again.

Status Code	Error Codes	Error Message	Description	Solution
400	ER.04001105	The default route table propagation function is not enabled.	The default route table propagation function is not enabled.	Enable the default route table propagation function and try again.
400	ER.04001106	Invalid ASN.	Invalid ASN.	Enter a valid ASN.
400	ER.04002002	The association already exists.	The association already exists.	Check the association and try again.
400	ER.04002003	An operation is being performed on this association.	An operation is being performed on this association.	Try again after the association status changes to Normal.
400	ER.04003002	The propagation already exists.	The propagation already exists.	Check the propagation and try again.
400	ER.04003003	An operation is being performed on this propagation.	An operation is being performed on this propagation.	Try again after the propagation status changes to Normal.
400	ER.04004002	This attachment is being used by other resources.	This attachment is being used by other resources.	Check whether the attachment is being used by other resources. If there are such resources, delete them and try again.
400	ER.04004003	This attachment is unavailable or is being operated.	This attachment is unavailable or is being operated.	Check whether the attachment is available and try again.
400	ER.04004004	This resource is being used by another attachment.	This resource is being used by another attachment.	Check whether an attachment has been created for the resource.
400	ER.04004101	This route already exists in the VPC route table.	This route already exists in the VPC route table.	Disable the Auto Add Routes function and try again.

Status Code	Error Codes	Error Message	Description	Solution
400	ER.04004102	Failed to add the route to the VPC route table.	Failed to add the route to the VPC route table.	Check whether a route with the same destination already exists in the VPC route table.
400	ER.04005003	This route table is unavailable or is being operated.	This route table is unavailable or is being operated.	Check whether the route table is available and try again.
400	ER.04006002	The destination of the route already exists.	The destination of the route already exists.	Check the destination in the route.
400	ER.04006103	The destination of the route is invalid.	The destination of the route is invalid.	Check the destination in the route.
400	ER.04006104	The destination cannot be 127.0.0.0/8, 169.254.0.0/16, 224.0.0.0/4, or any of their subnets.	The destination cannot be 127.0.0.0/8, 169.254.0.0/16, 224.0.0.0/4, or any of their subnets.	Do not add a route with destination set to 127.0.0.0/8, 169.254.0.0/16, 224.0.0.0/4, or any of their subnets.
400	ER.04006105	The network instance type of the next hop is not supported.	The network instance type of the next hop is not supported.	Use another type of network instance.
400	ER.04006106	A blackhole route cannot have a next hop. A non-blackhole route must have a next hop.	Invalid route.	Check the route.
400	ER.04008500	Flow logs are not supported by the resource type.	Flow logs are not supported by the resource type.	Check the resource type.

Status Code	Error Codes	Error Message	Description	Solution
400	ER.04008501	The flow log task does not exist.	The flow log task does not exist.	Check the flow log ID.
400	ER.04008502	The flow log task is being operated.	The flow log task is being operated.	Check the flow log task status and try again later.
400	ER.04008503	The flow log task already exists.	The flow log task already exists.	Check the flow log task.
400	ER.04009005	Invalid parameters.	Invalid parameters.	Check the parameters.
400	ER.04009008	Insufficient quota.	Insufficient quota.	Submit a service ticket to apply for quota increase.
400	ER.04009009	The quota type does not exist.	The quota type does not exist.	Check the parameters.
400	ER.04009011	The resource is frozen.	The resource is frozen.	Unfreeze the resource and try again.
400	ER.04009012	This account is frozen or restricted.	This account is frozen or restricted.	Contact customer service.
400	ER.04009013	This enterprise router has frozen attachments.	This enterprise router has frozen attachments.	Contact customer service.
400	ER.04009019	This feature is not available yet.	This feature is not available yet.	Contact customer service.
404	ER.04041001	This enterprise router does not exist.	This enterprise router does not exist.	Check the parameters.
404	ER.04042001	This association does not exist.	This association does not exist.	Check the parameters.

Status Code	Error Codes	Error Message	Description	Solution
404	ER.04043001	This propagation does not exist.	This propagation does not exist.	Check the parameters.
404	ER.04044001	This attachment does not exist.	This attachment does not exist.	Check the parameters.
404	ER.04045001	This route table does not exist.	This route table does not exist.	Check the parameters.
404	ER.04046001	This route does not exist.	This route does not exist.	Check the parameters.
409	ER.04091002	This enterprise router is being used by other resources.	This enterprise router is being used by other resources.	Delete the resources and try again.
409	ER.04095002	This route table is being used by other resources.	This route table is being used by other resources.	Delete the resources and try again.
409	ER.04095104	The default association route table cannot be deleted.	The default association route table cannot be deleted.	Disable the Default Route Table Association function.
409	ER.04095105	The default propagation route table cannot be deleted.	The default propagation route table cannot be deleted.	Disable the Default Route Table Propagation function.
503	ER.05039006	This service is temporarily unavailable.	This service is temporarily unavailable.	Contact customer service or try again later.

A.3 Obtaining a Project ID

Scenarios

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

- **Obtain the Project ID by Calling an API**
- **Obtain the Project ID from the Console**

Obtain the Project ID by Calling an API

You can obtain a project ID by calling the API used to **query projects based on specified criteria**.

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

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

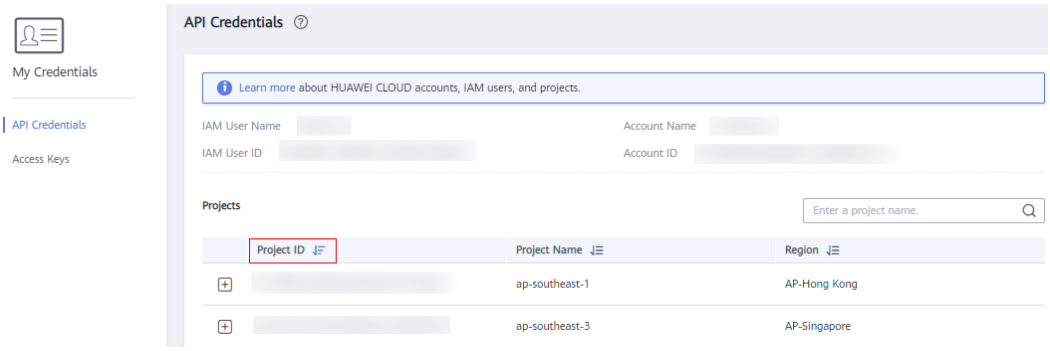
```
{
    "projects": [
        {
            "domain_id": "65ewtrgaggshhk1223245sghjlse684b",
            "is_domain": false,
            "parent_id": "65ewtrgaggshhk1223245sghjlse684b",
            "name": "project_name",
            "description": "",
            "links": {
                "next":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

Obtain a Project ID from the Console

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

1. 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 A-1 Viewing the project ID



B Change History

Released On	Change History
2023-11-17	This issue is the first official release.

