

企业路由器

# API 参考

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# 目录

<b>1 使用前必读</b>	<b>1</b>
1.1 概述	1
1.2 调用说明	1
1.3 终端节点 (Endpoint)	1
1.4 约束与限制	1
1.5 基本概念	2
<b>2 API 概览</b>	<b>4</b>
<b>3 如何调用 API</b>	<b>5</b>
3.1 构造请求	5
3.2 认证鉴权	9
3.3 返回结果	10
<b>4 API</b>	<b>12</b>
4.1 企业路由器	12
4.1.1 创建企业路由器	12
4.1.2 更新企业路由器	21
4.1.3 查询企业路由器详情	25
4.1.4 查询企业路由器列表	30
4.1.5 更新企业路由器的可用区信息	37
4.1.6 删除企业路由器	40
4.2 VPC 连接	43
4.2.1 创建 VPC 连接	43
4.2.2 更新 VPC 连接基本信息	50
4.2.3 查询 VPC 连接详情	54
4.2.4 查询 VPC 连接列表	57
4.2.5 删除 VPC 连接	63
4.3 其他连接	66
4.3.1 更新连接基本信息	66
4.3.2 查询连接详情	72
4.3.3 查询连接列表	77
4.4 路由表	84
4.4.1 创建路由表	84
4.4.2 更新路由表信息	91

4.4.3 查询路由表详情.....	97
4.4.4 查询路由表列表.....	102
4.4.5 删除路由表.....	108
4.5 关联.....	111
4.5.1 创建路由关联.....	111
4.5.2 查询路由关联列表.....	116
4.5.3 删除路由关联.....	120
4.6 传播.....	124
4.6.1 创建路由传播.....	124
4.6.2 查询路由传播列表.....	130
4.6.3 删除路由传播.....	136
4.7 路由.....	140
4.7.1 创建静态路由.....	140
4.7.2 更新静态路由.....	143
4.7.3 查询静态路由详情.....	149
4.7.4 查询静态路由列表.....	153
4.7.5 查询有效路由列表.....	159
4.7.6 删除静态路由.....	162
4.8 标签.....	165
4.8.1 查询项目标签.....	165
4.8.2 查询资源标签.....	169
4.8.3 创建资源标签.....	172
4.8.4 批量添加删除资源标签.....	177
4.8.5 删除资源标签.....	185
4.9 配额管理.....	189
4.9.1 查询配额.....	189
4.10 可用区.....	194
4.10.1 查询可用区列表.....	194
4.11 流日志.....	198
4.11.1 创建流日志.....	198
4.11.2 查询流日志列表.....	204
4.11.3 查询流日志详情.....	210
4.11.4 更新流日志基本信息.....	212
4.11.5 删除流日志.....	216
4.11.6 开启流日志.....	219
4.11.7 关闭流日志.....	223
<b>5 权限和授权项.....</b>	<b>229</b>
5.1 权限及授权项说明.....	229
5.2 基于角色授权的服务授权项.....	229
5.3 企业路由器.....	230
5.4 VPC 连接.....	231
5.5 其他连接.....	232

---

5.6 路由表.....	232
5.7 关联.....	233
5.8 传播.....	233
5.9 路由.....	234
5.10 流日志.....	235
5.11 标签.....	236
5.12 配额管理.....	236
<b>A 附录.....</b>	<b>237</b>
A.1 状态码.....	237
A.2 错误码.....	238
A.3 获取项目 ID.....	242
<b>B 修订记录.....</b>	<b>244</b>

# 1 使用前必读

## 1.1 概述

欢迎使用企业路由器（Enterprise Router, ER）。企业路由器可以连接虚拟私有云（Virtual Private Cloud, VPC）或本地网络来构建中心辐射型组网，是云上大规格，高带宽，高性能的集中路由器。企业路由器使用边界网关协议（Border Gateway Protocol, BGP），支持路由学习、动态选路以及链路切换，极大的提升网络的可扩展性及运维效率，从而保证业务的连续性。

您可以使用本文档提供API对企业路由器进行相关操作，如创建企业路由器、在企业路由器中添加连接、创建路由表、添加路由等。支持的全部操作请参见[API概览](#)。

在调用企业路由器API之前，请确保已经充分了解企业路由器相关概念，详细信息请参见“[什么是企业路由器](#)”。

## 1.2 调用说明

企业路由器提供了REST（Representational State Transfer）风格API，支持您通过HTTPS请求调用，调用方法请参见[如何调用API](#)。

## 1.3 终端节点（Endpoint）

终端节点（Endpoint）即调用API的**请求地址**，不同服务不同区域的终端节点不同，您可以从[地区和终端节点](#)中查询所有服务的终端节点。

## 1.4 约束与限制

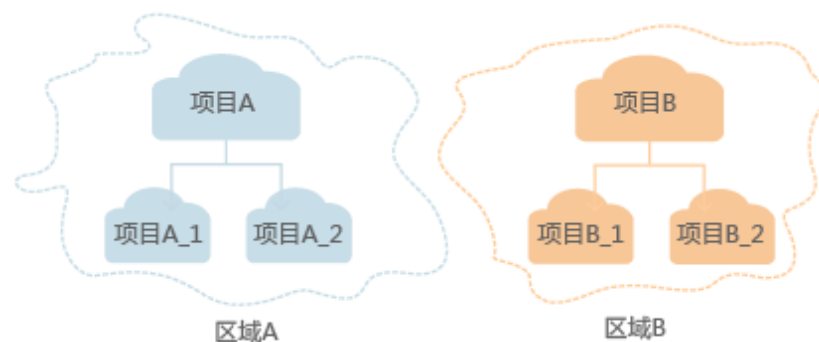
您能创建的企业路由器资源的数量与配额有关系，如果您想查看服务配额、扩大配额，具体请参见“[申请扩大配额](#)”。

更详细的限制请参见具体API的说明。

## 1.5 基本概念

- 账号  
用户注册时的账号，账号对其所拥有的资源及云服务具有完全的访问权限，可以重置用户密码、分配用户权限等。由于账号是付费主体，为了确保账号安全，建议您不要直接使用账号进行日常管理工作，而是创建用户并使用用户进行日常管理工作。
- 用户  
由账号在IAM中创建的用户，是云服务的使用人员，具有身份凭证（密码和访问密钥）。  
在[我的凭证](#)下，您可以查看账号ID和IAM用户ID。通常在调用API的鉴权过程中，您需要用到账号、用户和密码等信息。
- 区域（Region）  
从地理位置和网络时延维度划分，同一个Region内共享弹性计算、块存储、对象存储、VPC网络、弹性公网IP、镜像等公共服务。Region分为通用Region和专属Region，通用Region指面向公共租户提供通用云服务的Region；专属Region指只承载同一类业务或只面向特定租户提供业务服务的专用Region。  
详情请参见[区域和可用区](#)。
- 可用区（AZ，Availability Zone）  
一个可用区是一个或多个物理数据中心的集合，有独立的风火水电，AZ内逻辑上再将计算、网络、存储等资源划分成多个集群。一个Region中的多个AZ间通过高速光纤相连，以满足用户跨AZ构建高可用性系统的需求。
- 项目  
区域默认对应一个项目，这个项目由系统预置，用来隔离物理区域间的资源（计算资源、存储资源和网络资源），以默认项目为单位进行授权，用户可以访问您账号中该区域的所有资源。如果您希望进行更加精细的权限控制，可以在区域默认的项目中创建子项目，并在子项目中创建资源，然后以子项目为单位进行授权，使得用户仅能访问特定子项目中的资源，使得资源的权限控制更加精确。

图 1-1 项目隔离模型



同样在[我的凭证](#)下，您可以查看项目ID。

- 企业项目  
企业项目是项目的升级版，针对企业不同项目间的资源进行分组和管理，是逻辑隔离。企业项目中可以包含多个区域的资源，且项目中的资源可以迁入迁出。

关于企业项目ID的获取及企业项目特性的详细信息，请参见《[企业管理用户指南](#)》。



# 2 API 概览

通过使用企业路由器服务所提供的接口，您可以完整的使用企业路由器服务的所有功能。

表 2-1 接口说明

类型	说明
企业路由器	您可以通过企业路由器相关的API，执行查询企业路由器实例列表、创建企业路由器实例、更新企业路由器实例以及删除企业路由器实例等操作。
VPC连接	您可以通过VPC连接相关的API，执行查询VPC连接列表、创建VPC连接、更新VPC连接以及切换VPC连接的子网等操作。
其他连接	您可以通过连接相关的API，针对VGW连接、Peering连接，执行更新连接信息、查询连接详情以及查询连接列表等操作。
路由表	您可以通过路由表相关的API，执行查询路由表列表、创建路由表、更新路由表以及删除路由表等操作。
关联	您可以通过关联相关的API，执行查询路由表关联列表、在路由表创建以及删除关联等操作。
传播	您可以通过传播相关的API，执行查询路由传播列表、在路由表创建以及删除传播等操作。
路由	您可以通过路由相关的API，执行查询路由、修改路由、创建及删除静态路由等操作。
标签	您可以通过标签相关的API，执行通过标签查询项目标签、查询资源标签、创建以及删除资源标签等操作。
配额	您可以通过配额相关的API，执行查询企业路由器使用量、VPC连接使用量等操作。
可用区	您可以通过可用区API，执行查询支持创建企业路由器实例的可用区列表操作。
流日志	您可以通过流日志相关的API，执行创建流日志、查询流日志、开启以及关闭流日志等操作。

# 3 如何调用 API

## 3.1 构造请求

本节介绍REST API请求的组成，并以调用IAM服务的[获取用户Token](#)来说明如何调用API，该API获取用户的Token，Token可以用于调用其他API时鉴权。

您还可以通过这个视频教程了解如何构造请求调用API：<https://bbs.huaweicloud.com/videos/102987>。

### 请求 URI

请求URI由如下部分组成：

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

尽管请求URI包含在请求消息头中，但大多数语言或框架都要求您从请求消息中单独传递它，所以在此单独强调。

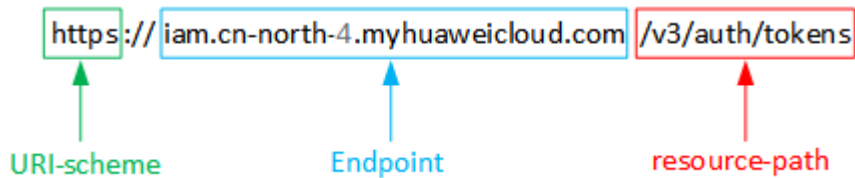
表 3-1 URI 中的参数说明

参数	描述
URI-scheme	表示用于传输请求的协议，当前所有API均采用HTTPS协议。
Endpoint	指定承载REST服务端点的服务器域名或IP，不同服务不同区域的Endpoint不同，您可以从 <a href="#">地区和终端节点</a> 获取。 例如IAM服务在“华北-北京四”区域的Endpoint为“iam.cn-north-4.myhuaweicloud.com”。
resource-path	资源路径，即API访问路径。从具体API的URI模块获取，例如“获取用户Token”API的resource-path为“/v3/auth/tokens”。
query-string	查询参数，是可选部分，并不是每个API都有查询参数。查询参数前面需要带一个“？”，形式为“参数名=参数取值”，例如“？limit=10”，表示查询不超过10条数据。

例如您需要获取IAM在“华北-北京四”区域的Token，则需使用“华北-北京四”区域的Endpoint（iam.cn-north-4.myhuaweicloud.com），并在[获取用户Token](#)的URI部分找到resource-path（/v3/auth/tokens），拼接起来如下所示。

```
https://iam.cn-north-4.myhuaweicloud.com/v3/auth/tokens
```

图 3-1 URI 示意图



### 说明

为方便查看，在每个具体API的URI部分，只给出resource-path部分，并将请求方法写在一起。这是因为URI-scheme都是HTTPS，而Endpoint在同一个区域也相同，所以简洁起见将这两部分省略。

## 请求方法

HTTP请求方法（也称为操作或动词），它告诉服务您正在请求什么类型的操作。

表 3-2 HTTP 方法

方法	说明
GET	请求服务器返回指定资源。
PUT	请求服务器更新指定资源。
POST	请求服务器新增资源或执行特殊操作。
DELETE	请求服务器删除指定资源，如删除对象等。
HEAD	请求服务器资源头部。
PATCH	请求服务器更新资源的部分内容。 当资源不存在的时候，PATCH可能会去创建一个新的资源。

在[获取用户Token](#)的URI部分，您可以看到其请求方法为“POST”，则其请求为：

```
POST https://iam.cn-north-1.myhuaweicloud.com/v3/auth/tokens
```

## 请求消息头

附加请求头字段，如指定的URI和HTTP方法所要求的字段。例如定义消息体类型的请求头“Content-Type”，请求鉴权信息等。

详细的公共请求消息头字段请参见[表3-3](#)。

表 3-3 公共请求消息头

名称	描述	是否必选	示例
Host	请求的服务器信息，从服务API的URL中获取。值为hostname[:port]。端口缺省时使用默认的端口，https的默认端口为443。	否 使用AK/SK认证时该字段必选。	code.test.com or code.test.com:443
Content-Type	消息体的类型（格式）。推荐用户使用默认值application/json，有其他取值时会在具体接口中专门说明。	是	application/json
Content-Length	请求body长度，单位为Byte。	否	3495
X-Project-Id	project id，项目编号。请参考 <a href="#">获取项目ID</a> 章节获取项目编号。	否 如果是专属云场景采用AK/SK认证方式的接口请求，或者多project场景采用AK/SK认证的接口请求，则该字段必选。	e9993fc787d94b6c886cb aa340f9c0f4
X-Auth-Token	用户Token。 用户Token也就是调用 <a href="#">获取用户Token</a> 接口的响应值，该接口是唯一不需要认证的接口。 请求响应成功后在响应消息头（Headers）中包含的“X-Subject-Token”的值即为Token值。	否 使用Token认证时该字段必选。	注：以下仅为Token示例片段。 MIIPAgYJKoZlhvcNAQcCo ...ggg1BBIIlNPXsidG9rZ

### 📖 说明

API同时支持使用AK/SK认证，AK/SK认证使用SDK对请求进行签名，签名过程会自动往请求中添加Authorization（签名认证信息）和X-Sdk-Date（请求发送的时间）请求头。

AK/SK认证的详细说明请参见[认证鉴权](#)的“AK/SK认证”。

对于[获取用户Token](#)接口，由于不需要认证，所以只添加“Content-Type”即可，添加消息头后的请求如下所示。

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

### 请求消息体（可选）

该部分可选。请求消息体通常以结构化格式（如JSON或XML）发出，与请求消息头中Content-Type对应，传递除请求消息头之外的内容。若请求消息体中的参数支持中文，则中文字符必须为UTF-8编码。

每个接口的请求消息体内容不同，也并不是每个接口都需要有请求消息体（或者说消息体为空），GET、DELETE操作类型的接口就不需要消息体，消息体具体内容需要根据具体接口而定。

对于[获取用户Token](#)接口，您可以从接口的请求部分看到所需的请求参数及参数说明。将消息体加入后的请求如下所示，加粗的斜体字段需要根据实际值填写，其中***username***为用户名，***domainname***为用户所属的账号名称，***\$ADMIN\_PASS***表示用户登录密码，***xxxxxxxxxxxxxxxxxxxx***为project的名称，如“cn-north-1”，您可以从[地区和终端节点](#)获取。

### 📖 说明

scope参数定义了Token的作用域，下面示例中获取的Token仅能访问project下的资源。您还可以设置Token的作用域为某个账号下所有资源或账号的某个project下的资源，详细定义请参见[获取用户Token](#)。

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

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username",
          "password": "$ADMIN_PASS", //建议在配置文件或者环境变量中密文存放，使用时解密，确保安全
          "domain": {
            "name": "domainname"
          }
        }
      }
    },
    "scope": {
      "project": {
        "name": "xxxxxxxxxxxxxxxxxxxx"
      }
    }
  }
}
```

到这里为止这个请求需要的内容就具备齐全了，您可以使用[curl](#)、[Postman](#)或直接编写代码等方式发送请求调用API。对于获取用户Token接口，返回的响应消息头中的

“X-Subject-Token”就是需要获取的用户Token。有了Token之后，您就可以使用Token认证调用其他API。

## 3.2 认证鉴权

调用接口有如下两种认证方式，您可以选择其中一种进行认证鉴权。

- Token认证：通过Token认证调用请求。
- AK/SK认证：通过AK（Access Key ID）/SK（Secret Access Key）加密调用请求。推荐使用AK/SK认证，其安全性比Token认证要高。

### Token 认证

#### 📖 说明

Token的有效期为24小时，需要使用一个Token鉴权时，可以先缓存起来，避免频繁调用。

Token在计算机系统中代表令牌（临时）的意思，拥有Token就代表拥有某种权限。Token认证就是在调用API的时候将Token加到请求消息头中，从而通过身份认证，获得操作API的权限。Token可通过调用[获取用户Token](#)接口获取。

调用本服务API需要项目级别的Token，即调用[获取用户Token](#)接口时，请求body中**auth.scope**的取值需要选择**project**，如下所示。

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username", //IAM用户名
          "password": "*****", //IAM用户密码
          "domain": {
            "name": "domainname" //IAM用户所属账号名
          }
        }
      }
    },
    "scope": {
      "project": {
        "name": "xxxxxxx" //项目名称
      }
    }
  }
}
```

获取Token后，再调用其他接口时，您需要在请求消息头中添加“X-Auth-Token”，其值即为Token。例如Token值为“ABCDEFJ...”，则调用接口时将“X-Auth-Token: ABCDEFJ...”加到请求消息头即可，如下所示。

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

您还可以通过这个视频教程了解如何使用Token认证：<https://bbs.huaweicloud.com/videos/101333>。

## AK/SK 认证

### 📖 说明

AK/SK签名认证方式仅支持消息体大小在12MB以内，12MB以上的请求请使用Token认证。

AK/SK认证就是使用AK/SK对请求进行签名，在请求时将签名信息添加到消息头，从而通过身份认证。

- AK ( Access Key ID )：访问密钥ID。与私有访问密钥关联的唯一标识符；访问密钥ID和私有访问密钥一起使用，对请求进行加密签名。
- SK ( Secret Access Key )：私有访问密钥。与访问密钥ID结合使用，对请求进行加密签名，可标识发送方，并防止请求被修改。

使用AK/SK认证时，您可以基于签名算法使用AK/SK对请求进行签名，也可以使用专门的签名SDK对请求进行签名。详细的签名方法和SDK使用方法请参见[API签名指南](#)。

### 📖 说明

签名SDK只提供签名功能，与服务提供的SDK不同，使用时请注意。

## 3.3 返回结果

### 状态码

请求发送以后，您会收到响应，其中包含状态码、响应消息头和消息体。

状态码是一组从1xx到5xx的数字代码，状态码表示了请求响应的状态，完整的状态码列表请参见[状态码](#)。

对于[获取用户Token](#)接口，如果调用后返回状态码为“201”，则表示请求成功。

### 响应消息头

对应请求消息头，响应同样也有消息头，如“Content-type”。

对于[获取用户Token](#)接口，返回如[图3-2](#)所示的消息头，其中“X-Subject-Token”就是需要获取的用户Token。有了Token之后，您就可以使用Token认证调用其他API。

### 📖 说明

建议在配置文件或者环境变量中密文存放，使用时解密，确保安全。

图 3-2 获取用户 Token 响应消息头

```
connection → keep-alive
content-type → application/json
date → Tue, 12 Feb 2019 06:52:13 GMT
server → Web Server
strict-transport-security → max-age=31536000; includeSubdomains;
transfer-encoding → chunked
via → proxy A
x-content-type-options → nosniff
x-download-options → noopen
x-frame-options → SAMEORIGIN
x-iam-trace-id → 218d45ab-d674-4995-af3a-2d0255ba41b5
x-subject-token → [REDACTED]
x-xss-protection → 1; mode=block;
```

## 响应消息体（可选）

该部分可选。响应消息体通常以结构化格式（如JSON或XML）返回，与响应消息头中 Content-Type对应，传递除响应消息头之外的内容。

对于[获取用户Token](#)接口，返回如下消息体。为篇幅起见，这里只展示部分内容。

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

```

当接口调用出错时，会返回错误码及错误信息说明，错误响应的Body体格式如下所示。

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

其中，error\_code表示错误码，error\_msg表示错误描述信息。



# 4 API

## 4.1 企业路由器

### 4.1.1 创建企业路由器

#### 功能介绍

创建企业路由器实例，如果使能默认关联路由表或使能默认传递路由表，那么系统会默认创建一张路由表，作为默认关联路由表或默认传递路由表。

#### 调用方法

请参见[如何调用API](#)。

#### URI

POST /v3/{project\_id}/enterprise-router/instances

表 4-1 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID

## 请求参数

表 4-2 请求 Header 参数

参数	是否必选	参数类型	描述
X-Client-Token	否	String	幂等性标识 最小长度：1 最大长度：64

表 4-3 请求 Body 参数

参数	是否必选	参数类型	描述
instance	是	CreateEnterpriseRouter object	企业路由器

表 4-4 CreateEnterpriseRouter

参数	是否必选	参数类型	描述
name	是	String	企业路由器实例名称，取值范围：1-64个字符，支持数字、字母、中文、_(下划线)、-(中划线)、.(点) 最小长度：1 最大长度：64
description	否	String	企业路由器实例描述信息 最小长度：0 最大长度：255
asn	是	Long	企业路由器实例的BGP AS号
enterprise_project_id	否	String	企业项目ID
charge_mode	否	String	计费模式 按需 缺省值：postPaid
tags	否	Array of Tag objects	标签信息
enable_default_propagation	否	Boolean	是否开启默认路由表传播，默认false不开启 缺省值：false

参数	是否必选	参数类型	描述
enable_default_association	否	Boolean	是否开启默认路由表关联，默认false不开启 缺省值： <b>false</b>
availability_zone_ids	是	Array of strings	企业路由器所在的可用区列表 最小长度： <b>0</b> 最大长度： <b>128</b>
auto_accept_shared_attachments	否	Boolean	是否开启自动接受共享连接创建，默认false不开启 缺省值： <b>false</b>

表 4-5 Tag

参数	是否必选	参数类型	描述
key	否	String	标签键，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母（包含中文）、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• _sys_开头属于系统标签，租户不能输入。</li><li>• 标签key不能为空（长度不能为0）。</li><li>• 长度在1-128之间。</li></ul> 最小长度： <b>1</b> 最大长度： <b>128</b>
value	否	String	标签值，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母（包含中文）、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• 资源标签值可以为空（empty or null）。</li><li>• 长度在0-255之间。</li></ul> 最小长度： <b>0</b> 最大长度： <b>255</b>

## 响应参数

状态码： 202

表 4-6 响应 Header 参数

参数	参数类型	描述
X-Client-Token	-	幂等性标识

表 4-7 响应 Body 参数

参数	参数类型	描述
instance	<a href="#">EnterpriseRouter</a> object	企业路由器
request_id	String	请求ID

表 4-8 EnterpriseRouter

参数	参数类型	描述
id	String	企业路由器实例的ID
name	String	企业路由器实例名称
description	String	企业路由器实例描述信息
state	String	运行状态:pending available modifying deleting deleted failed
tags	Array of <a href="#">Tag</a> objects	标签信息
charge_mode	String	计费模式 按需 缺省值： <b>postPaid</b>
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
enterprise_project_id	String	企业项目ID
project_id	String	项目ID
asn	Long	企业路由器实例的BGP AS号
enable_default_propagation	Boolean	是否开启默认路由表传播，默认false不开启

参数	参数类型	描述
enable_default_association	Boolean	是否开启默认路由表关联，默认false不开启
default_propagation_route_table_id	String	默认传播路由表id
default_association_route_table_id	String	默认关联路由表id
availability_zone_ids	Array of strings	企业路由器所在可用区信息
auto_accept_shared_attachments	Boolean	是否自动接受共享连接创建，默认false不开启

表 4-9 Tag

参数	参数类型	描述
key	String	<p>标签键，规则：</p> <ul style="list-style-type: none"> <li>可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li> <li>_sys_开头属于系统标签，租户不能输入。</li> <li>标签key不能为空（长度不能为0）。</li> <li>长度在1-128之间。</li> </ul> <p>最小长度：1 最大长度：128</p>
value	String	<p>标签值，规则：</p> <ul style="list-style-type: none"> <li>可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li> <li>资源标签值可以为空（empty or null）。</li> <li>长度在0-255之间。</li> </ul> <p>最小长度：0 最大长度：255</p>

## 请求示例

创建一个企业路由器，名称为“my\_er”，开启默认路由表关联和默认路由表传播功能

```
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" ]
  }
}
```

## 响应示例

**状态码： 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 代码示例

SDK代码示例如下。

### Java

创建一个企业路由器，名称为“my\_er”，开启默认路由表关联和默认路由表传播功能

```
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.ErrRegion;
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> listInstanceAvailabilityZonelds = new ArrayList<>();
        listInstanceAvailabilityZonelds.add("az1");
        listInstanceAvailabilityZonelds.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)
            .withAvailabilityZonelds(listInstanceAvailabilityZonelds);
        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

创建一个企业路由器，名称为“my\_er”，开启默认路由表关联和默认路由表传播功能

```
# 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()
        listAvailabilityZoneldsInstance = [
            "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=listAvailabilityZoneldsInstance
        )
        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

创建一个企业路由器，名称为“my\_er”，开启默认路由表关联和默认路由表传播功能

```
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 listAvailabilityZoneldsInstance = []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,
    AvailabilityZonelds: listAvailabilityZoneldsInstance,
}
request.Body = &model.CreateEnterpriseRouterRequestBody{
    Instance: instancebody,
}
response, err := client.CreateEnterpriseRouter(request)
if err == nil {
    fmt.Printf("%+v\n", response)
} else {
    fmt.Println(err)
}
}
    
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

## 4.1.2 更新企业路由器

### 功能介绍

更新企业路由器基本信息。

### 接口约束

除了name和description，其它信息只有在企业路由器实例状态为available的时候才能更新。

### 调用方法

请参见[如何调用API](#)。

### URI

PUT /v3/{project\_id}/enterprise-router/instances/{er\_id}

表 4-10 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID

### 请求参数

表 4-11 请求 Body 参数

参数	是否必选	参数类型	描述
instance	否	<a href="#">UpdateEnterpriseRouter</a> object	更新企业路由器请求体

表 4-12 UpdateEnterpriseRouter

参数	是否必选	参数类型	描述
name	否	String	企业路由器实例名称，取值范围：1-64个字符，支持数字、字母、中文、_(下划线)、-(中划线)、.(点) 最小长度：1 最大长度：64
description	否	String	企业路由器实例描述信息 最小长度：0 最大长度：255
enable_default_propagation	否	Boolean	是否开启默认传播
enable_default_association	否	Boolean	是否开启默认关联
default_propagation_route_table_id	否	String	默认传播路由表ID
default_association_route_table_id	否	String	默认关联路由表ID
auto_accept_shared_attachments	否	Boolean	是否自动接受共享连接创建，默认false不开启

## 响应参数

状态码： 200

表 4-13 响应 Body 参数

参数	参数类型	描述
instance	<a href="#">EnterpriseRouter</a> object	企业路由器
request_id	String	请求ID

表 4-14 EnterpriseRouter

参数	参数类型	描述
id	String	企业路由器实例的ID

参数	参数类型	描述
name	String	企业路由器实例名称
description	String	企业路由器实例描述信息
state	String	运行状态:pending available modifying deleting deleted failed
tags	Array of <b>Tag</b> objects	标签信息
charge_mode	String	计费模式 按需 缺省值: <b>postPaid</b>
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
enterprise_project_id	String	企业项目ID
project_id	String	项目ID
asn	Long	企业路由器实例的BGP AS号
enable_default_propagation	Boolean	是否开启默认路由表传播, 默认false不开启
enable_default_association	Boolean	是否开启默认路由表关联, 默认false不开启
default_propagation_route_table_id	String	默认传播路由表id
default_association_route_table_id	String	默认关联路由表id
availability_zone_ids	Array of strings	企业路由器所在可用区信息
auto_accept_shared_attachments	Boolean	是否自动接受共享连接创建, 默认false不开启

表 4-15 Tag

参数	参数类型	描述
key	String	标签键，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• _sys_开头属于系统标签，租户不能输入。</li><li>• 标签key不能为空（长度不能为0）。</li><li>• 长度在1-128之间。</li></ul> 最小长度：1 最大长度：128
value	String	标签值，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• 资源标签值可以为空（empty or null）。</li><li>• 长度在0-255之间。</li></ul> 最小长度：0 最大长度：255

## 请求示例

更新企业路由器，开启默认路由表关联和默认路由表传播功能，并指定对应的路由表

```
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"
  }
}
```

## 响应示例

状态码：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"
}
```

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.1.3 查询企业路由器详情

### 功能介绍

查询企业路由器详情

### 调用方法

请参见[如何调用API](#)。

### URI

GET /v3/{project\_id}/enterprise-router/instances/{er\_id}

表 4-16 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID

### 请求参数

无

### 响应参数

状态码: 200

表 4-17 响应 Body 参数

参数	参数类型	描述
instance	<a href="#">EnterpriseRouter</a> object	企业路由器
request_id	String	请求ID

表 4-18 EnterpriseRouter

参数	参数类型	描述
id	String	企业路由器实例的ID
name	String	企业路由器实例名称
description	String	企业路由器实例描述信息
state	String	运行状态:pending available modifying deleting deleted failed
tags	Array of <a href="#">Tag</a> objects	标签信息
charge_mode	String	计费模式 按需 缺省值: <b>postPaid</b>
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
enterprise_project_id	String	企业项目ID
project_id	String	项目ID
asn	Long	企业路由器实例的BGP AS号
enable_default_propagation	Boolean	是否开启默认路由表传播, 默认false不开启
enable_default_association	Boolean	是否开启默认路由表关联, 默认false不开启
default_propagation_route_table_id	String	默认传播路由表id
default_association_route_table_id	String	默认关联路由表id
availability_zone_ids	Array of strings	企业路由器所在可用区信息

参数	参数类型	描述
auto_accept_shared_attachments	Boolean	是否自动接受共享连接创建，默认false不开启

表 4-19 Tag

参数	参数类型	描述
key	String	<p>标签键，规则：</p> <ul style="list-style-type: none"> <li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li> <li>• _sys_开头属于系统标签，租户不能输入。</li> <li>• 标签key不能为空（长度不能为0）。</li> <li>• 长度在1-128之间。</li> </ul> <p>最小长度：1 最大长度：128</p>
value	String	<p>标签值，规则：</p> <ul style="list-style-type: none"> <li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li> <li>• 资源标签值可以为空（empty or null）。</li> <li>• 长度在0-255之间。</li> </ul> <p>最小长度：0 最大长度：255</p>

## 请求示例

获取指定id的企业路由器详情

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

## 响应示例

状态码： 200

OK

```
{
  "instance": {
    "id": "94c2b814-99dc-939a-e811-ae84c61ea3ff",
    "name": "my_er",
    "description": "this is my first enterprise router",
```



```
"project_id" : "08d5a9564a704afda6039ae2babbe3c",
"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 代码示例

SDK代码示例如下。

### 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)
}
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.1.4 查询企业路由器列表

### 功能介绍

查询企业路由器列表

### 接口约束

- 分页查询使用的参数为marker、limit。marker和limit一起使用时才会生效，单独使用无效。
- 支持单字段排序，排序字段有[id,name,description,created\_at,updated\_at]，不支持多字段排序。

### 调用方法

请参见[如何调用API](#)。

### URI

GET /v3/{project\_id}/enterprise-router/instances

表 4-20 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID

表 4-21 Query 参数

参数	是否必选	参数类型	描述
limit	否	Integer	每页返回的个数。取值范围：0~2000。 最小值：0 最大值：2000
marker	否	String	查询的页码id，为空时为查询第一页。使用说明：必须与limit一起使用。 最小长度：1 最大长度：128
enterprise_project_id	否	Array	企业项目ID
state	否	Array	资源状态:pending available modifying deleting deleted failed freezed
id	否	Array	根据资源ID查询，可同时查询多个。
resource_id	否	Array	连接对应的资源ID列表
owned_by_self	否	Boolean	过滤资源是否属于当前租户；取值为true时，只查属于当前租户的资源，不包括共享资源；为false时，查询当前租户及共享给该租户的资源；
sort_key	否	Array	按关键字排序，默认按照id排序，可选值:id name state
sort_dir	否	Array	返回结果按照升序或降序排列，默认为asc,降序为desc

## 请求参数

无

## 响应参数

状态码： 200

表 4-22 响应 Body 参数

参数	参数类型	描述
instances	Array of <b>EnterpriseRouter</b> objects	企业路由器列表
page_info	<b>PageInfo</b> object	分页查询的信息
request_id	String	请求ID

表 4-23 EnterpriseRouter

参数	参数类型	描述
id	String	企业路由器实例的ID
name	String	企业路由器实例名称
description	String	企业路由器实例描述信息
state	String	运行状态:pending available modifying deleting deleted failed
tags	Array of <b>Tag</b> objects	标签信息
charge_mode	String	计费模式 按需 缺省值: <b>postPaid</b>
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
enterprise_project_id	String	企业项目ID
project_id	String	项目ID
asn	Long	企业路由器实例的BGP AS号
enable_default_propagation	Boolean	是否开启默认路由表传播, 默认false不开启
enable_default_association	Boolean	是否开启默认路由表关联, 默认false不开启
default_propagation_route_table_id	String	默认传播路由表id
default_association_route_table_id	String	默认关联路由表id

参数	参数类型	描述
availability_zone_ids	Array of strings	企业路由器所在可用区信息
auto_accept_shared_attachments	Boolean	是否自动接受共享连接创建，默认false不开启

表 4-24 Tag

参数	参数类型	描述
key	String	标签键，规则： <ul style="list-style-type: none"><li>可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>_sys_开头属于系统标签，租户不能输入。</li><li>标签key不能为空（长度不能为0）。</li><li>长度在1-128之间。</li></ul> 最小长度：1 最大长度：128
value	String	标签值，规则： <ul style="list-style-type: none"><li>可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>资源标签值可以为空（empty or null）。</li><li>长度在0-255之间。</li></ul> 最小长度：0 最大长度：255

表 4-25 PageInfo

参数	参数类型	描述
next_marker	String	下一个marker标识，为空时表示最后一页
current_count	Integer	当前列表中资源数量

## 请求示例

- 分页查询2两条记录

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

- 全量查询

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

## 响应示例

状态码： 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 代码示例

SDK代码示例如下。

### 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.ErrRegion;
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)
    }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.1.5 更新企业路由器的可用区信息

### 功能介绍

更新企业路由器的可用区信息，企业路由器实例状态为available的时候才能更新。

### 调用方法

请参见[如何调用API](#)。

### URI

POST /v3/{project\_id}/enterprise-router/instances/{er\_id}/change-availability-zone-ids

表 4-26 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID

### 请求参数

表 4-27 请求 Body 参数

参数	是否必选	参数类型	描述
availability_zone_ids	是	Array of strings	企业路由器实例所在的可用区 最小长度：1 最大长度：256

### 响应参数

状态码： 202

表 4-28 响应 Body 参数

参数	参数类型	描述
instance	<a href="#">EnterpriseRouter</a> object	企业路由器
request_id	String	请求ID

表 4-29 EnterpriseRouter

参数	参数类型	描述
id	String	企业路由器实例的ID
name	String	企业路由器实例名称
description	String	企业路由器实例描述信息
state	String	运行状态:pending available modifying deleting deleted failed
tags	Array of <a href="#">Tag</a> objects	标签信息
charge_mode	String	计费模式 按需 缺省值: <b>postPaid</b>
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
enterprise_project_id	String	企业项目ID
project_id	String	项目ID
asn	Long	企业路由器实例的BGP AS号
enable_default_propagation	Boolean	是否开启默认路由表传播, 默认false不开启
enable_default_association	Boolean	是否开启默认路由表关联, 默认false不开启
default_propagation_route_table_id	String	默认传播路由表id
default_association_route_table_id	String	默认关联路由表id
availability_zone_ids	Array of strings	企业路由器所在可用区信息

参数	参数类型	描述
auto_accept_shared_attachments	Boolean	是否自动接受共享连接创建，默认false不开启

表 4-30 Tag

参数	参数类型	描述
key	String	<p>标签键，规则：</p> <ul style="list-style-type: none"> <li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li> <li>• _sys_开头属于系统标签，租户不能输入。</li> <li>• 标签key不能为空（长度不能为0）。</li> <li>• 长度在1-128之间。</li> </ul> <p>最小长度：1 最大长度：128</p>
value	String	<p>标签值，规则：</p> <ul style="list-style-type: none"> <li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li> <li>• 资源标签值可以为空（empty or null）。</li> <li>• 长度在0-255之间。</li> </ul> <p>最小长度：0 最大长度：255</p>

## 请求示例

更新企业路由器的可用区

```
POST https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/instances/ccc35ad-fd0d-4043-aab2-dc28ae56f967/change-availability-zone-ids
```

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

## 响应示例

状态码： 202

Accepted

```
{
  "instance" : {
```

```
{
  "id": "94c2b814-99dc-939a-e811-ae84c61ea3ff",
  "name": "my_er",
  "description": "this is my first enterprise router",
  "project_id": "08d5a9564a704afda6039ae2babbf3c",
  "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"
}
```

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

## 4.1.6 删除企业路由器

### 功能介绍

删除企业路由器。

### 调用方法

请参见[如何调用API](#)。

### URI

DELETE /v3/{project\_id}/enterprise-router/instances/{er\_id}

表 4-31 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID

### 请求参数

无

## 响应参数

无

## 请求示例

删除企业路由器

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

## 响应示例

无

## SDK 代码示例

SDK代码示例如下。

### 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)
}
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

# 4.2 VPC 连接

## 4.2.1 创建 VPC 连接

### 功能介绍

给ER实例创建VPC连接。

### 调用方法

请参见[如何调用API](#)。

### URI

POST /v3/{project\_id}/enterprise-router/{er\_id}/vpc-attachments

表 4-32 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID



## 请求参数

表 4-33 请求 Header 参数

参数	是否必选	参数类型	描述
X-Client-Token	否	String	幂等性标识 最小长度：1 最大长度：64

表 4-34 请求 Body 参数

参数	是否必选	参数类型	描述
vpc_attachment	是	VpcAttachmentCreateRequest object	VPC类型连接

表 4-35 VpcAttachmentCreateRequest

参数	是否必选	参数类型	描述
vpc_id	是	String	VPC的id, 取值范围：最大长度36字节，带“-”连字符的UUID格式
name	是	String	VPC连接名字, 取值范围：1-64个字符，支持数字、字母、中文、_(下划线)、-(中划线)、.(点) 最小长度：1 最大长度：64
virsubnet_id	是	String	VPC子网id, 取值范围：最大长度36字节，带“-”连字符的UUID格式
description	否	String	描述信息, 取值范围：0-255个字符，不能包含“<”和“>” 最小长度：0 最大长度：255
auto_create_vpc_routes	否	Boolean	默认为false, 为true表示自动为vpc配置指向企业路由器的路由 缺省值：false
tags	否	Array of Tag objects	标签信息

表 4-36 Tag

参数	是否必选	参数类型	描述
key	否	String	<p>标签键，规则：</p> <ul style="list-style-type: none"> <li>• 可用 UTF-8 格式表示的字母（包含中文）、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li> <li>• _sys_ 开头属于系统标签，租户不能输入。</li> <li>• 标签key不能为空（长度不能为0）。</li> <li>• 长度在1-128之间。</li> </ul> <p>最小长度：1 最大长度：128</p>
value	否	String	<p>标签值，规则：</p> <ul style="list-style-type: none"> <li>• 可用 UTF-8 格式表示的字母（包含中文）、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li> <li>• 资源标签值可以为空（empty or null）。</li> <li>• 长度在0-255之间。</li> </ul> <p>最小长度：0 最大长度：255</p>

## 响应参数

状态码： 202

表 4-37 响应 Header 参数

参数	参数类型	描述
X-Client-Token	-	幂等性标识

表 4-38 响应 Body 参数

参数	参数类型	描述
vpc_attachment	VpcAttachmentDetails object	VPC类型连接
request_id	String	请求id

表 4-39 VpcAttachmentDetails

参数	参数类型	描述
id	String	VPC连接ID
name	String	VPC连接名称
vpc_id	String	VPC id
vpc_subnet_id	String	VPC子网id
auto_create_vpc_routes	Boolean	默认为false,当设置true时,会自动为VPC配置10.0.0.0/8, 172.16.0.0/12, 192.168.0.0/16三条路由, 下一跳指向企业路由器。 缺省值: <b>false</b>
state	String	VPC连接状态:pending available modifying deleting deleted failed initiating_request rejected pending_acceptance frezed
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
tags	Array of Tag objects	标签信息
description	String	VPC连接描述信息
project_id	String	项目ID
vpc_project_id	String	vpc所属项目ID

表 4-40 Tag

参数	参数类型	描述
key	String	标签键，规则： <ul style="list-style-type: none"><li>可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>_sys_开头属于系统标签，租户不能输入。</li><li>标签key不能为空（长度不能为0）。</li><li>长度在1-128之间。</li></ul> 最小长度：1 最大长度：128
value	String	标签值，规则： <ul style="list-style-type: none"><li>可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>资源标签值可以为空（empty or null）。</li><li>长度在0-255之间。</li></ul> 最小长度：0 最大长度：255

## 请求示例

创建一个VPC连接，名称为“vpc-atta”，并指定连接的VPC和子网资源

```
POST https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/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"
  }
}
```

## 响应示例

状态码：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": "08d5a9564a704afda6039ae2babbe3c",
    "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 代码示例

SDK代码示例如下。

### Java

创建一个VPC连接，名称为“vpc-atta”，并指定连接的VPC和子网资源

```
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

创建一个VPC连接，名称为“vpc-atta”，并指定连接的VPC和子网资源

```
# 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

创建一个VPC连接，名称为“vpc-atta”，并指定连接的VPC和子网资源

```
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)
}
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

## 4.2.2 更新 VPC 连接基本信息

### 功能介绍

修改VPC连接基本信息。

### 调用方法

请参见[如何调用API](#)。

## URI

PUT /v3/{project\_id}/enterprise-router/{er\_id}/vpc-attachments/  
{vpc\_attachment\_id}

表 4-41 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
vpc_attachment_id	是	String	VPC连接ID

## 请求参数

表 4-42 请求 Body 参数

参数	是否必选	参数类型	描述
vpc_attachment	否	<b>UpdateVpcAttachmentBody</b> object	更新vpc基本信息请求体

表 4-43 UpdateVpcAttachmentBody

参数	是否必选	参数类型	描述
description	否	String	VPC连接描述信息，取值范围： 最大长度36字节，带“-”连字符的UUID格式 最小长度： <b>0</b> 最大长度： <b>255</b>
name	否	String	VPC连接名称，取值范围：1-64 个字符，支持数字、字母、中 文、_(下划线)、-(中划线)、. (点) 最小长度： <b>1</b> 最大长度： <b>64</b>

## 响应参数

状态码： 200



表 4-44 响应 Body 参数

参数	参数类型	描述
vpc_attachment	VpcAttachmentDetails object	VPC类型连接
request_id	String	请求id

表 4-45 VpcAttachmentDetails

参数	参数类型	描述
id	String	VPC连接ID
name	String	VPC连接名称
vpc_id	String	VPC id
virsubnet_id	String	VPC子网id
auto_create_vpc_routes	Boolean	默认为false,当设置true时,会自动为VPC配置10.0.0.0/8, 172.16.0.0/12, 192.168.0.0/16三条路由, 下一跳指向企业路由器。 缺省值: <b>false</b>
state	String	VPC连接状态:pending available modifying deleting deleted failed initiating_request rejected pending_acceptance frezed
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
tags	Array of Tag objects	标签信息
description	String	VPC连接描述信息
project_id	String	项目ID
vpc_project_id	String	vpc所属项目ID

表 4-46 Tag

参数	参数类型	描述
key	String	标签键，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• _sys_开头属于系统标签，租户不能输入。</li><li>• 标签key不能为空（长度不能为0）。</li><li>• 长度在1-128之间。</li></ul> 最小长度：1 最大长度：128
value	String	标签值，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• 资源标签值可以为空（empty or null）。</li><li>• 长度在0-255之间。</li></ul> 最小长度：0 最大长度：255

## 请求示例

更新VPC连接的信息，修改连接名称为“new-vpc-attach”

```
PUT https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/f1a28dfd-186f-4625-b6b1-f05e5e8609c0/vpc-attachments/3b9724e9-49ec-4d21-9191-3d703133b910
```

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

## 响应示例

状态码： 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": "08d5a9564a704afda6039ae2babbe3c",  
    "state": "available",  
    "created_at": "2020-03-11T15:13:31Z",  
  }  
}
```

```
"updated_at" : "2020-03-11T15:13:31Z"  
},  
"request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"  
}
```

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.2.3 查询 VPC 连接详情

### 功能介绍

查询VPC连接详情

### 调用方法

请参见[如何调用API](#)。

### URI

GET /v3/{project\_id}/enterprise-router/{er\_id}/vpc-attachments/  
{vpc\_attachment\_id}

表 4-47 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
vpc_attachment_id	是	String	VPC连接ID

### 请求参数

无

### 响应参数

状态码： 200

表 4-48 响应 Body 参数

参数	参数类型	描述
vpc_attachment	VpcAttachmentDetails object	VPC类型连接
request_id	String	请求id

表 4-49 VpcAttachmentDetails

参数	参数类型	描述
id	String	VPC连接ID
name	String	VPC连接名称
vpc_id	String	VPC id
virsubnet_id	String	VPC子网id
auto_create_vpc_routes	Boolean	默认为false,当设置true时,会自动为VPC配置10.0.0.0/8, 172.16.0.0/12, 192.168.0.0/16三条路由, 下一跳指向企业路由器。 缺省值: <b>false</b>
state	String	VPC连接状态:pending available modifying deleting deleted failed initiating_request rejected pending_acceptance frezed
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
tags	Array of Tag objects	标签信息
description	String	VPC连接描述信息
project_id	String	项目ID
vpc_project_id	String	vpc所属项目ID

表 4-50 Tag

参数	参数类型	描述
key	String	标签键，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• _sys_开头属于系统标签，租户不能输入。</li><li>• 标签key不能为空（长度不能为0）。</li><li>• 长度在1-128之间。</li></ul> 最小长度：1 最大长度：128
value	String	标签值，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• 资源标签值可以为空（empty or null）。</li><li>• 长度在0-255之间。</li></ul> 最小长度：0 最大长度：255

## 请求示例

### 查询VPC连接详情

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/212d3f0b-8496-472d-bc99-05a7c96d6655/vpc-attachments/b70aee08-c671-4cad-9fd5-7381d163bcc8
```

## 响应示例

状态码：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": "08d5a9564a704afda6039ae2babbe3c",
    "state": "available",
    "created_at": "2020-03-11T15:13:31Z",
    "updated_at": "2020-03-11T15:13:31Z"
  },
  "request_id": "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.2.4 查询 VPC 连接列表

### 功能介绍

查询企业路由器实例下的VPC连接列表。

### 接口约束

- 支持过滤查询，过滤条件有id, state, enterprise\_project\_id, vpc\_id, 过滤条件可以重复和组合。
- 支持分页查询，limit和marker组合实现分页查询。
- 支持单字段排序功能，排序字段有[id,name,description,created\_at,updated\_at]，不支持多字段排序。

### 调用方法

请参见[如何调用API](#)。

### URI

GET /v3/{project\_id}/enterprise-router/{er\_id}/vpc-attachments

表 4-51 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID

表 4-52 Query 参数

参数	是否必选	参数类型	描述
limit	否	Integer	每页返回的个数。取值范围：0~2000。 最小值： <b>0</b> 最大值： <b>2000</b>

参数	是否必选	参数类型	描述
marker	否	String	查询的页码id, 为空时为查询第一页。使用说明: 必须与limit一起使用。 最小长度: 1 最大长度: 128
state	否	Array	连接状态:pending available modifying deleting deleted failed pending_acceptance rejected initiating_request
id	否	Array	根据资源ID查询, 可同时查询多个。
sort_key	否	Array	按关键字排序, 默认按照id排序, 可选值:id name state
sort_dir	否	Array	返回结果按照升序或降序排列, 默认为asc,降序为desc
vpc_id	否	Array	VPC id

## 请求参数

无

## 响应参数

状态码: 200

表 4-53 响应 Body 参数

参数	参数类型	描述
vpc_attachments	Array of <b>VpcAttachmentDetails</b> objects	VPC连接列表
page_info	<b>PageInfo</b> object	分页查询的信息
request_id	String	请求ID

表 4-54 VpcAttachmentDetails

参数	参数类型	描述
id	String	VPC连接ID

参数	参数类型	描述
name	String	VPC连接名称
vpc_id	String	VPC id
virsubnet_id	String	VPC子网id
auto_create_vpc_routes	Boolean	默认为false,当设置true时,会自动为VPC配置10.0.0.0/8, 172.16.0.0/12, 192.168.0.0/16三条路由, 下一跳指向企业路由器。 缺省值: <b>false</b>
state	String	VPC连接状态:pending available modifying deleting deleted failed initiating_request rejected pending_acceptance frozen
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
tags	Array of <b>Tag</b> objects	标签信息
description	String	VPC连接描述信息
project_id	String	项目ID
vpc_project_id	String	vpc所属项目ID

表 4-55 Tag

参数	参数类型	描述
key	String	标签键, 规则: <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格, 以及字符: 下划线 “_”, 点 “.”, 冒号 “:”, 等号 “=”, 加号 “+”, 中划线 “-”, “@”。</li><li>• _sys_ 开头属于系统标签, 租户不能输入。</li><li>• 标签key不能为空 (长度不能为0)。</li><li>• 长度在1-128之间。</li></ul> 最小长度: <b>1</b> 最大长度: <b>128</b>



参数	参数类型	描述
value	String	标签值，规则： <ul style="list-style-type: none"><li>可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>资源标签值可以为空（empty or null）。</li><li>长度在0-255之间。</li></ul> 最小长度：0 最大长度：255

表 4-56 PageInfo

参数	参数类型	描述
next_marker	String	下一个marker标识，为空时表示最后一页
current_count	Integer	当前列表中资源数量

## 请求示例

- 分页查询VPC连接信息  
GET https://{erouter\_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/vpc-attachments?limit=10
- 查询全量VPC连接信息  
GET https://{erouter\_endpoint}/v3/08d5a9564a704afda6039ae2babbef3c/enterprise-router/vpc-attachments

## 响应示例

状态码： 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 代码示例

SDK代码示例如下。

### 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.withVpclid();  
        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)
    }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.2.5 删除 VPC 连接

### 功能介绍

删除VPC连接。

### 接口约束

VPC连接状态为available，deleting和failed的时候才能删除。

### 调用方法

请参见[如何调用API](#)。

### URI

DELETE /v3/{project\_id}/enterprise-router/{er\_id}/vpc-attachments/  
{vpc\_attachment\_id}

表 4-57 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
vpc_attachment_id	是	String	VPC连接ID

## 请求参数

无

## 响应参数

无

## 请求示例

删除VPC连接

```
DELETE https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/4ba931b6-5273-4ed9-8eeb-484d16a4786f/vpc-attachments/b70aee08-c671-4cad-9fd5-7381d163bcc8
```

## 响应示例

无

## SDK 代码示例

SDK代码示例如下。

### 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 huaweicloudsdsdker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdsdker.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)
    }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

## 4.3 其他连接

### 4.3.1 更新连接基本信息

#### 功能介绍

修改连接基本信息。

## 调用方法

请参见[如何调用API](#)。

## URI

PUT /v3/{project\_id}/enterprise-router/{er\_id}/attachments/{attachment\_id}

表 4-58 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
attachment_id	是	String	连接ID

## 请求参数

表 4-59 请求 Body 参数

参数	是否必选	参数类型	描述
attachment	否	<a href="#">UpdateAttachmentBody</a> object	更新连接基本信息

表 4-60 UpdateAttachmentBody

参数	是否必选	参数类型	描述
description	否	String	连接描述信息，取值范围：最大长度36字节，带“-”连字符的UUID格式 最小长度： <b>0</b> 最大长度： <b>255</b>
name	否	String	连接名称，取值范围：1-64个字符，支持数字、字母、中文、_(下划线)、-(中划线)、.(点) 最小长度： <b>1</b> 最大长度： <b>64</b>



## 响应参数

状态码： 200

表 4-61 响应 Body 参数

参数	参数类型	描述
attachment	<b>AttachmentResponse</b> object	连接基本信息详情
request_id	String	请求id

表 4-62 AttachmentResponse

参数	参数类型	描述
name	String	连接名字
id	String	连接ID
description	String	描述信息
state	String	连接状态:pending available modifying deleting deleted failed pending_acceptance rejected initiating_request freezed
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
tags	Array of <b>Tag</b> objects	企业路由器关联tag
project_id	String	项目ID
resource_id	String	内部连接关联的资源ID
resource_type	String	内部连接关联的资源类型: <ul style="list-style-type: none"><li>• vgw: 云专线的虚拟网关</li><li>• vpn: vpn网关</li><li>• peering: 对等连接, 通过云连接CC加载不同区域的企业路由器来创建“对等连接 ( Peering )” 连接</li><li>• ecn: 企业连接网</li><li>• vpc: 虚拟私有云</li><li>• cfw: 云防火墙</li></ul>
resource_project_id	String	资源所属项目ID

表 4-63 Tag

参数	参数类型	描述
key	String	<p>标签键，规则：</p> <ul style="list-style-type: none"> <li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li> <li>• _sys_开头属于系统标签，租户不能输入。</li> <li>• 标签key不能为空（长度不能为0）。</li> <li>• 长度在1-128之间。</li> </ul> <p>最小长度：1 最大长度：128</p>
value	String	<p>标签值，规则：</p> <ul style="list-style-type: none"> <li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li> <li>• 资源标签值可以为空（empty or null）。</li> <li>• 长度在0-255之间。</li> </ul> <p>最小长度：0 最大长度：255</p>

## 请求示例

更新企业路由器内其他类型连接（非VPC连接）的名称

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

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

## 响应示例

状态码： 200

OK

```
{
  "attachment": {
    "id": "b70aee08-c671-4cad-9fd5-7381d163bcc8",
    "name": "attachment",
    "description": "attachment",
    "state": "available",
    "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 代码示例

SDK代码示例如下。

### Java

更新企业路由器内其他类型连接（非VPC连接）的名称

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

```
}  
}
```

## Python

更新企业路由器内其他类型连接（非VPC连接）的名称

```
# 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

更新企业路由器内其他类型连接（非VPC连接）的名称

```
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)
}
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.3.2 查询连接详情

### 功能介绍

查询连接详情

### 调用方法

请参见[如何调用API](#)。

## URI

GET /v3/{project\_id}/enterprise-router/{er\_id}/attachments/{attachment\_id}

表 4-64 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
attachment_id	是	String	连接ID

## 请求参数

无

## 响应参数

状态码： 200

表 4-65 响应 Body 参数

参数	参数类型	描述
attachment	<b>AttachmentResponse</b> object	连接基本信息详情
request_id	String	请求id

表 4-66 AttachmentResponse

参数	参数类型	描述
name	String	连接名字
id	String	连接ID
description	String	描述信息
state	String	连接状态:pending available modifying deleting deleted failed pending_acceptance rejected initiating_request frezed
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ

参数	参数类型	描述
tags	Array of <b>Tag</b> objects	企业路由器关联tag
project_id	String	项目ID
resource_id	String	内部连接关联的资源ID
resource_type	String	内部连接关联的资源类型: <ul style="list-style-type: none"> <li>• vgw: 云专线的虚拟网关</li> <li>• vpn: vpn网关</li> <li>• peering: 对等连接, 通过云连接CC加载不同区域的企业路由器来创建“对等连接 ( Peering )”连接</li> <li>• ecn: 企业连接网</li> <li>• vpc: 虚拟私有云</li> <li>• cfw: 云防火墙</li> </ul>
resource_project_id	String	资源所属项目ID

表 4-67 Tag

参数	参数类型	描述
key	String	标签键, 规则: <ul style="list-style-type: none"> <li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格, 以及字符: 下划线 “_”, 点 “.”, 冒号 “:”, 等号 “=”, 加号 “+”, 中划线 “-”, “@”。</li> <li>• _sys_开头属于系统标签, 租户不能输入。</li> <li>• 标签key不能为空 ( 长度不能为0 )。</li> <li>• 长度在1-128之间。</li> </ul> <p>最小长度: <b>1</b> 最大长度: <b>128</b></p>
value	String	标签值, 规则: <ul style="list-style-type: none"> <li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格, 以及字符: 下划线 “_”, 点 “.”, 冒号 “:”, 等号 “=”, 加号 “+”, 中划线 “-”, “@”。</li> <li>• 资源标签值可以为空 ( empty or null )。</li> <li>• 长度在0-255之间。</li> </ul> <p>最小长度: <b>0</b> 最大长度: <b>255</b></p>

## 请求示例

### 查询连接详情

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/212d3f0b-8496-472d-bc99-05a7c96d6655/attachments/b70aee08-c671-4cad-9fd5-7381d163bcc8
```

## 响应示例

状态码： 200

OK

```
{
  "attachment" : {
    "id" : "b70aee08-c671-4cad-9fd5-7381d163bcc8",
    "name" : "vpc attachment",
    "description" : "vpc prod",
    "state" : "available",
    "created_at" : "2020-03-11T15:13:31Z",
    "updated_at" : "2020-03-11T15:13:31Z",
    "project_id" : "08d5a9564a704afda6039ae2babbe3c",
    "resource_id" : "b715e131-3371-4e17-a2de-4f669e24439a",
    "resource_type" : "vpc"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

## SDK 代码示例

SDK代码示例如下。

### 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)
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

### 4.3.3 查询连接列表

#### 功能介绍

查询企业路由器实例下的连接列表。

#### 接口约束

- 支持过滤查询，过滤条件有state，resource\_type，resource\_id过滤条件可以重复和组合；
- 支持分页查询，limit和marker组合实现分页查询；
- 支持单字段排序，排序字段有[id,name,description,created\_at,updated\_at]，不支持多字段排序。

#### 调用方法

请参见[如何调用API](#)。

## URI

GET /v3/{project\_id}/enterprise-router/{er\_id}/attachments

表 4-68 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID

表 4-69 Query 参数

参数	是否必选	参数类型	描述
limit	否	Integer	每页返回的个数。取值范围： 0~2000。 最小值： <b>0</b> 最大值： <b>2000</b>
marker	否	String	查询的页码id，为空时为查询第一页。使用说明：必须与limit一起使用。 最小长度： <b>1</b> 最大长度： <b>128</b>
state	否	Array	连接状态:pending available modifying deleting deleted failed pending_acceptance rejected initiating_request
resource_type	否	Array	<ul style="list-style-type: none"><li>• vpc: 虚拟私有云</li><li>• vpn: vpn网关</li><li>• vgw: 云专线的虚拟网关</li><li>• peering: 对等连接，通过云连接CC加载不同区域的企业路由器来创建“对等连接（Peering）”连接</li><li>• ecn: 企业连接网</li><li>• cfw: 云防火墙</li></ul>
resource_id	否	Array	连接对应的资源ID列表
sort_key	否	Array	按关键字排序，默认按照id排序，可选值:id name state
sort_dir	否	Array	返回结果按照升序或降序排列，默认为asc,降序为desc

## 请求参数

无

## 响应参数

状态码： 200

表 4-70 响应 Body 参数

参数	参数类型	描述
attachments	Array of <b>AttachmentDetails</b> objects	连接列表
page_info	<b>PageInfo</b> object	分页查询的信息
request_id	String	请求ID

表 4-71 AttachmentDetails

参数	参数类型	描述
id	String	连接ID
name	String	连接名字
description	String	描述信息
state	String	连接状态:pending available modifying deleting deleted failed pending_acceptance rejected initiating_request freezed
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
tags	Array of <b>Tag</b> objects	企业路由器关联tag
project_id	String	项目ID
er_id	String	Enterprise router ID
resource_id	String	内部连接关联的资源ID

参数	参数类型	描述
resource_type	String	内部连接关联的资源类型： <ul style="list-style-type: none"><li>• vgw: 云专线的虚拟网关</li><li>• vpn: vpn网关</li><li>• peering: 对等连接，通过云连接CC加载不同区域的企业路由器来创建“对等连接（Peering）”连接</li><li>• ecn: 企业连接网</li><li>• vpc: 虚拟私有云</li><li>• cfw: 云防火墙</li></ul>
resource_project_id	String	资源所属项目ID
associated	Boolean	表示此连接是否被关联
route_table_id	String	关联路由表id

表 4-72 Tag

参数	参数类型	描述
key	String	标签键，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• _sys_开头属于系统标签，租户不能输入。</li><li>• 标签key不能为空（长度不能为0）。</li><li>• 长度在1-128之间。</li></ul> 最小长度：1 最大长度：128
value	String	标签值，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• 资源标签值可以为空（empty or null）。</li><li>• 长度在0-255之间。</li></ul> 最小长度：0 最大长度：255

表 4-73 PageInfo

参数	参数类型	描述
next_marker	String	下一个marker标识, 为空时表示最后一页
current_count	Integer	当前列表中资源数量

## 请求示例

### 查询连接列表

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

## 响应示例

状态码: 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 代码示例

SDK代码示例如下。

### 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)
    }
}
```



## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

# 4.4 路由表

## 4.4.1 创建路由表

### 功能介绍

路由表是企业路由器收发报文的依据，包含了连接的关联关系，传播关系以及路由信息。

### 调用方法

请参见[如何调用API](#)。

### URI

POST /v3/{project\_id}/enterprise-router/{er\_id}/route-tables

表 4-74 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID

## 请求参数

表 4-75 请求 Header 参数

参数	是否必选	参数类型	描述
X-Client-Token	否	String	幂等性标识 最小长度：1 最大长度：64

表 4-76 请求 Body 参数

参数	是否必选	参数类型	描述
route_table	否	CreateRouteTable object	路由表

表 4-77 CreateRouteTable

参数	是否必选	参数类型	描述
name	是	String	路由器表名称，取值范围：1-64 个字符，支持数字、字母、中文、_(下划线)、-(中划线)、.(点) 最小长度：1 最大长度：64
description	否	String	路由器表描述信息 最小长度：0 最大长度：255
tags	否	Array of Tag objects	标签信息

表 4-78 Tag

参数	是否必选	参数类型	描述
key	否	String	<p>标签键，规则：</p> <ul style="list-style-type: none"> <li>• 可用 UTF-8 格式表示的字母（包含中文）、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li> <li>• _sys_ 开头属于系统标签，租户不能输入。</li> <li>• 标签key不能为空（长度不能为0）。</li> <li>• 长度在1-128之间。</li> </ul> <p>最小长度：1 最大长度：128</p>
value	否	String	<p>标签值，规则：</p> <ul style="list-style-type: none"> <li>• 可用 UTF-8 格式表示的字母（包含中文）、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li> <li>• 资源标签值可以为空（empty or null）。</li> <li>• 长度在0-255之间。</li> </ul> <p>最小长度：0 最大长度：255</p>

## 响应参数

状态码： 202

表 4-79 响应 Header 参数

参数	参数类型	描述
X-Client-Token	-	幂等性标识

表 4-80 响应 Body 参数

参数	参数类型	描述
route_table	<b>RouteTable</b> object	路由表
request_id	String	请求ID

表 4-81 RouteTable

参数	参数类型	描述
id	String	路由表的id
name	String	路由表名字
description	String	描述信息
is_default_association	Boolean	是否为默认关联的路由表 缺省值: <b>false</b>
is_default_propagation	Boolean	是否为默认传递路由表
state	String	路由表状态, 支持的状态有pending   available   deleting   deleted   failed
tags	Array of <b>Tag</b> objects	标签
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ

表 4-82 Tag

参数	参数类型	描述
key	String	<p>标签键, 规则:</p> <ul style="list-style-type: none"> <li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格, 以及字符: 下划线 “_”, 点 “.”, 冒号 “:”, 等号 “=”, 加号 “+”, 中划线 “-”, “@”。</li> <li>• <code>_sys</code> 开头属于系统标签, 租户不能输入。</li> <li>• 标签key不能为空 (长度不能为0)。</li> <li>• 长度在1-128之间。</li> </ul> <p>最小长度: <b>1</b> 最大长度: <b>128</b></p>

参数	参数类型	描述
value	String	标签值，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• 资源标签值可以为空（empty or null）。</li><li>• 长度在0-255之间。</li></ul> 最小长度：0 最大长度：255

## 请求示例

在企业路由器内创建路由表，名称为“my-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"
    }]
  }
}
```

## 响应示例

状态码：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 代码示例

SDK代码示例如下。

## Java

### 在企业路由器内创建路由表，名称为“my-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.setName("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

在企业路由器内创建路由表，名称为“my-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

在企业路由器内创建路由表，名称为“my-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)
    }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

## 4.4.2 更新路由表信息

### 功能介绍

更新路由表基本信息，如名称，描述等。



## 调用方法

请参见[如何调用API](#)。

## URI

PUT /v3/{project\_id}/enterprise-router/{er\_id}/route-tables/{route\_table\_id}

表 4-83 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
route_table_id	是	String	路由表ID

## 请求参数

表 4-84 请求 Body 参数

参数	是否必选	参数类型	描述
route_table	否	<a href="#">UpdateRouteTable</a> object	更新路由表请求体

表 4-85 UpdateRouteTable

参数	是否必选	参数类型	描述
name	否	String	路由器表名称，取值范围：1-64个字符，支持数字、字母、中文、_(下划线)、-(中划线)、.(点) 最小长度：1 最大长度：64
description	否	String	路由器表描述信息 最小长度：0 最大长度：255

## 响应参数

状态码： 200

表 4-86 响应 Body 参数

参数	参数类型	描述
route_table	<b>RouteTable</b> object	路由表
request_id	String	请求ID

表 4-87 RouteTable

参数	参数类型	描述
id	String	路由表的id
name	String	路由表名字
description	String	描述信息
is_default_association	Boolean	是否为默认关联的路由表 缺省值: <b>false</b>
is_default_propagation	Boolean	是否为默认传递路由表
state	String	路由表状态, 支持的状态有pending   available   deleting   deleted   failed
tags	Array of <b>Tag</b> objects	标签
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ

表 4-88 Tag

参数	参数类型	描述
key	String	标签键, 规则: <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格, 以及字符: 下划线 “_”, 点 “.”, 冒号 “:”, 等号 “=”, 加号 “+”, 中划线 “-”, “@”。</li><li>• _sys_开头属于系统标签, 租户不能输入。</li><li>• 标签key不能为空 (长度不能为0)。</li><li>• 长度在1-128之间。</li></ul> 最小长度: <b>1</b> 最大长度: <b>128</b>

参数	参数类型	描述
value	String	标签值，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• 资源标签值可以为空（empty or null）。</li><li>• 长度在0-255之间。</li></ul> 最小长度：0 最大长度：255

## 请求示例

更新企业路由器内路由表的信息，修改路由表名称为“new-rtb”

```
PUT https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/915a14a6-867b-4af7-83d1-70efceb146f5/route-tables/4ab54142-7c92-48ad-8288-77727a231052
```

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

## 响应示例

状态码： 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 代码示例

SDK代码示例如下。

### Java

更新企业路由器内路由表的信息，修改路由表名称为“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.setName("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

更新企业路由器内路由表的信息，修改路由表名称为“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

更新企业路由器内路由表的信息，修改路由表名称为“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)
  }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.4.3 查询路由表详情

### 功能介绍

查询路由表详情

### 调用方法

请参见[如何调用API](#)。

## URI

GET /v3/{project\_id}/enterprise-router/{er\_id}/route-tables/{route\_table\_id}

表 4-89 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
route_table_id	是	String	路由表ID

### 请求参数

无

### 响应参数

状态码： 200

表 4-90 响应 Body 参数

参数	参数类型	描述
route_table	<b>RouteTable</b> object	路由表
request_id	String	请求ID

表 4-91 RouteTable

参数	参数类型	描述
id	String	路由表的id
name	String	路由表名字
description	String	描述信息
is_default_association	Boolean	是否为默认关联的路由表 缺省值: <b>false</b>
is_default_propagation	Boolean	是否为默认传递路由表
state	String	路由表状态, 支持的状态有pending   available   deleting   deleted   failed
tags	Array of <b>Tag</b> objects	标签
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ

表 4-92 Tag

参数	参数类型	描述
key	String	标签键, 规则: <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格, 以及字符: 下划线 “_”, 点 “.”, 冒号 “:”, 等号 “=”, 加号 “+”, 中划线 “-”, “@”。</li><li>• _sys_开头属于系统标签, 租户不能输入。</li><li>• 标签key不能为空 (长度不能为0)。</li><li>• 长度在1-128之间。</li></ul> 最小长度: <b>1</b> 最大长度: <b>128</b>

参数	参数类型	描述
value	String	标签值，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• 资源标签值可以为空（empty or null）。</li><li>• 长度在0-255之间。</li></ul> 最小长度：0 最大长度：255

## 请求示例

查询路由表详情

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/915a14a6-867b-4af7-83d1-70efceb146f6/route-tables/4ab54142-7c92-48ad-8288-77727a231052
```

## 响应示例

状态码： 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 代码示例

SDK代码示例如下。

### 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.ErrRegion;
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.getErrMsg());
        }
    }
}
```

## 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)
    }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.4.4 查询路由表列表

### 功能介绍

查询路由表列表。

### 接口约束

- 支持分页查询, 支持过滤查询: state, is\_default\_propagation\_route\_table, is\_default\_association\_route\_table。
- 支持单字段排序, 排序字段有[id,name,description,created\_at,updated\_at], 不支持多字段排序。

### 调用方法

请参见[如何调用API](#)。

### URI

GET /v3/{project\_id}/enterprise-router/{er\_id}/route-tables

表 4-93 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID

表 4-94 Query 参数

参数	是否必选	参数类型	描述
limit	否	Integer	每页返回的个数。取值范围: 0~2000。 最小值: <b>0</b> 最大值: <b>2000</b>
marker	否	String	查询的页码id, 为空时为查询第一页。使用说明: 必须与limit一起使用。 最小长度: <b>1</b> 最大长度: <b>128</b>
state	否	Array	状态
is_default_propagation_table	否	Boolean	是否为默认传播路由表

参数	是否必选	参数类型	描述
is_default_association_table	否	Boolean	是否为默认关联路由表
sort_key	否	Array	按关键字排序，默认按照id排序，可选值:id name state
sort_dir	否	Array	返回结果按照升序或降序排列，默认为asc,降序为desc

## 请求参数

无

## 响应参数

状态码： 200

表 4-95 响应 Body 参数

参数	参数类型	描述
route_tables	Array of <a href="#">RouteTable</a> objects	路由表列表
request_id	String	请求ID
page_info	<a href="#">PageInfo</a> object	分页查询的信息

表 4-96 RouteTable

参数	参数类型	描述
id	String	路由表的id
name	String	路由表名字
description	String	描述信息
is_default_association	Boolean	是否为默认关联的路由表 缺省值： <b>false</b>
is_default_propagation	Boolean	是否为默认传递路由表
state	String	路由表状态，支持的状态有pending   available   deleting   deleted   failed

参数	参数类型	描述
tags	Array of <b>Tag</b> objects	标签
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ

表 4-97 Tag

参数	参数类型	描述
key	String	标签键，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• _sys_开头属于系统标签，租户不能输入。</li><li>• 标签key不能为空（长度不能为0）。</li><li>• 长度在1-128之间。</li></ul> 最小长度：1 最大长度：128
value	String	标签值，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• 资源标签值可以为空（empty or null）。</li><li>• 长度在0-255之间。</li></ul> 最小长度：0 最大长度：255

表 4-98 PageInfo

参数	参数类型	描述
next_marker	String	下一个marker标识，为空时表示最后一页
current_count	Integer	当前列表中资源数量

## 请求示例

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

## 响应示例

状态码： 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 代码示例

SDK代码示例如下。

### 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 huaweicloudsaker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsaker.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)
    }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。



## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.4.5 删除路由表

### 功能介绍

删除路由表

### 调用方法

请参见[如何调用API](#)。

### URI

DELETE /v3/{project\_id}/enterprise-router/{er\_id}/route-tables/{route\_table\_id}

表 4-99 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
route_table_id	是	String	路由表ID

### 请求参数

无

### 响应参数

无

### 请求示例

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

### 响应示例

无

## SDK 代码示例

SDK代码示例如下。

### 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)
    }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

# 4.5 关联

## 4.5.1 创建路由关联

### 功能介绍

每个连接只能关联到一张路由表。通过创建关联将连接关联到路由表，从该连接收到的报文会用被关联的路由表进行路由。

### 调用方法

请参见[如何调用API](#)。

### URI

POST /v3/{project\_id}/enterprise-router/{er\_id}/route-tables/{route\_table\_id}/  
associate

表 4-100 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
route_table_id	是	String	路由表ID

### 请求参数

表 4-101 请求 Header 参数

参数	是否必选	参数类型	描述
X-Client-Token	否	String	幂等性标识 最小长度：1 最大长度：64

表 4-102 请求 Body 参数

参数	是否必选	参数类型	描述
attachment_id	否	String	连接唯一标识 最大长度：36
route_policy	否	<b>ExportRoute Policy</b> object	出方向路由策略

表 4-103 ExportRoutePolicy

参数	是否必选	参数类型	描述
export_policy_id	否	String	出方向Ipv4协议路由策略id 最小长度：0 最大长度：36

## 响应参数

状态码： 202

表 4-104 响应 Header 参数

参数	参数类型	描述
X-Client-Token	-	幂等性标识

表 4-105 响应 Body 参数

参数	参数类型	描述
association	<b>Association</b> object	关联详情
request_id	String	请求ID

表 4-106 Association

参数	参数类型	描述
id	String	关联唯一标识 最大长度：36

参数	参数类型	描述
route_table_id	String	路由表唯一标识 最大长度：36
attachment_id	String	连接唯一标识 最大长度：36
resource_type	String	<ul style="list-style-type: none"> <li>vpc：虚拟私有云</li> <li>vpn：vpn网关</li> <li>vgw：云专线的虚拟网关</li> <li>peering：对等连接，通过云连接CC加载不同区域的企业路由器来创建“对等连接（Peering）”连接</li> <li>ecn：企业连接网</li> <li>cfw：云防火墙</li> </ul>
resource_id	String	连接的资源唯一标识
state	String	状态:pending available modifying deleting deleted failed
created_at	String	资源创建时间 采用UTC时间 格式：YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	资源更新时间 采用UTC时间 格式：YYYY-MM-DDTHH:mm:ss.sssZ
route_policy	<b>ExportRoute Policy</b> object	出方向路由策略

表 4-107 ExportRoutePolicy

参数	参数类型	描述
export_policy_id	String	出方向ipv4协议路由策略id 最小长度：0 最大长度：36

## 请求示例

在企业路由器的路由表中创建关联，将指定连接关联至路由表中

```
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"
}
```

## 响应示例

状态码： 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 代码示例

SDK代码示例如下。

### Java

在企业路由器的路由表中创建关联，将指定连接关联至路由表中

```
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

在企业路由器的路由表中创建关联，将指定连接关联至路由表中

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsaker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsaker.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

在企业路由器的路由表中创建关联，将指定连接关联至路由表中

```
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)  
    }  
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

## 4.5.2 查询路由关联列表

### 功能介绍

查询路由关联列表。

### 接口约束

- 支持分页查询，支持过滤查询：state, resource\_type, attachment\_id。

- 支持单字段排序，排序字段有[id,created\_at,updated\_at]，不支持多字段排序。

## 调用方法

请参见[如何调用API](#)。

## URI

GET /v3/{project\_id}/enterprise-router/{er\_id}/route-tables/{route\_table\_id}/associations

表 4-108 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
route_table_id	是	String	路由表ID

表 4-109 Query 参数

参数	是否必选	参数类型	描述
limit	否	Integer	每页返回的个数。取值范围：0~2000。 最小值： <b>0</b> 最大值： <b>2000</b>
marker	否	String	查询的页码id，为空时为查询第一页。使用说明：必须与limit一起使用。 最小长度： <b>1</b> 最大长度： <b>128</b>
attachment_id	否	Array	连接ID
resource_type	否	Array	<ul style="list-style-type: none"><li>vpc：虚拟私有云</li><li>vpn：vpn网关</li><li>vgw：云专线的虚拟网关</li><li>peering：对等连接，通过云连接CC加载不同区域的企业路由器来创建“对等连接（Peering）”连接</li><li>ecn：企业连接网</li><li>cfw：云防火墙</li></ul>

参数	是否必选	参数类型	描述
state	否	Array	状态:pending available modifying deleting deleted failed
sort_key	否	Array	按关键字排序, 默认按照id排序, 可选值:id name state
sort_dir	否	Array	返回结果按照升序或降序排列, 默认为asc,降序为desc

## 请求参数

无

## 响应参数

状态码: 200

表 4-110 响应 Body 参数

参数	参数类型	描述
associations	Array of <b>Association</b> objects	路由表关联列表 数组长度: 0 - 2000
request_id	String	请求ID
page_info	<b>PageInfo</b> object	分页查询的信息

表 4-111 Association

参数	参数类型	描述
id	String	关联唯一标识 最大长度: 36
route_table_id	String	路由表唯一标识 最大长度: 36
attachment_id	String	连接唯一标识 最大长度: 36

参数	参数类型	描述
resource_type	String	<ul style="list-style-type: none"> <li>vpc: 虚拟私有云</li> <li>vpn: vpn网关</li> <li>vgw: 云专线的虚拟网关</li> <li>peering: 对等连接, 通过云连接CC加载不同区域的企业路由器来创建“对等连接 ( Peering )” 连接</li> <li>ecn: 企业连接网</li> <li>cfw: 云防火墙</li> </ul>
resource_id	String	连接的资源唯一标识
state	String	状态:pending available modifying deleting deleted failed
created_at	String	资源创建时间 采用UTC时间 格式: YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	资源更新时间 采用UTC时间 格式: YYYY-MM-DDTHH:mm:ss.sssZ
route_policy	<a href="#">ExportRoute Policy</a> object	出方向路由策略

表 4-112 ExportRoutePolicy

参数	参数类型	描述
export_policy_id	String	出方向Ipv4协议路由策略id 最小长度: 0 最大长度: 36

表 4-113 PageInfo

参数	参数类型	描述
next_marker	String	下一个marker标识, 为空时表示最后一页
current_count	Integer	当前列表中资源数量

## 请求示例

查询路由表的关联信息

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

## 响应示例

状态码： 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"
}
```

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.5.3 删除路由关联

### 功能介绍

解绑连接和路由表的关联关系。

### 调用方法

请参见[如何调用API](#)。

### URI

POST /v3/{project\_id}/enterprise-router/{er\_id}/route-tables/{route\_table\_id}/disassociate

表 4-114 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
route_table_id	是	String	路由表ID

## 请求参数

表 4-115 请求 Body 参数

参数	是否必选	参数类型	描述
attachment_id	否	String	连接唯一标识 最大长度：36
route_policy	否	<b>ExportRoute Policy</b> object	出方向路由策略

表 4-116 ExportRoutePolicy

参数	是否必选	参数类型	描述
export_policy_id	否	String	出方向Ipv4协议路由策略id 最小长度：0 最大长度：36

## 响应参数

无

## 请求示例

删除路由表关联

```
POST https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/915a14a6-867b-4af7-83d1-70efceb146f8/route-tables/915a14a6-867b-4af7-83d1-70efceb146f9/disassociate
{
  "attachment_id" : "2609ec92-ac19-4467-a527-7f9e690e7836"
}
```

## 响应示例

无

## SDK 代码示例

SDK代码示例如下。

### Java

#### 删除路由表关联

```
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

#### 删除路由表关联

```
# 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

### 删除路由表关联

```
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)
}
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

# 4.6 传播

## 4.6.1 创建路由传播

### 功能介绍

每个连接可以和多个路由表建立传播关系，从该连接学习到的路由会应用到具有传播关系的路由表。

### 调用方法

请参见[如何调用API](#)。

### URI

POST /v3/{project\_id}/enterprise-router/{er\_id}/route-tables/{route\_table\_id}/enable-propagations

表 4-117 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID

参数	是否必选	参数类型	描述
route_table_id	是	String	路由表ID

## 请求参数

表 4-118 请求 Header 参数

参数	是否必选	参数类型	描述
X-Client-Token	否	String	幂等性标识 最小长度：1 最大长度：64

表 4-119 请求 Body 参数

参数	是否必选	参数类型	描述
attachment_id	否	String	连接唯一标识
route_policy	否	<b>ImportRoute Policy</b> object	入方向路由策略

表 4-120 ImportRoutePolicy

参数	是否必选	参数类型	描述
import_policy_id	否	String	入方向Ipv4协议路由策略id 最小长度：0 最大长度：36

## 响应参数

状态码： 202

表 4-121 响应 Header 参数

参数	参数类型	描述
X-Client-Token	-	幂等性标识

表 4-122 响应 Body 参数

参数	参数类型	描述
propagation	<b>Propagation</b> object	传播详情
request_id	String	请求ID

表 4-123 Propagation

参数	参数类型	描述
id	String	关联唯一标识
project_id	String	项目ID
er_id	String	企业路由器id
route_table_id	String	路由表唯一标识
attachment_id	String	连接唯一标识
resource_type	String	<ul style="list-style-type: none"><li>• vpc: 虚拟私有云</li><li>• vpn: vpn网关</li><li>• vgw: 云专线的虚拟网关</li><li>• peering: 对等连接, 通过云连接CC加载不同区域的企业路由器来创建“对等连接 ( Peering )” 连接</li><li>• ecn: 企业连接网</li><li>• cfw: 云防火墙</li></ul>
resource_id	String	连接的资源唯一标识
route_policy	<b>ImportRoute Policy</b> object	入方向路由策略
state	String	状态:pending available modifying deleting deleted failed
created_at	String	资源创建时间 采用UTC时间 格式: YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	资源更新时间 采用UTC时间 格式: YYYY-MM-DDTHH:mm:ss.sssZ

表 4-124 ImportRoutePolicy

参数	参数类型	描述
import_policy_id	String	入方向Ipv4协议路由策略id 最小长度：0 最大长度：36

## 请求示例

在企业路由器的路由表中，为指定连接创建传播，学习连接的路由信息

```
POST https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/ad838a5e-  
dbef-22cc-b1d9-cb46bef77ae8/route-tables/915a14a6-867b-4af7-83d1-70efceb146f9/enable-propagations  
{  
  "attachment_id" : "a5b7d209-dc02-4c46-a51f-805eadd3de64"  
}
```

## 响应示例

状态码： 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 代码示例

SDK代码示例如下。

### Java

在企业路由器的路由表中，为指定连接创建传播，学习连接的路由信息

```
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.getErrMsg());
        }
    }
}
```

## Python

在企业路由器的路由表中，为指定连接创建传播，学习连接的路由信息

```
# 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

在企业路由器的路由表中，为指定连接创建传播，学习连接的路由信息

```
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)
    }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

## 4.6.2 查询路由传播列表

### 功能介绍

查询路由传播列表。

### 接口约束

- 支持分页查询, 支持过滤查询: state, resource\_type, attachment\_id。
- 支持单字段排序, 排序字段有[id,created\_at,updated\_at], 不支持多字段排序。

### 调用方法

请参见[如何调用API](#)。

## URI

GET /v3/{project\_id}/enterprise-router/{er\_id}/route-tables/{route\_table\_id}/propagations

表 4-125 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
route_table_id	是	String	路由表ID

表 4-126 Query 参数

参数	是否必选	参数类型	描述
limit	否	Integer	每页返回的个数。取值范围: 0~2000。 最小值: 0 最大值: 2000

参数	是否必选	参数类型	描述
marker	否	String	查询的页码id，为空时为查询第一页。使用说明：必须与limit一起使用。 最小长度：1 最大长度：128
attachment_id	否	Array	连接ID
resource_type	否	Array	<ul style="list-style-type: none"> <li>vpc：虚拟私有云</li> <li>vpn：vpn网关</li> <li>vgw：云专线的虚拟网关</li> <li>peering：对等连接，通过云连接CC加载不同区域的企业路由器来创建“对等连接（Peering）”连接</li> <li>ecn：企业连接网</li> <li>cfw：云防火墙</li> </ul>
state	否	Array	资源状态:pending available modifying deleting deleted failed frozen
sort_key	否	Array	按关键字排序，默认按照id排序，可选值:id name state
sort_dir	否	Array	返回结果按照升序或降序排列，默认为asc,降序为desc

## 请求参数

无

## 响应参数

状态码：200

表 4-127 响应 Body 参数

参数	参数类型	描述
propagations	Array of <b>Propagation</b> objects	路由传播列表 数组长度：0 - 2000
request_id	String	请求ID



参数	参数类型	描述
page_info	<b>PageInfo</b> object	分页查询的信息

表 4-128 Propagation

参数	参数类型	描述
id	String	关联唯一标识
project_id	String	项目ID
er_id	String	企业路由器id
route_table_id	String	路由表唯一标识
attachment_id	String	连接唯一标识
resource_type	String	<ul style="list-style-type: none"><li>• vpc: 虚拟私有云</li><li>• vpn: vpn网关</li><li>• vgw: 云专线的虚拟网关</li><li>• peering: 对等连接, 通过云连接CC加载不同区域的企业路由器来创建“对等连接 ( Peering )”连接</li><li>• ecn: 企业连接网</li><li>• cfw: 云防火墙</li></ul>
resource_id	String	连接的资源唯一标识
route_policy	<b>ImportRoutePolicy</b> object	入方向路由策略
state	String	状态:pending available modifying deleting deleted failed
created_at	String	资源创建时间 采用UTC时间 格式: YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	资源更新时间 采用UTC时间 格式: YYYY-MM-DDTHH:mm:ss.sssZ

表 4-129 ImportRoutePolicy

参数	参数类型	描述
import_policy_id	String	入方向Ipv4协议路由策略id 最小长度: 0 最大长度: 36

表 4-130 PageInfo

参数	参数类型	描述
next_marker	String	下一个marker标识, 为空时表示最后一页
current_count	Integer	当前列表中资源数量

## 请求示例

### 查询路由表传播列表

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/7dec531a-7714-11eb-9439-0242ac130002/route-tables/91c013e2-d65a-474e-9177-c3e1799ca726/propagations
```

## 响应示例

**状态码: 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 代码示例

SDK代码示例如下。

### 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)  
  }  
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

### 4.6.3 删除路由传播

#### 功能介绍

解绑连接和路由表的传播关系。

#### 调用方法

请参见[如何调用API](#)。

#### URI

POST /v3/{project\_id}/enterprise-router/{er\_id}/route-tables/{route\_table\_id}/disable-propagations

表 4-131 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
route_table_id	是	String	路由表ID

#### 请求参数

表 4-132 请求 Body 参数

参数	是否必选	参数类型	描述
attachment_id	否	String	连接唯一标识

参数	是否必选	参数类型	描述
route_policy	否	<b>ImportRoute Policy</b> object	入方向路由策略

表 4-133 ImportRoutePolicy

参数	是否必选	参数类型	描述
import_policy_id	否	String	入方向Ipv4协议路由策略id 最小长度： <b>0</b> 最大长度： <b>36</b>

## 响应参数

无

## 请求示例

删除路由表传播

```
POST https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/ad838a5e-dbef-22cc-b1d9-cb46bef77ae8/route-tables/915a14a6-867b-4af7-83d1-70efceb146f9/disable-propagations
{
  "attachment_id" : "a5b7d209-dc02-4c46-a51f-805eadd3de64"
}
```

## 响应示例

无

## SDK 代码示例

SDK代码示例如下。

### Java

删除路由表传播

```
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

### 删除路由表传播

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsaker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsaker.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

### 删除路由表传播

```
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)  
    }  
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。



## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

## 4.7 路由

### 4.7.1 创建静态路由

#### 功能介绍

创建静态路由。静态路由为手动创建的路由，有效路由为优选后的路由。

#### 接口约束

当is\_blackhole设置为false时，必须传入attachment\_id参数;当is\_blackhole设置为true时，禁止传入attachment\_id参数。

#### 调用方法

请参见[如何调用API](#)。

#### URI

POST /v3/{project\_id}/enterprise-router/route-tables/{route\_table\_id}/static-routes

表 4-134 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
route_table_id	是	String	路由表ID

## 请求参数

表 4-135 请求 Header 参数

参数	是否必选	参数类型	描述
X-Client-Token	否	String	幂等性标识 最小长度：1 最大长度：64

表 4-136 请求 Body 参数

参数	是否必选	参数类型	描述
route	是	CreateRoute object	创建路由请求体

表 4-137 CreateRoute

参数	是否必选	参数类型	描述
destination	是	String	路由目的地址 最小长度：0 最大长度：256
attachment_id	否	String	路由下一跳指向的连接ID
is_blackhole	否	Boolean	是否为黑洞路由，默认为false

## 响应参数

状态码：202

表 4-138 响应 Header 参数

参数	参数类型	描述
X-Client-Token	-	幂等性标识

表 4-139 响应 Body 参数

参数	参数类型	描述
route	Route object	路由表项

参数	参数类型	描述
request_id	String	请求ID

表 4-140 Route

参数	参数类型	描述
id	String	路由id
type	String	路由类型:static
state	String	路由状态:pending available modifying deleting deleted failed
is_blackhole	Boolean	是否为黑洞路由
destination	String	路由目的地址
attachments	Array of <a href="#">RouteAttachment</a> objects	下一跳列表
route_table_id	String	路由表id
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ

表 4-141 RouteAttachment

参数	参数类型	描述
resource_id	String	连接关联的资源ID
resource_type	String	连接关联的资源类型: <ul style="list-style-type: none"> <li>• vpc: 虚拟私有云</li> <li>• vpn: vpn网关</li> <li>• vgw: 云专线的虚拟网关</li> <li>• peering: 对等连接, 通过云连接CC加载不同区域的企业路由器来创建“对等连接 ( Peering )”连接</li> <li>• cfw: 云防火墙</li> <li>• ecn: 企业连接网</li> </ul>
attachment_id	String	连接ID

## 请求示例

在企业路由器的路由表中创建静态路由，该路由不是黑洞路由，目的地址为 192.168.0.0/16，下一跳为指定连接

```
POST https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/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"
  }
}
```

## 响应示例

状态码： 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"
}
```

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

## 4.7.2 更新静态路由

### 功能介绍

更新静态路由

## 接口约束

当is\_blackhole设置为false时，必须传入attachment\_id参数;当is\_blackhole设置为true时，禁止传入attachment\_id参数。

## 调用方法

请参见[如何调用API](#)。

## URI

PUT /v3/{project\_id}/enterprise-router/route-tables/{route\_table\_id}/static-routes/{route\_id}

表 4-142 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
route_table_id	是	String	路由表ID
route_id	是	String	路由ID

## 请求参数

表 4-143 请求 Body 参数

参数	是否必选	参数类型	描述
route	是	<b>UpdateRoute</b> object	路由

表 4-144 UpdateRoute

参数	是否必选	参数类型	描述
attachment_id	否	String	路由下一跳
is_blackhole	否	Boolean	是否为黑洞路由

## 响应参数

状态码： 202

表 4-145 响应 Body 参数

参数	参数类型	描述
route	<a href="#">Route</a> object	路由表项
request_id	String	请求ID

表 4-146 Route

参数	参数类型	描述
id	String	路由id
type	String	路由类型:static
state	String	路由状态:pending available modifying deleting deleted failed
is_blackhole	Boolean	是否为黑洞路由
destination	String	路由目的地址
attachments	Array of <a href="#">RouteAttachment</a> objects	下一跳列表
route_table_id	String	路由表id
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ

表 4-147 RouteAttachment

参数	参数类型	描述
resource_id	String	连接关联的资源ID
resource_type	String	连接关联的资源类型: <ul style="list-style-type: none"><li>• vpc: 虚拟私有云</li><li>• vpn: vpn网关</li><li>• vgw: 云专线的虚拟网关</li><li>• peering: 对等连接, 通过云连接CC加载不同区域的企业路由器来创建“对等连接 (Peering)”连接</li><li>• cfw: 云防火墙</li><li>• ecn: 企业连接网</li></ul>
attachment_id	String	连接ID

## 请求示例

在企业路由器的路由表中修改静态路由，将黑洞路由修改为常规路由，下一跳为指定连接

```
PUT https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/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"
  }
}
```

## 响应示例

状态码： 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 代码示例

SDK代码示例如下。

### Java

在企业路由器的路由表中修改静态路由，将黑洞路由修改为常规路由，下一跳为指定连接

```
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")
    .withBlackhole(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.getStatusCode());
    System.out.println(e.getRequestId());
    System.out.println(e.getErrorCode());
    System.out.println(e.getErrorMsg());
}
}
```

## Python

在企业路由器的路由表中修改静态路由，将黑洞路由修改为常规路由，下一跳为指定连接

```
# 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

在企业路由器的路由表中修改静态路由，将黑洞路由修改为常规路由，下一跳为指定连接

```
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)
        }
    }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

## 4.7.3 查询静态路由详情

### 功能介绍

查询静态路由详情

### 调用方法

请参见[如何调用API](#)。

## URI

GET /v3/{project\_id}/enterprise-router/route-tables/{route\_table\_id}/static-routes/{route\_id}

表 4-148 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
route_table_id	是	String	路由表ID
route_id	是	String	路由ID

### 请求参数

无

### 响应参数

状态码： 200

表 4-149 响应 Body 参数

参数	参数类型	描述
route	<a href="#">Route</a> object	路由表项
request_id	String	请求ID

表 4-150 Route

参数	参数类型	描述
id	String	路由id
type	String	路由类型:static
state	String	路由状态:pending available modifying deleting deleted failed
is_blackhole	Boolean	是否为黑洞路由
destination	String	路由目的地址
attachments	Array of <a href="#">RouteAttachment</a> objects	下一跳列表
route_table_id	String	路由表id
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ

表 4-151 RouteAttachment

参数	参数类型	描述
resource_id	String	连接关联的资源ID
resource_type	String	连接关联的资源类型: <ul style="list-style-type: none"><li>• vpc: 虚拟私有云</li><li>• vpn: vpn网关</li><li>• vgw: 云专线的虚拟网关</li><li>• peering: 对等连接, 通过云连接CC加载不同区域的企业路由器来创建“对等连接 ( Peering )” 连接</li><li>• cfw: 云防火墙</li><li>• ecn: 企业连接网</li></ul>
attachment_id	String	连接ID

## 请求示例

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/route-tables/19d334b7-78c1-4e0e-ba29-b797e641e23c/static-routes/19d334b7-78c1-4e0e-ba29-b797e641e23c
```

## 响应示例

**状态码： 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 代码示例

SDK代码示例如下。

### 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)
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

### 4.7.4 查询静态路由列表

#### 功能介绍

查询静态路由列表。

#### 接口约束

- 支持分页查询，支持过滤查询：destination, attachment\_id, resource\_type, type。
- 支持单字段排序，排序字段有[id,destination,created\_at,updated\_at]，不支持多字段排序。

#### 调用方法

请参见[如何调用API](#)。

## URI

GET /v3/{project\_id}/enterprise-router/route-tables/{route\_table\_id}/static-routes

表 4-152 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
route_table_id	是	String	路由表ID

表 4-153 Query 参数

参数	是否必选	参数类型	描述
limit	否	Integer	每页返回的个数。取值范围：0~2000。 最小值： <b>0</b> 最大值： <b>2000</b>
marker	否	String	查询的页码id，为空时为查询第一页。使用说明：必须与limit一起使用。 最小长度： <b>1</b> 最大长度： <b>128</b>
destination	否	Array	路由目的地址
attachment_id	否	Array	连接ID
resource_type	否	Array	<ul style="list-style-type: none"> <li>• vpc: 虚拟私有云</li> <li>• vpn: vpn网关</li> <li>• vgw: 云专线的虚拟网关</li> <li>• peering: 对等连接，通过云连接CC加载不同区域的企业路由器来创建“对等连接（Peering）”连接</li> <li>• ecn: 企业连接网</li> <li>• cfw: 云防火墙</li> </ul>
sort_key	否	Array	按关键字排序，默认按照id排序，可选值:id name state
sort_dir	否	Array	返回结果按照升序或降序排列，默认为asc,降序为desc

## 请求参数

无

## 响应参数

状态码： 200

表 4-154 响应 Body 参数

参数	参数类型	描述
routes	Array of <a href="#">Route</a> objects	路由列表
request_id	String	请求ID
page_info	<a href="#">PageInfo</a> object	分页查询的信息

表 4-155 Route

参数	参数类型	描述
id	String	路由id
type	String	路由类型:static
state	String	路由状态:pending available modifying deleting deleted failed
is_blackhole	Boolean	是否为黑洞路由
destination	String	路由目的地址
attachments	Array of <a href="#">RouteAttachment</a> objects	下一跳列表
route_table_id	String	路由表id
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ

表 4-156 RouteAttachment

参数	参数类型	描述
resource_id	String	连接关联的资源ID



参数	参数类型	描述
resource_type	String	连接关联的资源类型: <ul style="list-style-type: none"><li>• vpc: 虚拟私有云</li><li>• vpn: vpn网关</li><li>• vgw: 云专线的虚拟网关</li><li>• peering: 对等连接, 通过云连接CC加载不同区域的企业路由器来创建“对等连接 (Peering)”连接</li><li>• cfw: 云防火墙</li><li>• ecn: 企业连接网</li></ul>
attachment_id	String	连接ID

表 4-157 PageInfo

参数	参数类型	描述
next_marker	String	下一个marker标识, 为空时表示最后一页
current_count	Integer	当前列表中资源数量

## 请求示例

### 查询静态路由列表

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/route-tables/915a14a6-867b-4af7-83d1-70efceb146f5/static-routes
```

## 响应示例

状态码: 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 代码示例

SDK代码示例如下。

### 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 huaweicloudsaker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsaker.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)
}
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.7.5 查询有效路由列表

### 功能介绍

查询有效的路由列表，支持分页查询能力。有效路由为优选后的路由。

### 调用方法

请参见[如何调用API](#)。

### URI

GET /v3/{project\_id}/enterprise-router/route-tables/{route\_table\_id}/routes

表 4-158 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
route_table_id	是	String	路由表ID

表 4-159 Query 参数

参数	是否必选	参数类型	描述
limit	否	Integer	每页返回的个数。取值范围：0~2000。 最小值：0 最大值：2000
marker	否	String	上一页最后一条记录的路由id，为空时为查询第一页。使用说明：必须与limit一起使用。 最小长度：1 最大长度：128
destination	否	Array	路由目的地址
resource_type	否	Array	<ul style="list-style-type: none"><li>• vpc：虚拟私有云</li><li>• vpn：vpn网关</li><li>• vgw：云专线的虚拟网关</li><li>• peering：对等连接，通过云连接CC加载不同区域的企业路由器来创建“对等连接（Peering）”连接</li><li>• ecn：企业连接网</li><li>• cfw：云防火墙</li></ul>

## 请求参数

无

## 响应参数

状态码：200

表 4-160 响应 Body 参数

参数	参数类型	描述
routes	Array of <b>EffectiveRoute</b> objects	路由列表
request_id	String	请求ID
page_info	<b>PageInfo</b> object	分页查询的信息

表 4-161 EffectiveRoute

参数	参数类型	描述
route_id	String	路由ID
destination	String	路由目的地
next_hops	Array of <a href="#">RouteAttachment</a> objects	路由下一跳列表
is_blackhole	Boolean	是否黑洞路由
route_type	String	路由类型:static,propagation

表 4-162 RouteAttachment

参数	参数类型	描述
resource_id	String	连接关联的资源ID
resource_type	String	连接关联的资源类型: <ul style="list-style-type: none"> <li>• vpc: 虚拟私有云</li> <li>• vpn: vpn网关</li> <li>• vgw: 云专线的虚拟网关</li> <li>• peering: 对等连接, 通过云连接CC加载不同区域的企业路由器来创建“对等连接 (Peering)”连接</li> <li>• cfw: 云防火墙</li> <li>• ecn: 企业连接网</li> </ul>
attachment_id	String	连接ID

表 4-163 PageInfo

参数	参数类型	描述
next_marker	String	下一个marker标识, 为空时表示最后一页
current_count	Integer	当前列表中资源数量

## 请求示例

### 查询有效路由列表

```
GET https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/route-tables/915a14a6-867b-4af7-83d1-70efceb146f9/routes
```

## 响应示例

状态码： 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"
}
```

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.7.6 删除静态路由

### 功能介绍

删除静态路由

### 调用方法

请参见[如何调用API](#)。

### URI

DELETE /v3/{project\_id}/enterprise-router/route-tables/{route\_table\_id}/static-routes/{route\_id}

表 4-164 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID

参数	是否必选	参数类型	描述
route_table_id	是	String	路由表ID
route_id	是	String	路由ID

## 请求参数

无

## 响应参数

无

## 请求示例

```
DELETE https://{erouter_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/route-tables/3ddb4dc2-174e-4d43-9328-b805d5c0c774/static-routes/19d334b7-78c1-4e0e-ba29-b797e641e23c
```

## 响应示例

无

## SDK 代码示例

SDK代码示例如下。

### 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)
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

## 4.8 标签

### 4.8.1 查询项目标签

#### 功能介绍

查询特定类型资源的标签集合。

#### 调用方法

请参见[如何调用API](#)。

#### URI

GET /v3/{project\_id}/{resource\_type}/tags

表 4-165 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
resource_type	是	String	标签资源类型: <ul style="list-style-type: none"> <li>instance: 企业路由器实例</li> <li>route-table: 路由表</li> <li>vpc-attachment: VPC连接</li> <li>vgw-attachment: 虚拟网关连接</li> <li>peering-attachment: 对等连接 ( Peering ) 连接</li> <li>vpn-attachment: VPN网关连接</li> <li>ecn-attachment: 企业连接网连接</li> <li>cfw-attachment: 云防火墙连接</li> </ul>

### 请求参数

无

### 响应参数

状态码： 200

表 4-166 响应 Body 参数

参数	参数类型	描述
tags	Array of <b>Tags</b> objects	标签列表。

表 4-167 Tags

参数	参数类型	描述
key	String	标签键，不能为空，最大长度127个unicode字符。
values	Array of strings	值列表，每个值最大长度255个unicode字符。

## 请求示例

### 查询企业路由器标签

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

## 响应示例

状态码: 200

OK

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

## SDK 代码示例

SDK代码示例如下。

### 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 huaweicloudsaker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsaker.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)
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.8.2 查询资源标签

### 功能介绍

查询特定类型资源的标签信息。

### 调用方法

请参见[如何调用API](#)。

### URI

GET /v3/{project\_id}/{resource\_type}/{resource\_id}/tags

表 4-168 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
resource_id	是	String	资源ID
resource_type	是	String	标签资源类型: <ul style="list-style-type: none"> <li>• instance: 企业路由器实例</li> <li>• route-table: 路由表</li> <li>• vpc-attachment: VPC连接</li> <li>• vgw-attachment: 虚拟网关连接</li> <li>• peering-attachment: 对等连接 ( Peering ) 连接</li> <li>• vpn-attachment: VPN网关连接</li> <li>• ecn-attachment: 企业连接网连接</li> <li>• cfw-attachment: 云防火墙连接</li> </ul>

### 请求参数

无

### 响应参数

状态码： 200

表 4-169 响应 Body 参数

参数	参数类型	描述
tags	Array of <b>Tag</b> objects	标签列表

表 4-170 Tag

参数	参数类型	描述
key	String	标签键，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• _sys_开头属于系统标签，租户不能输入。</li><li>• 标签key不能为空（长度不能为0）。</li><li>• 长度在1-128之间。</li></ul> 最小长度：1 最大长度：128
value	String	标签值，规则： <ul style="list-style-type: none"><li>• 可用 UTF-8 格式表示的字母(包含中文)、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>• 资源标签值可以为空（empty or null）。</li><li>• 长度在0-255之间。</li></ul> 最小长度：0 最大长度：255

## 请求示例

### 查询企业路由器实例标签

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

## 响应示例

状态码： 200

OK

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



## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

### 4.8.3 创建资源标签

#### 功能介绍

为特定类型的资源创建标签。

#### 接口约束

- 一个资源上最多有20个标签。
- 此接口为幂等接口。
- 创建时，如果创建的标签已经存在（key相同），则覆盖。

#### 调用方法

请参见[如何调用API](#)。

#### URI

POST /v3/{project\_id}/{resource\_type}/{resource\_id}/tags

表 4-171 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
resource_id	是	String	资源ID

参数	是否必选	参数类型	描述
resource_type	是	String	标签资源类型: <ul style="list-style-type: none"><li>instance: 企业路由器实例</li><li>route-table: 路由表</li><li>vpc-attachment: VPC连接</li><li>vgw-attachment: 虚拟网关连接</li><li>peering-attachment: 对等连接 ( Peering ) 连接</li><li>vpn-attachment: VPN网关连接</li><li>ecn-attachment: 企业连接网连接</li><li>cfw-attachment: 云防火墙连接</li></ul>

## 请求参数

表 4-172 请求 Body 参数

参数	是否必选	参数类型	描述
tag	是	<b>Tag</b> object	资源标签

表 4-173 Tag

参数	是否必选	参数类型	描述
key	否	String	标签键，规则： <ul style="list-style-type: none"><li>可用 UTF-8 格式表示的字母 (包含中文)、数字和空格，以及字符：下划线 “_”，点 “.”，冒号 “:”，等号 “=”，加号 “+”，中划线 “-”，“@”。</li><li>_sys_ 开头属于系统标签，租户不能输入。</li><li>标签key不能为空 (长度不能为0)。</li><li>长度在1-128之间。</li></ul> 最小长度：1 最大长度：128

参数	是否必选	参数类型	描述
value	否	String	标签值，规则： <ul style="list-style-type: none"><li>可用 UTF-8 格式表示的字母（包含中文）、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li><li>资源标签值可以为空（empty or null）。</li><li>长度在0-255之间。</li></ul> 最小长度： <b>0</b> 最大长度： <b>255</b>

## 响应参数

无

## 请求示例

为企业路由器资源添加标签，标签值为key1，标签键为value1

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

```
{
  "tag": {
    "key": "key1",
    "value": "value1"
  }
}
```

## 响应示例

无

## SDK 代码示例

SDK代码示例如下。

### Java

为企业路由器资源添加标签，标签值为key1，标签键为value1

```
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

为企业路由器资源添加标签，标签值为key1，标签键为value1

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsaker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsaker.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

为企业路由器资源添加标签，标签值为key1，标签键为value1

```
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)
  }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
204	No Content

## 错误码

请参见[错误码](#)。

## 4.8.4 批量添加删除资源标签

### 功能介绍

- 为指定实例批量添加或删除标签
- 标签管理服务需要使用该接口批量管理实例的标签。
- 一个资源上最多有20个标签。

### 调用方法

请参见[如何调用API](#)。

### URI

POST /v3/{project\_id}/{resource\_type}/{resource\_id}/tags/action

表 4-174 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
resource_id	是	String	资源ID

参数	是否必选	参数类型	描述
resource_type	是	String	标签资源类型: <ul style="list-style-type: none"><li>• instance: 企业路由器实例</li><li>• route-table: 路由表</li><li>• vpc-attachment: VPC连接</li><li>• vgw-attachment: 虚拟网关连接</li><li>• peering-attachment: 对等连接 ( Peering ) 连接</li><li>• vpn-attachment: VPN网关连接</li><li>• ecn-attachment: 企业连接网连接</li><li>• cfw-attachment: 云防火墙连接</li></ul>

## 请求参数

表 4-175 请求 Body 参数

参数	是否必选	参数类型	描述
action	是	String	功能说明：操作标识。取值范围：create（创建）delete（删除）
tags	否	Array of <b>Tag</b> objects	标签列表。

表 4-176 Tag

参数	是否必选	参数类型	描述
key	否	String	<p>标签键，规则：</p> <ul style="list-style-type: none"> <li>• 可用 UTF-8 格式表示的字母（包含中文）、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li> <li>• _sys_开头属于系统标签，租户不能输入。</li> <li>• 标签key不能为空（长度不能为0）。</li> <li>• 长度在1-128之间。</li> </ul> <p>最小长度：1 最大长度：128</p>
value	否	String	<p>标签值，规则：</p> <ul style="list-style-type: none"> <li>• 可用 UTF-8 格式表示的字母（包含中文）、数字和空格，以及字符：下划线“_”，点“.”，冒号“:”，等号“=”，加号“+”，中划线“-”，“@”。</li> <li>• 资源标签值可以为空（empty or null）。</li> <li>• 长度在0-255之间。</li> </ul> <p>最小长度：0 最大长度：255</p>

## 响应参数

无

## 请求示例

- 批量添加资源标签。

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"
  }
]
```



```
    }]  
  }
```

- 批量删除资源标签。

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

```
{  
  "action" : "delete",  
  "tags" : [{  
    "key" : "key1"  
  }, {  
    "key" : "key2",  
    "value" : "value3"  
  }]  
}
```

## 响应示例

无

## SDK 代码示例

SDK代码示例如下。

### Java

- 批量添加资源标签。

```
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());
    }
}
}
```

- 批量删除资源标签。

```
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

- 批量添加资源标签。

```
# 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)
```

- 批量删除资源标签。

```
# 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

- 批量添加资源标签。

```
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)
    }
}
```

- 批量删除资源标签。

```
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)
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
204	No Content

## 错误码

请参见[错误码](#)。

### 4.8.5 删除资源标签

#### 功能介绍

删除特定类型资源的标签。

#### 接口约束

此接口为幂等接口，Key不能为空或者空字符串。

## 调用方法

请参见[如何调用API](#)。

## URI

DELETE /v3/{project\_id}/{resource\_type}/{resource\_id}/tags/{key}

表 4-177 路径参数

参数	是否必选	参数类型	描述
key	是	String	标签键
project_id	是	String	项目ID
resource_id	是	String	资源ID
resource_type	是	String	标签资源类型: <ul style="list-style-type: none"><li>• instance: 企业路由器实例</li><li>• route-table: 路由表</li><li>• vpc-attachment: VPC连接</li><li>• vgw-attachment: 虚拟网关连接</li><li>• peering-attachment: 对等连接 ( Peering ) 连接</li><li>• vpn-attachment: VPN网关连接</li><li>• ecn-attachment: 企业连接网连接</li><li>• cfw-attachment: 云防火墙连接</li></ul>

## 请求参数

无

## 响应参数

无

## 请求示例

```
DELETE https://{erouter-endpoint}/v3/cfa563efb77d4b6d9960781d82530fd8/instance/3320166e-b937-40cc-a35c-02cd3f2b3ee2/tags/key1
```

## 响应示例

无

## SDK 代码示例

SDK代码示例如下。

### 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)
    }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
204	No Content

## 错误码

请参见[错误码](#)。

# 4.9 配额管理

## 4.9.1 查询配额

### 功能介绍

查询租户各类资源的使用情况，如企业路由器的使用量，VPC连接的使用量等。

### 调用方法

请参见[如何调用API](#)。

### URI

GET /v3/{project\_id}/enterprise-router/quotas

表 4-178 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID

表 4-179 Query 参数

参数	是否必选	参数类型	描述
limit	否	Integer	每页返回的个数。取值范围： 0~2000。 最小值： <b>0</b> 最大值： <b>2000</b>
marker	否	String	查询的页码id，为空时为查询第一页。使用说明：必须与limit一起使用。 最小长度： <b>1</b> 最大长度： <b>128</b>

参数	是否必选	参数类型	描述
type	否	Array	支持过滤的配额类型： <ul style="list-style-type: none"> <li>er_instance: 企业路由器实例的配额和使用量</li> <li>dc_attachment: 云专线网关连接的配额和使用量</li> <li>vpc_attachment: VPC连接的配额和使用量</li> <li>vpn_attachment: VPN网关连接的配额和使用量</li> <li>peering_attachment: 云连接实例连接的配额和使用量</li> <li>can_attachment: 智能接入网关连接的配额和使用量</li> <li>route_table: 路由表的配额和使用量</li> <li>static_route: 静态路由的配额和使用量</li> <li>vpc_er: 每个vpc可以接入的企业路由器数量和当前使用量</li> <li>flow_log: 每个连接可以创建的流日志数量</li> </ul>
erId	否	Object	企业路由器ID
routeTableId	否	Object	路由表ID
vpcId	否	Object	VPC ID

## 请求参数

无

## 响应参数

状态码： 200

表 4-180 响应 Body 参数

参数	参数类型	描述
quotas	Array of <b>Quota</b> objects	配额使用详情

表 4-181 Quota

参数	参数类型	描述
quota_key	String	配额类型
quota_limit	Long	可用的配额数，-1 代表不受限制
used	Long	已使用的配额数量
unit	String	用量单位

## 请求示例

查询配额信息

GET https://{erouter\_endpoint}/v3/08d5a9564a704afda6039ae2babbe3c/enterprise-router/quotas

## 响应示例

状态码： 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 代码示例

SDK代码示例如下。

### 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.withVpId();
        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)
  }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

# 4.10 可用区

## 4.10.1 查询可用区列表

### 功能介绍

查询支持创建企业路由器实例的可用区列表，当可用区状态为available时，表示可以创建企业路由器实例。

### 调用方法

请参见[如何调用API](#)。

### URI

GET /v3/{project\_id}/enterprise-router/availability-zones

表 4-182 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID

表 4-183 Query 参数

参数	是否必选	参数类型	描述
instance_id	否	String	企业路由器ID

参数	是否必选	参数类型	描述
bandwidth_size	否	Integer	带宽大小，单位Mbps 最小值：-1

## 请求参数

无

## 响应参数

状态码： 200

表 4-184 响应 Body 参数

参数	参数类型	描述
availability_zones	Array of <b>AvailableZone</b> objects	可用区列表
request_id	String	请求ID

表 4-185 AvailableZone

参数	参数类型	描述
code	String	可用区编码
state	String	可用区是否可用available unavailable

## 请求示例

查询可用区列表

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

## 响应示例

状态码： 200

OK

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



```
    }  
  }  
}
```

## SDK 代码示例

SDK代码示例如下。

### 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)
    }
}
```

```
}  
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

# 4.11 流日志

## 4.11.1 创建流日志

### 功能介绍

给ER实例创建流日志。

### 调用方法

请参见[如何调用API](#)。

### URI

POST /v3/{project\_id}/enterprise-router/{er\_id}/flow-logs

表 4-186 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID

## 请求参数

表 4-187 请求 Header 参数

参数	是否必选	参数类型	描述
X-Client-Token	否	String	幂等性标识 最小长度：1 最大长度：64

表 4-188 请求 Body 参数

参数	是否必选	参数类型	描述
flow_log	是	FlowLogRequest object	创建流日志请求体

表 4-189 FlowLogRequest

参数	是否必选	参数类型	描述
name	是	String	流日志名称 最小长度：1 最大长度：64
description	否	String	流日志描述 最小长度：0 最大长度：255
resource_type	是	String	流日志采集的资源类型： <ul style="list-style-type: none"><li>• VPC连接</li><li>• 虚拟网关连接</li><li>• 对等连接</li></ul>
resource_id	是	String	要采集的资源ID
log_group_id	是	String	日志组ID。请在云日志服务中获取，详情请参见《云日志服务用户指南》。
log_stream_id	是	String	日志主题ID。请在云日志服务中获取，详情请参见《云日志服务用户指南》。
log_store_type	是	String	流日志的存储类型： <ul style="list-style-type: none"><li>• LTS: 云日志服务器存储</li></ul>

## 响应参数

状态码： 202

表 4-190 响应 Header 参数

参数	参数类型	描述
X-Client-Token	-	幂等性标识

表 4-191 响应 Body 参数

参数	参数类型	描述
flow_log	FlowLog object	流日志详情
request_id	String	请求id

表 4-192 FlowLog

参数	参数类型	描述
id	String	流日志ID
name	String	流日志名称
description	String	流日志描述
project_id	String	流日志任务创建者项目ID
resource_type	String	采集的资源类型:attachment
resource_id	String	采集的资源ID
log_group_id	String	日志组ID
log_stream_id	String	日志流ID
log_store_type	String	流日志存储类型:LTS
log_aggregation_interval	Integer	日志聚合时间, 单位s, 取值范围: 60-600
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
state	String	日志资源状态:pending available modifying deleting deleted failed
enabled	Boolean	日志开关:true false

## 请求示例

### 创建流日志

```
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"
  }
}
```

## 响应示例

**状态码： 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": "ER流日志"
  },
  "request_id": "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

## SDK 代码示例

SDK代码示例如下。

### Java

#### 创建流日志

```
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

### 创建流日志

```
# 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

### 创建流日志

```
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)
}
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

## 4.11.2 查询流日志列表

### 功能介绍

查询企业路由器实例下的流日志列表

### 接口约束

- 支持过滤查询，过滤条件有resource\_type, resource\_id, enterprise\_project\_id过滤条件可以重复和组合。
- 支持分页查询，limit和marker组合实现分页查询。
- 支持单字段排序功能，排序字段有[id,name,state]，不支持多字段排序。

### 调用方法

请参见[如何调用API](#)。

### URI

GET /v3/{project\_id}/enterprise-router/{er\_id}/flow-logs

表 4-193 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID

表 4-194 Query 参数

参数	是否必选	参数类型	描述
resource_type	否	String	采集的资源类型
resource_id	否	Array	连接对应的资源ID列表
limit	否	Integer	每页返回的个数。取值范围： 0~2000。 最小值： <b>0</b> 最大值： <b>2000</b>
marker	否	String	查询的页码id，为空时为查询第一页。使用说明：必须与limit一起使用。 最小长度： <b>1</b> 最大长度： <b>128</b>
sort_key	否	Array	按关键字排序，默认按照id排序，可选值:id name state
sort_dir	否	Array	返回结果按照升序或降序排列，默认为asc,降序为desc

## 请求参数

无

## 响应参数

状态码： 200

表 4-195 响应 Body 参数

参数	参数类型	描述
flow_logs	Array of <a href="#">FlowLog</a> objects	流日志详情
request_id	String	请求ID

参数	参数类型	描述
page_info	<b>PageInfo</b> object	分页查询的信息

表 4-196 FlowLog

参数	参数类型	描述
id	String	流日志ID
name	String	流日志名称
description	String	流日志描述
project_id	String	流日志任务创建者项目ID
resource_type	String	采集的资源类型:attachment
resource_id	String	采集的资源ID
log_group_id	String	日志组ID
log_stream_id	String	日志流ID
log_store_type	String	流日志存储类型:LTS
log_aggregation_interval	Integer	日志聚合时间, 单位s, 取值范围: 60-600
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
state	String	日志资源状态:pending available modifying deleting deleted failed
enabled	Boolean	日志开关:true false

表 4-197 PageInfo

参数	参数类型	描述
next_marker	String	下一个marker标识, 为空时表示最后一页
current_count	Integer	当前列表中资源数量

## 请求示例

查询流日志列表

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

## 响应示例

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

## SDK 代码示例

SDK代码示例如下。

### 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.getStatusCode());
    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 huaweicloudsaker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsaker.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)
    }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

### 4.11.3 查询流日志详情

#### 功能介绍

查询流日志详情

#### 调用方法

请参见[如何调用API](#)。

#### URI

GET /v3/{project\_id}/enterprise-router/{er\_id}/flow-logs/{flow\_log\_id}

表 4-198 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
flow_log_id	是	String	流日志ID

#### 请求参数

无

#### 响应参数

状态码： 200

表 4-199 响应 Body 参数

参数	参数类型	描述
flow_log	<b>FlowLog</b> object	流日志详情
request_id	String	请求id

表 4-200 FlowLog

参数	参数类型	描述
id	String	流日志ID
name	String	流日志名称
description	String	流日志描述

参数	参数类型	描述
project_id	String	流日志任务创建者项目ID
resource_type	String	采集的资源类型:attachment
resource_id	String	采集的资源ID
log_group_id	String	日志组ID
log_stream_id	String	日志流ID
log_store_type	String	流日志存储类型:LTS
log_aggregation_interval	Integer	日志聚合时间, 单位s, 取值范围: 60-600
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
state	String	日志资源状态:pending available modifying deleting deleted failed
enabled	Boolean	日志开关:true false

## 请求示例

### 查询流日志列表

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

## 响应示例

状态码: 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": "ER流日志"
  },
  "request_id": "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```



## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.11.4 更新流日志基本信息

### 功能介绍

更新流日志基本信息

### 调用方法

请参见[如何调用API](#)。

### URI

PUT /v3/{project\_id}/enterprise-router/{er\_id}/flow-logs/{flow\_log\_id}

表 4-201 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
flow_log_id	是	String	流日志ID

### 请求参数

表 4-202 请求 Body 参数

参数	是否必选	参数类型	描述
name	否	String	流日志名称 最小长度：1 最大长度：64
description	否	String	最小长度：0 最大长度：255

## 响应参数

状态码： 200

表 4-203 响应 Body 参数

参数	参数类型	描述
flow_log	FlowLog object	流日志详情
request_id	String	请求id

表 4-204 FlowLog

参数	参数类型	描述
id	String	流日志ID
name	String	流日志名称
description	String	流日志描述
project_id	String	流日志任务创建者项目ID
resource_type	String	采集的资源类型:attachment
resource_id	String	采集的资源ID
log_group_id	String	日志组ID
log_stream_id	String	日志流ID
log_store_type	String	流日志存储类型:LTS
log_aggregation_interval	Integer	日志聚合时间, 单位s, 取值范围: 60-600
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
state	String	日志资源状态:pending available modifying deleting deleted failed
enabled	Boolean	日志开关:true false

## 请求示例

更新流日志b216bc1d-5963-41a7-89f9-779a5128c5ac的名称为flow\_log\_update,描述为flow log update test

```
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"
}
```

## 响应示例

**状态码： 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 代码示例

SDK代码示例如下。

### Java

更新流日志b216bc1d-5963-41a7-89f9-779a5128c5ac的名称为flow\_log\_update,描述为flow log update test

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.er.v3.region.ErrRegion;
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

更新流日志b216bc1d-5963-41a7-89f9-779a5128c5ac的名称为flow\_log\_update,描述为flow log update test

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsaker.v3.region.er_region import ErRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsaker.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

更新流日志b216bc1d-5963-41a7-89f9-779a5128c5ac的名称为flow\_log\_update,描述为flow log update test

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
200	OK

## 错误码

请参见[错误码](#)。

## 4.11.5 删除流日志

### 功能介绍

删除流日志

### 接口约束

流日志状态为available，deleting和failed的时候才能删除。

### 调用方法

请参见[如何调用API](#)。

### URI

DELETE /v3/{project\_id}/enterprise-router/{er\_id}/flow-logs/{flow\_log\_id}

表 4-205 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
flow_log_id	是	String	流日志ID

## 请求参数

无

## 响应参数

无

## 请求示例

删除流日志

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

## 响应示例

无

## SDK 代码示例

SDK代码示例如下。

### 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)
}
}

```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

## 4.11.6 开启流日志

### 功能介绍

开启流日志

### 调用方法

请参见[如何调用API](#)。

### URI

POST /v3/{project\_id}/enterprise-router/{er\_id}/flow-logs/{flow\_log\_id}/enable

表 4-206 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID



参数	是否必选	参数类型	描述
flow_log_id	是	String	流日志ID

## 请求参数

无

## 响应参数

状态码： 202

表 4-207 响应 Body 参数

参数	参数类型	描述
flow_log	<b>FlowLog</b> object	流日志详情
request_id	String	请求id

表 4-208 FlowLog

参数	参数类型	描述
id	String	流日志ID
name	String	流日志名称
description	String	流日志描述
project_id	String	流日志任务创建者项目ID
resource_type	String	采集的资源类型:attachment
resource_id	String	采集的资源ID
log_group_id	String	日志组ID
log_stream_id	String	日志流ID
log_store_type	String	流日志存储类型:LTS
log_aggregation_interval	Integer	日志聚合时间, 单位s, 取值范围: 60-600
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
state	String	日志资源状态:pending available modifying deleting deleted failed

参数	参数类型	描述
enabled	Boolean	日志开关:true false

## 请求示例

开启流日志

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

## 响应示例

状态码: 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" : "ER流日志"
  },
  "request_id" : "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

## SDK 代码示例

SDK代码示例如下。

### 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)
    }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
202	Accepted

## 错误码

请参见[错误码](#)。

## 4.11.7 关闭流日志

### 功能介绍

关闭流日志

## 调用方法

请参见[如何调用API](#)。

## URI

POST /v3/{project\_id}/enterprise-router/{er\_id}/flow-logs/{flow\_log\_id}/disable

表 4-209 路径参数

参数	是否必选	参数类型	描述
project_id	是	String	项目ID
er_id	是	String	企业路由器实例ID
flow_log_id	是	String	流日志ID

## 请求参数

无

## 响应参数

状态码： 202

表 4-210 响应 Body 参数

参数	参数类型	描述
flow_log	<b>FlowLog</b> object	流日志详情
request_id	String	请求id

表 4-211 FlowLog

参数	参数类型	描述
id	String	流日志ID
name	String	流日志名称
description	String	流日志描述
project_id	String	流日志任务创建者项目ID
resource_type	String	采集的资源类型:attachment
resource_id	String	采集的资源ID
log_group_id	String	日志组ID

参数	参数类型	描述
log_stream_id	String	日志流ID
log_store_type	String	流日志存储类型:LTS
log_aggregation_interval	Integer	日志聚合时间, 单位s, 取值范围: 60-600
created_at	String	创建时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
updated_at	String	更新时间,格式:YYYY-MM-DDTHH:mm:ss.sssZ
state	String	日志资源状态:pending available modifying deleting deleted failed
enabled	Boolean	日志开关:true false

## 请求示例

关闭流日志

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

## 响应示例

状态码: 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": "ER流日志"
  },
  "request_id": "915a14a6-867b-4af7-83d1-70efceb146f9"
}
```

## SDK 代码示例

SDK代码示例如下。

### 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.getErrMsg());
        }
    }
}
```

## 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)
    }
}
```

## 更多

更多编程语言的SDK代码示例，请参见[API Explorer](#)的代码示例页签，可生成自动对应的SDK代码示例。

## 状态码

状态码	描述
202	Accepted



## 错误码

请参见[错误码](#)。

# 5 权限和授权项

## 5.1 权限及授权项说明

如果您需要对您所拥有的ER进行精细的权限管理，您可以使用统一身份认证服务（Identity and Access Management，简称IAM），如果华为已经能满足您的要求，不需要创建独立的IAM用户，您可以跳过本章节，不影响您使用ER服务的其它功能。

默认情况下，新建的IAM用户没有任何权限，您需要将其加入用户组，并给用户组授予策略或角色，才能使用户组中的用户获得相应的权限，这一过程称为授权。授权后，用户就可以基于已有权限对云服务进行操作。

权限根据授权的精细程度，分为**角色**和**策略**。角色以服务为粒度，是IAM最初提供了一种根据用户的工作职能定义权限的粗粒度授权机制。策略以API接口为粒度进行权限拆分，授权更加精细，可以精确到某个操作、资源和条件，能够满足企业对权限最小化的安全管控要求。

### 📖 说明

如果您要允许或是禁止某个接口的操作权限，请使用策略。

账号具备所有接口的调用权限，如果使用账号下的IAM用户发起API请求时，该IAM用户必须具备调用该接口所需的权限，否则，API请求将调用失败。每个接口所需要的权限，与各个接口所对应的授权项相对应，只有发起请求的用户被授予授权项所对应的策略，该用户才能成功调用该接口。例如，用户要调用接口来查询企业路由器列表，那么这个IAM用户被授予的策略中必须包含允许“er:instances:list”的授权项，该接口才能调用成功。

## 5.2 基于角色授权的服务授权项

本章节介绍企业路由器ER基于角色授权场景下支持的策略授权项。

### 支持的授权项

策略包含系统策略和自定义策略，如果系统策略不满足授权要求，管理员可以创建自定义策略，并通过给用户组授予自定义策略来进行精细的访问控制。策略支持的操作与API相对应，授权项列表说明如下：

- 权限：允许或拒绝对指定资源在特定条件下进行某项操作。
- 对应API接口：自定义策略实际调用的API接口。
- 授权项：自定义策略中支持的Action，在自定义策略中的Action中写入授权项，可以实现授权项对应的权限功能。
- 依赖的授权项：部分Action存在对其他Action的依赖，需要将依赖的Action同时写入授权项，才能实现对应的权限功能。
- IAM项目(Project)/企业项目(Enterprise Project)：自定义策略的授权范围，包括IAM项目与企业项目。授权范围如果同时支持IAM项目和企业项目，表示此授权项对应的自定义策略，可以在IAM和企业管理两个服务中给用户组授权并生效。如果仅支持IAM项目，不支持企业项目，表示仅能在IAM中给用户组授权并生效，如果在企业管理中授权，则该自定义策略不生效。管理员可以在授权项列表中查看授权项是否支持IAM项目或企业项目，“√”表示支持，“×”表示暂不支持。关于IAM项目与企业项目的区别，详情请参见：[IAM与企业管理的区别](#)。

ER的支持自定义策略授权项如下所示：

- [企业路由器](#)
- [VPC连接](#)
- [其他连接](#)
- [路由表](#)
- [关联](#)
- [传播](#)
- [路由](#)
- [流日志](#)
- [标签](#)
- [配额管理](#)

## 5.3 企业路由器

权限	对应API接口	授权项 ( Action )	IAM项目 (Project)	企业项目 (Enterprise Project)
创建企业路由器	POST /v3/{project_id}/enterprise-router/instances	er:instances:create	√	√
更新企业路由器	PUT /v3/{project_id}/enterprise-router/instances/{enterprise_router_id}	er:instances:update	√	√
查询企业路由器详情	GET /v3/{project_id}/enterprise-router/instances/{enterprise_router_id}	er:instances:get	√	√

权限	对应API接口	授权项 ( Action )	IAM项目 (Project)	企业项目 (Enterprise Project)
查询企业路由器列表	GET /v3/{project_id}/enterprise-router/instances	er:instances:list	√	√
更新企业路由器的可用区	POST /v3/{project_id}/enterprise-router/instances/{enterprise_router_id}/change-availability-zone-ids	er:instances:changeAZ	√	√
删除企业路由器	DELETE /v3/{project_id}/enterprise-router/instances/{enterprise_router_id}	er:instances:delete	√	√

## 5.4 VPC 连接

权限	对应API接口	授权项 ( Action )	IAM项目 (Project)	企业项目 (Enterprise Project)
创建VPC连接	POST /v3/{project_id}/enterprise-router/{er_id}/vpc-attachments	er:attachments:create	√	√
更新VPC连接基本信息	PUT /v3/{project_id}/enterprise-router/{er_id}/vpc-attachments/{vpc_attachment_id}	er:attachments:update	√	√
查询VPC连接详情	GET /v3/{project_id}/enterprise-router/{er_id}/vpc-attachments/{vpc_attachment_id}	er:attachments:get	√	√
查询VPC连接列表	GET /v3/{project_id}/enterprise-router/{er_id}/vpc-attachments	er:attachments:list	√	√
删除VPC连接	DELETE /v3/{project_id}/enterprise-router/{er_id}/vpc-attachments/{vpc_attachment_id}	er:attachments:delete	√	√

## 5.5 其他连接

权限	对应API接口	授权项 ( Action )	IAM项 目 (Project)	企业项目 (Enterprise Project)
更新连接 基本信息	PUT /v3/{project_id}/ enterprise-router/{er_id}/ attachments/ {attachment_id}	er:attachments: update	√	√
查询连接 详情	GET /v3/{project_id}/ enterprise-router/{er_id}/ attachments/ {attachment_id}	er:attachments: get	√	√
查询连接 列表	GET /v3/{project_id}/ enterprise-router/{er_id}/ attachments	er:attachments:l ist	√	√

## 5.6 路由表

权限	对应API接口	授权项 ( Action )	IAM项 目 (Project)	企业项目 (Enterprise Project)
创建路由 表	POST /v3/{project_id}/ enterprise-router/{er_id}/ route-tables	er:routeTables:cr eate	√	√
更新路由 表信息	PUT /v3/{project_id}/ enterprise-router/{er_id}/ route-tables/ {route_table_id}	er:routeTables:u pdate	√	√
查询路由 表详情	GET /v3/{project_id}/ enterprise-router/{er_id}/ route-tables/ {route_table_id}	er:routeTables:g et	√	√
查询路由 表列表	GET /v3/{project_id}/ enterprise-router/{er_id}/ route-tables	er:routeTables:li st	√	√

权限	对应API接口	授权项 ( Action )	IAM项目 (Project)	企业项目 (Enterprise Project)
删除路由表	DELETE /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}	er:routeTables:delete	√	√

## 5.7 关联

权限	对应API接口	授权项 ( Action )	IAM项目 (Project)	企业项目 (Enterprise Project)
创建关联	POST /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/associate	er:associations:associate	√	√
查询关联列表	GET /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/associations	er:associations:list	√	√
删除关联	POST /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/disassociate	er:associations:disassociate	√	√

## 5.8 传播

权限	对应API接口	授权项 ( Action )	IAM项目 (Project)	企业项目 (Enterprise Project)
创建传播	POST /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/enable-propagations	er:propagations:enable	√	√

权限	对应API接口	授权项 ( Action )	IAM项目 (Project)	企业项目 (Enterprise Project)
查询传播列表	GET /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/propagations	er:propagations:list	√	√
删除传播	POST /v3/{project_id}/enterprise-router/{er_id}/route-tables/{route_table_id}/disable-propagations	er:propagations:disable	√	√

## 5.9 路由

权限	对应API接口	授权项 ( Action )	IAM项目 (Project)	企业项目 (Enterprise Project)
创建静态路由	POST /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/static-routes	er:routes:create	√	√
修改静态路由	PUT /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/static-routes/{route_id}	er:routes:update	√	√
查询静态路由详情	GET /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/static-routes/{route_id}	er:routes:get	√	√
查询静态路由列表	GET /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/static-routes	er:routes:list	√	√
查询有效路由列表	GET /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/routes	er:routes:list	√	√

权限	对应API接口	授权项 ( Action )	IAM项目 (Project)	企业项目 (Enterprise Project)
删除静态路由	DELETE /v3/{project_id}/enterprise-router/route-tables/{route_table_id}/static-routes/{route_id}	er:routes:delete	√	√

## 5.10 流日志

权限	对应API接口	授权项 ( Action )	IAM项目 (Project)	企业项目 (Enterprise Project)
创建流日志	POST /v3/{project_id}/enterprise-router/{er_id}/flow-logs	er:flowlogs:create	√	√
查询流日志列表	GET /v3/{project_id}/enterprise-router/{er_id}/flow-logs	er:flowlogs:list	√	√
查询流日志	GET /v3/{project_id}/enterprise-router/{er_id}/flow-logs/{flow_log_id}	er:flowlogs:show	√	√
更新流日志基本信息	PUT /v3/{project_id}/enterprise-router/{er_id}/flow-logs/{flow_log_id}	er:flowlogs:update	√	√
删除流日志	DELETE /v3/{project_id}/enterprise-router/{er_id}/flow-logs/{flow_log_id}	er:flowlogs:delete	√	√
开启流日志	POST /v3/{project_id}/enterprise-router/{er_id}/flow-logs/{flow_log_id}/enable	er:flowlogs:enable	√	√
关闭流日志	POST /v3/{project_id}/enterprise-router/{er_id}/flow-logs/{flow_log_id}/disable	er:flowlogs:disable	√	√



## 5.11 标签

权限	对应API接口	授权项 ( Action )	IAM项目 (Project)	企业项目 (Enterprise Project)
查询项目标签	GET /v3/{project_id}/ {resource_type}/tags	er:tags:list	√	√
查询资源标签	GET /v3/{project_id}/ {resource_type}/ {resource_id}/tags	er:tags:get	√	√
创建资源标签	POST /v3/{project_id}/ {resource_type}/ {resource_id}/tags	er:tags:create	√	√
批量添加/ 删除资源 标签	POST /v3/{project_id}/ {resource_type}/ {resource_id}/tags/action	er:tags:create	√	√
删除资源 标签	POST /v3/{project_id}/ {resource_type}/ {resource_id}/tags/{key}	er:tags:delete	√	√

## 5.12 配额管理

权限	对应API接口	授权项 ( Action )	IAM项目 (Project)	企业项目 (Enterprise Project)
查询配额	GET /v3/{project_id}/ enterprise-router/quotas	er:quotas:list	√	√

# A 附录

## A.1 状态码

表 A-1 正常状态码

状态码	编码	说明
200	OK	GET、PUT、POST操作正常返回。
201	Created	POST操作正常返回。
202	Accepted	常用于需要很长时间才能处理的操作。 表示该请求已被接受处理，但处理尚未完成。
204	No Content	DELETE操作正常返回。

表 A-2 异常状态码

状态码	编码	说明
400	Bad Request	服务器未能处理请求。
401	Unauthorized	被请求的页面需要用户名和密码。
403	Forbidden	对被请求页面的访问被禁止。
404	Not Found	服务器无法找到被请求的页面。
405	Method Not Allowed	请求中指定的方法不被允许。
406	Not Acceptable	服务器生成的响应无法被客户端所接受。
407	Proxy Authentication Required	用户必须首先使用代理服务器进行验证，这样请求才会被处理。

状态码	编码	说明
408	Request Timeout	请求超出了服务器的等待时间。
409	Conflict	由于冲突，请求无法被完成。
500	Internal Server Error	请求未完成。服务异常。
501	Not Implemented	请求未完成。服务器不支持所请求的功能。
502	Bad Gateway	请求未完成。服务器从上游服务器收到一个无效的响应。
503	Service Unavailable	请求未完成。系统暂时异常。
504	Gateway Timeout	网关超时。

## A.2 错误码

当您调用API时，如果遇到“APIGW”开头的错误码，请参见[API网关错误码](#)进行处理。

状态码	错误码	错误信息	描述	处理措施
400	ER.04001003	The enterprise router is unavailable or is being operated.	企业路由器实例不可用或正在操作中。	请检查企业路由器状态是否可用，并稍后尝试。
400	ER.04001104	The default route table association function is not enabled.	未使能默认关联开关。	请使能默认关联开关后尝试。
400	ER.04001105	The default route table propagation function is not enabled.	未使能默认传播开关。	请使能默认传播开关后尝试。
400	ER.04001106	Invalid ASN.	ASN参数不合法。	请输入合法的ASN参数。
400	ER.04002002	The association already exists.	关联关系已存在。	已存在的关联关系，请检查后重试。

状态码	错误码	错误信息	描述	处理措施
400	ER.04002003	An operation is being performed on this association.	关联正在操作中。	请等待关联状态变为可用后重试。
400	ER.04003002	The propagation already exists.	传播关系已存在。	已存在的传播关系，请检查后重试。
400	ER.04003003	An operation is being performed on this propagation.	传播正在操作中。	请等待传播状态变为可用后重试。
400	ER.04004002	This attachment is being used by other resources.	连接已被使用，无法删除。	请检查是否有其它资源在使用此连接，并在完全清理这些资源后进行重试。
400	ER.04004003	This attachment is unavailable or is being operated.	连接不可用或正在操作中。	请检查连接状态是否可用，并稍后重试。
400	ER.04004004	This resource is being used by another attachment.	资源已被其它连接占用。	请检查是否已经为该资源创建了连接。
400	ER.04004101	This route already exists in the VPC route table.	需要创建的路由已经存在 VPC 的路由表中。	请关闭配置连接侧路由开关后重试。
400	ER.04004102	Failed to add the route to the VPC route table.	向 VPC 添加固定网段路由失败。	请检查 VPC 路由表是否已经存在同网段路由。
400	ER.04005003	This route table is unavailable or is being operated.	路由表不可用或正在操作中。	请检查路由表状态是否可用，并稍后重试。
400	ER.04006002	The destination of the route already exists.	路由目的地址已存在。	请检查路由配置。

状态码	错误码	错误信息	描述	处理措施
400	ER.04006103	The destination of the route is invalid.	路由目的地址不合法。	请检查目的地址的格式。
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.	目的路由地址不能在 127.0.0.0/8, 169.254.0.0/16, 224.0.0.0/4 及其子网内。	不能配置该网段路由。
400	ER.04006105	The network instance type of the next hop is not supported.	路由下一跳的网络实例类型不支持。	请更换其它类型的网络实例
400	ER.04006106	A blackhole route cannot have a next hop. A non-blackhole route must have a next hop.	路由参数非法。	请检查路由请求 Body 体。
400	ER.04008500	Flow logs are not supported by the resource type.	资源类型不支持采集流日志	请检查开启流日志采集的资源类型
400	ER.04008501	The flow log task does not exist.	流日志任务不存在	请检查流日志 Id
400	ER.04008502	The flow log task is being operated.	流日志任务正在操作中。	请检查流日志任务状态是否可用，并稍后重试。
400	ER.04008503	The flow log task already exists.	流日志采集任务已经存在	已存在的流日志采集任务，请检查后重试。
400	ER.04009005	Invalid parameters.	无效参数。	请检查参数。
400	ER.04009008	Insufficient quota.	资源配额不足。	请申请工单扩充配额。

状态码	错误码	错误信息	描述	处理措施
400	ER.04009009	The quota type does not exist.	配额类型不存在。	请检查查询参数。
400	ER.04009011	The resource is frozen.	资源被冻结无法操作。	请将资源解冻后尝试。
400	ER.04009012	This account is frozen or restricted.	租户被冻结或受限，无法操作资源。	请联系客服处理。
400	ER.04009013	This enterprise router has frozen attachments.	实例内存在被冻结的连接，无法变更AZ。	请联系客服处理。
400	ER.04009019	This feature is not available yet.	特性暂未开放。	请咨询客服。
404	ER.04041001	This enterprise router does not exist.	ER实例不存在	请检查参数是否正确。
404	ER.04042001	This association does not exist.	关联关系不存在。	请检查参数是否正确。
404	ER.04043001	This propagation does not exist.	传播关系不存在。	请检查参数是否正确。
404	ER.04044001	This attachment does not exist.	连接不存在。	请检查参数是否正确。
404	ER.04045001	This route table does not exist.	路由表不存在。	请检查参数是否正确。
404	ER.04046001	This route does not exist.	路由不存在。	请检查参数是否正确。

状态码	错误码	错误信息	描述	处理措施
409	ER.04091002	This enterprise router is being used by other resources.	ER实例被使用。	请先删除依赖资源后重试。
409	ER.04095002	This route table is being used by other resources.	路由表被使用。	请先删除依赖资源后重试。
409	ER.04095104	The default association route table cannot be deleted.	默认关联路由表无法被删除。	请禁用默认路由表关联功能。
409	ER.04095105	The default propagation route table cannot be deleted.	默认传播路由表无法被删除。	请禁用默认路由表传播功能。
503	ER.05039006	This service is temporarily unavailable.	服务暂时不可用。	请联系客服或稍后重试。

## A.3 获取项目 ID

### 操作场景

在调用接口的时候，部分URL中需要填入项目ID，所以需要获取到项目ID。有如下两种获取方式：

- [调用API获取项目ID](#)
- [从控制台获取项目ID](#)

### 调用 API 获取项目 ID

项目ID可以通过调用[查询指定条件下的项目列表](#)API获取。

获取项目ID的接口为“GET https://{Endpoint}/v3/projects”，其中{Endpoint}为IAM的终端节点，可以从[地区和终端节点](#)获取。接口的认证鉴权请参见[认证鉴权](#)。

响应示例如下，其中projects下的“id”即为项目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/a4adasfjljaaakla12334jklga9sasfg"
    },
    "id": "a4adasfjljaaakla12334jklga9sasfg",
    "enabled": true
  }
],
"links": {
  "next": null,
  "previous": null,
  "self": "https://www.example.com/v3/projects"
}
}
```

## 从控制台获取项目 ID

从控制台获取项目ID的步骤如下：

1. 登录管理控制台。
2. 鼠标悬停在右上角的用户名，选择下拉列表中的“我的凭证”。  
在“API凭证”页面的项目列表中查看项目ID。

图 A-1 查看项目 ID





# B 修订记录

发布日期	修订记录
2023-07-24	第二次正式发布。 本次变更说明如下： <ul style="list-style-type: none"><li>• 新增<a href="#">流日志</a>章节，补充ER流日志内容。</li><li>• 新增<a href="#">流日志</a>章节，补充权限说明。</li><li>• 在<a href="#">错误码</a>章节，增加流日志错误码。</li><li>• 新增<a href="#">查询配额</a>章节，补充配额内容。</li></ul>
2022-10-30	第一次正式发布。