Cloud Firewall

API Reference

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1 Before You Start

Cloud Firewall (CFW) is a next-generation cloud-native firewall. It protects the Internet border and VPC border on the cloud by real-time intrusion detection and prevention, global unified access control, full traffic analysis, log audit, and tracing. It employs AI for intelligent defense, and can be elastically scaled to meet changing business needs, helping you easily handle security threats. CFW is a basic service that provides network security protection for user services on the cloud.

This document describes how to use application programming interfaces (APIs) to perform operations on firewall instances, such as querying and updating.

If you plan to access CFW through an API, ensure that you are familiar with CFW. For more information, see **What Is CFW?**

API Calling

CFW provides Representational State Transfer (REST) APIs, allowing you to use HTTPS requests to call them. For details, see **API Calling**.

Endpoints

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

Concepts

- Account

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

- User

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

- Region

  Regions are divided based on geographical location and network latency. Public services, such as Elastic Cloud Server (ECS), Elastic Volume Service

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(EVS), Object Storage Service (OBS), Elastic IP (EIP), and Image Management Service (IMS), are shared within the same region. Regions are classified as universal regions and dedicated regions. A universal region provides universal cloud services for common tenants. A dedicated region provides services of the same type only or for specific tenants.

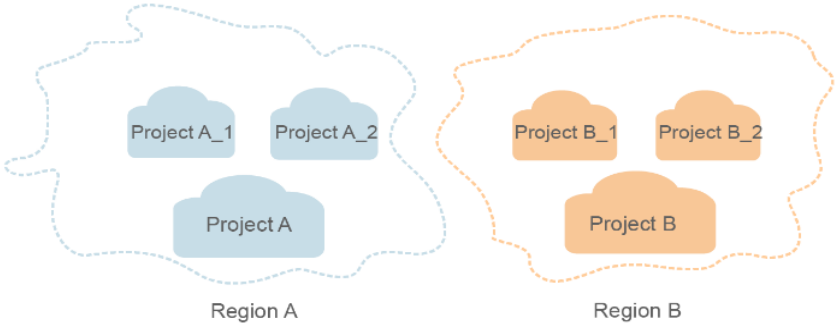
- Availability Zone (AZ)

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

- Project

  A project corresponds to a region. Projects group and isolate resources (including compute, storage, and network resources) across physical regions. Users can be granted permissions in a default project to access all resources in the region associated with the project. For more refined access control, create subprojects under a project and purchase resources in the subprojects. Users can then be assigned permissions to access only specific resources in the subprojects.

Figure 1-1 Project isolating model



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2 API Overview

You can use all functions of CFW through its APIs.

Type	Description
Firewall Management	Query firewall information, including querying the firewall list, modifying firewall protection status, and querying firewall details.
EIP Management	Manage EIPs, including enabling or disabling EIPs, querying the number of EIPs, and querying the EIP list.
Network ACL Rule Management	Manage ACL rules, including creating, updating, and deleting ACL rules.
Blacklist/Whitelist Management	Manage blacklists and whitelists, including creating, updating, and deleting items in blacklists and whitelists.
Address Group Management	Manage address groups, including adding, querying, and updating address groups.
Service Group Management	Manage service groups, including adding, querying, and modifying service groups.
Domain Name Resolution and Domain Name Group Management	Manage domain groups, including adding, querying, and updating domain groups.
IPS Management	Manage the IPS switch, including querying the IPS status, IPS switch, and protection mode.
Log Management	Manage log interfaces, including the interfaces for querying access control logs, attack event logs, and traffic logs.
Packet Capture Management	Manage packet capture tasks, including creating, querying, and deleting packet capture tasks.
Antivirus Management	Manage the antivirus function, including querying and modifying the antivirus switch and antivirus rules.

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Type	Description
Alarm Configuration Management	Manage alarm configurations, including obtaining alarm configurations and modifying alarm configurations.
Tag Management	Manage tags, including querying resource tags.
Traffic Filtering	Block traffic, including enabling, disabling, and importing IP address blacklists.

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3 API Calling

3.1 Making an API Request

This section describes the structure of a REST API request, and uses the IAM API for **obtaining a user token** as an example to demonstrate how to call an API. The obtained token can then be used to authenticate the calling of other APIs.

Request URI

A request URI is in the following format:

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

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

- **URI-scheme**:

  Protocol used to transmit requests. All APIs use HTTPS.
- **Endpoint**:

  Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from **Regions and Endpoints**.

  For example, the endpoint of IAM in region **CN-Hong Kong** is **iam.ap-southeast-1.myhuaweicloud.com**.
- **resource-path**:

  Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the **resource-path** of the API used to obtain a user token is **/v3/auth/tokens**.
- **query-string**:

  Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of "Parameter name=Parameter value". For example, **?limit=10** indicates that a maximum of 10 data records will be displayed.

For example, to obtain an IAM token in the **CN-Hong Kong** region, obtain the endpoint of IAM (**iam.ap-southeast-1.myhuaweicloud.com**) for this region and

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the resource-path (**/v3.0/OS-USER/users**) in the URI of the API used for **creating an IAM user**. Then, construct the URI as follows:

```
https://iam.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
```

Figure 3-1 Example URI

NOTE

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

Request Methods

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

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

For example, in the case of the API used to **obtain a user token**, the request method is POST. The request is as follows:

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
```

Request Header

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

Common request header fields are as follows:

- **Content-Type**: specifies the request body type or format. This field is mandatory and its default value is **application/json**. Other values of this field will be provided for specific APIs if any.
- **Authorization**: specifies signature authentication information. This field is optional. When AK/SK authentication is enabled, this field is automatically specified when SDK is used to sign the request.

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- **X-Sdk-Date**: specifies the time when a request is sent. This field is optional. When AK/SK authentication is enabled, this field is automatically specified when SDK is used to sign the request.
- **X-Auth-Token**: specifies a user token only for token-based API authentication. The user token is a response to the API used to **obtain a user token**. This API is the only one that does not require authentication.
- **X-Project-ID**: specifies subproject ID. This field is optional and can be used in multi-project scenarios. The **X-Project-ID** field is mandatory in the request header for accessing resources in a subproject through AK/SK-based authentication.
- **X-Domain-ID**: account ID, which is optional. When you call APIs of global services using AK/SK-based authentication, **X-Domain-ID** needs to be configured in the request header.

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users
Content-Type: application/json
X-Sdk-Date: 20240416T095341Z
Authorization: SDK-HMAC-SHA256 Access=**********, SignedHeaders=content-type;host;x-sdk-date,
Signature=**********
```

NOTE

In addition to supporting token-based authentication, APIs also support authentication using access key ID/secret access key (AK/SK). During AK/SK-based authentication, an SDK is used to sign the request, and the **Authorization** (signature information) and **X-Sdk-Date** (time when the request is sent) header fields are automatically added to the request.

For more information, see **AK/SK-based Authentication**.

Request Body

The body of a request is often sent in a structured format as specified in the **Content-Type** header field. The request body transfers content except the request header.

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

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

- **accountid**: ID of the account to which the IAM user belongs.
- **username**: IAM username to be created.
- **email**: email address of the IAM user.
- **************: password of the IAM user.

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3.0/OS-USER/users

Content-Type: application/json
 X-Sdk-Date: 20240416T095341Z
 Authorization: SDK-HMAC-SHA256 Access=**********, SignedHeaders=content-type;host;x-sdk-date,
Signature=**********

{
    "user": {
        "domain_id": "accountid",
        "name": "username",
```

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```
        "password": "**********",
        "email": "email",
        "description": "IAM User Description"
    }
}
```

If all data required for the API request is available, you can send the request to call the API through **curl**, **Postman**, or coding.

3.2 Authentication

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

- Token-based authentication: Requests are authenticated using a token.
- AK/SK authentication: Requests are encrypted using AK/SK pairs. This method is recommended because it provides higher security than token-based authentication.

Token-based Authentication

NOTE

- The validity period of a token is 24 hours. When using a token for authentication, cache it to prevent frequently calling the IAM API used to obtain a user token.
- Ensure that the token is valid when you use it. Using a token that will soon expire may cause API calling failures.

A token specifies temporary permissions in a computer system. During API authentication using a token, the token is added to requests to get permissions for calling the API.

You can **obtain a token** by calling an API. A project-level token is required for calling DEW APIs. When calling an API to obtain a user token, set **project** in **auth.scope** in the request body, as shown in the following example.

```
{
    "auth": {
        "identity": {
            "methods": [
                "password"
            ],
            "password": {
                "user": {
                    "name": "username",
                    "password": "********",
                    "domain": {
                        "name": "domainname"
                    }
                }
            }
        },
        "scope": {
            "project": {
                "name": "xxxxxxxx"
            }
        }
    }
}
```

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

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

AK/SK-based Authentication

NOTE

- AK/SK-based authentication supports API requests with a body not larger than 12 MB. For API requests with a larger body, token-based authentication is recommended.
- You can use the AK/SK in a permanent or temporary access key. The **X-Security-Token** field must be configured if the AK/SK in a temporary access key is used, and the field value is **security_token** of the temporary access key.

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

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

In AK/SK-based authentication, you can use an AK/SK to sign requests based on the signature algorithm or use the signing SDK to sign requests. For details about how to sign requests and use the signing SDK, see **API Request Signing Guide**.

NOTICE

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

3.3 Response

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

Status Codes

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

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

Response Header

A response header corresponds to a request header, for example, **Content-Type**.

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If the API is used to **obtain a user token**, the response header shown in **Figure 3-2** is returned.

Figure 3-2 Header of the response to the request for obtaining a user token

```
"X-Frame-Options": "SAMEORIGIN",
"X-IAM-ETag-id": "2562365939-d8f6f12921974cb097338ac11fceac8a",
"Transfer-Encoding": "chunked",
"Strict-Transport-Security": "max-age=31536000; includeSubdomains;",
"Server": "api-gateway",
"X-Request-Id": "af2953f2bcc67a42325a69a19e6c32a2",
"X-Content-Type-Options": "nosniff",
"Connection": "keep-alive",
"X-Download-Options": "noopen",
"X-XSS-Protection": "1; mode=block;",
"X-IAM-Trace-Id": "token_[redacted]_null_af2953f2bcc67a42325a69a19e6c32a2",
"Date": "Tue, 21 May 2024 09:03:40 GMT",
"Content-Type": "application/json; charset=utf8"
```

Response body

A response body is generally returned in a structured format, corresponding to the **Content-Type** in the response header, and is used to transfer content other than the response header.

The following shows part of the response body for the API to **obtain a user token**. For the sake of space, only part of the content is displayed here.

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

If an error occurs during API calling, the system returns an error code and a message to you. The following shows the format of an error response body:

```
{
    "error_msg": "Request body is invalid.",
    "error_code": "IAM.0011"
}
```

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In the preceding information, **error_code** is an error code, and **error_msg** describes the error.

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4 API

4.1 Firewall Management

4.1.1 Creating a Firewall

Function

This API is used to create a firewall.

Calling Method

For details, see **Calling APIs**.

URI

POST /v2/{project_id}/firewall

Table 4-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Request Parameters

Table 4-2 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.
X-Client-Token	No	String	**Definition** Identifier that ensures idempotency of client requests. It is generated by the client. The value must be unique. **Constraints** N/A **Range** N/A **Default Value** N/A

Table 4-3 Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Firewall name.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
tags	No	Array of **tags** objects	List of service resource tags. After tags are added to firewall resources, you can query resources and combine CDRs by key and value.
flavor	Yes	**flavor** object	Firewall specifications.
charge_info	Yes	**charge_info** object	Billing type, which can be yearly/monthly or pay-per-use (default setting).

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Table 4-4 tags

Parameter	Mandatory	Type	Description
key	No	String	Resource tag key.
value	No	String	Resource tag value.

Table 4-5 flavor

Parameter	Mandatory	Type	Description
version	Yes	String	Firewall edition. If **charge_mode** is set to **prePaid**, only the professional edition is supported. If **charge_mode** is set to **postPaid**, the standard and professional editions are supported. Enumeration values: • **Standard** • **Professional**
extend_eip_count	No	Integer	Number of EIPs to be added. This parameter takes effect only in the yearly/monthly billing mode. Set this parameter when you need to increase protected EIPs.
extend_bandwidth	No	Integer	Added bandwidth. The increment step is 5. This parameter takes effect only in yearly/monthly billing mode. Set this parameter when you need to increase protected bandwidth.
extend_vpc_count	No	Integer	Number of VPCs to be added. This parameter takes effect only in the yearly/monthly billing mode. Set this parameter when you need to increase protected VPCs.

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Table 4-6 charge_info

Parameter	Mandatory	Type	Description
charge_mode	Yes	String	Billing mode. Enumeration values: • **prePaid** (yearly/monthly) • **postPaid** (pay-per-use)
period_type	No	String	Subscription period. Enumeration values: • **month** • **year** Note: This parameter is valid and mandatory when **charge_mode** is set to **prePaid**.
period_num	No	Integer	Subscription time. This parameter is valid and mandatory only when **charge_mode** is set to **prePaid**. Enumeration values: • If **period_type** is set to **month**, the parameter value ranges from integer **1** to **9**. • If **period_type** is set to **year**, the parameter value ranges from integer **1** to **3**.
is_auto_renew	Yes	Boolean	Whether automatic renewal is enabled for yearly/monthly instances. The renewal period is the same as the original period and the order will be automatically paid during the subscription renewal. Enumeration values: • **true** (Automatic renewal enabled.) • **false** (Default. Automatic renewal disabled.)

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Parameter	Mandatory	Type	Description
is_auto_pay	Yes	Boolean	Whether an order will be automatically paid after yearly/monthly CFW instances are created. This parameter does not affect the payment mode of automatic renewal. Enumeration values: • **true**: The order will be automatically paid. (Discounts and coupons are automatically selected. The fee will be automatically deducted from your Huawei Cloud account.) If the automatic payment fails, an unpaid order will be generated, and you need to manually complete the payment. (During manual payment, you can still modify the discounts and coupons that were automatically selected.) • **false**: The order will be manually paid. This is the default value. (You need to manually pay for the bill. Discounts and coupons can be used.)

Response Parameters

Status code: 200

Table 4-7 Response body parameters

Parameter	Type	Description
job_id	String	Instance creation task ID. This parameter is returned only when pay-per-use instances are created.
order_id	String	Order ID. This parameter is returned only when yearly/monthly instances are created.
data	**CreateFirewallReq** object	Request body for creating a firewall.

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Table 4-8 CreateFirewallReq

Parameter	Type	Description
name	String	Firewall name.
enterprise_project_id	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
tags	Array of **tags** objects	List of service resource tags. After tags are added to firewall resources, you can query resources and combine CDRs by key and value.
flavor	**flavor** object	Firewall specifications.
charge_info	**charge_info** object	Billing type, which can be yearly/monthly or pay-per-use (default setting).

Table 4-9 tags

Parameter	Type	Description
key	String	Resource tag key.
value	String	Resource tag value.

Table 4-10 flavor

Parameter	Type	Description
version	String	Firewall edition. If **charge_mode** is set to **prePaid**, only the professional edition is supported. If **charge_mode** is set to **postPaid**, the standard and professional editions are supported. Enumeration values: • **Standard** • **Professional**

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Parameter	Type	Description
extend_eip_count	Integer	Number of EIPs to be added. This parameter takes effect only in the yearly/monthly billing mode. Set this parameter when you need to increase protected EIPs.
extend_bandwidth	Integer	Added bandwidth. The increment step is 5. This parameter takes effect only in yearly/monthly billing mode. Set this parameter when you need to increase protected bandwidth.
extend_vpc_count	Integer	Number of VPCs to be added. This parameter takes effect only in the yearly/monthly billing mode. Set this parameter when you need to increase protected VPCs.

Table 4-11 charge_info

Parameter	Type	Description
charge_mode	String	Billing mode. Enumeration values: • **prePaid** (yearly/monthly) • **postPaid** (pay-per-use)
period_type	String	Subscription period. Enumeration values: • **month** • **year** Note: This parameter is valid and mandatory when **charge_mode** is set to **prePaid**.
period_num	Integer	Subscription time. This parameter is valid and mandatory only when **charge_mode** is set to **prePaid**. Enumeration values: • If **period_type** is set to **month**, the parameter value ranges from integer **1** to **9**. • If **period_type** is set to **year**, the parameter value ranges from integer **1** to **3**.

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Parameter	Type	Description
is_auto_renew	Boolean	Whether automatic renewal is enabled for yearly/monthly instances. The renewal period is the same as the original period and the order will be automatically paid during the subscription renewal. Enumeration values: • **true** (Automatic renewal enabled.) • **false** (Default. Automatic renewal disabled.)
is_auto_pay	Boolean	Whether an order will be automatically paid after yearly/monthly CFW instances are created. This parameter does not affect the payment mode of automatic renewal. Enumeration values: • **true**: The order will be automatically paid. (Discounts and coupons are automatically selected. The fee will be automatically deducted from your Huawei Cloud account.) If the automatic payment fails, an unpaid order will be generated, and you need to manually complete the payment. (During manual payment, you can still modify the discounts and coupons that were automatically selected.) • **false**: The order will be manually paid. This is the default value. (You need to manually pay for the bill. Discounts and coupons can be used.)

Status code: 400

Table 4-12 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

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Example Requests

The customer whose project ID is 124147da-5b08-471a-93d2-bc82acc290c6 subscribes to the standard firewall. The firewall name is **CFW-Test**, the enterprise project ID is **0**, the resource tag is a key-value pair, the key is **TagKey**, the value is **TagValue**, the added number of protected EIPs is 2000, the added protection bandwidth is 5000 Mbit/s, and the added number of protected VPCs is 100. The yearly/monthly billing mode is used. Auto-renewal and auto-payment are enabled. The usage duration is one month.

```
https://{Endpoint}/v2/124147da-5b08-471a-93d2-bc82acc290c6/firewall

{
  "name" : "CFW-TEST",
  "enterprise_project_id" : "0",
  "tags" : [ {
    "key" : "TagKey",
    "value" : "TagVal"
  } ],
  "flavor" : {
    "version" : "standard",
    "extend_eip_count" : 2000,
    "extend_bandwidth" : 5000,
    "extend_vpc_count" : 100
  },
  "charge_info" : {
    "charge_mode" : "prePaid",
    "period_type" : "month",
    "period_num" : 1,
    "is_auto_renew" : true,
    "is_auto_pay" : true
  }
}
```

Example Responses

Status code: 200

Information returned when the firewall is purchased successfully.

```
{
  "data" : {
    "charge_info" : {
      "charge_mode" : "prePaid",
      "is_auto_pay" : true,
      "is_auto_renew" : true,
      "period_num" : 1,
      "period_type" : "month"
    },
    "enterprise_project_id" : "0",
    "flavor" : {
      "extend_bandwidth" : 5000,
      "extend_eip_count" : 2000,
      "extend_vpc_count" : 100,
      "version" : "Standard"
    },
    "name" : "CFW-TEST",
    "tags" : [ {
      "key" : "TagKey",
      "value" : "TagVal"
    } ]
  },
  "job_id" : "CS2403271050ZEM0L"
}
```

Status code: 400

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Returned error information.

```
{
  "error_code" : "CFW.00100001",
  "error_msg" : "System busy. Try again later."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

The customer whose project ID is 124147da-5b08-471a-93d2-bc82acc290c6 subscribes to the standard firewall. The firewall name is **CFW-Test**, the enterprise project ID is **0**, the resource tag is a key-value pair, the key is **TagKey**, the value is **TagValue**, the added number of protected EIPs is 2000, the added protection bandwidth is 5000 Mbit/s, and the added number of protected VPCs is 100. The yearly/monthly billing mode is used. Auto-renewal and auto-payment are enabled. The usage duration is one month.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class CreateFirewallSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateFirewallRequest request = new CreateFirewallRequest();
        CreateFirewallReq body = new CreateFirewallReq();
        CreateFirewallReqChargeInfo chargeInfobody = new CreateFirewallReqChargeInfo();
        chargeInfobody.withChargeMode("prePaid")
            .withPeriodType("month")
            .withPeriodNum(1)
            .withIsAutoRenew(true)
            .withIsAutoPay(true);
        CreateFirewallReqFlavor flavorbody = new CreateFirewallReqFlavor();
```

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```
        flavorbody.withVersion(CreateFirewallReqFlavor.VersionEnum.fromValue("standard"))
            .withExtendEipCount(2000)
            .withExtendBandwidth(5000)
            .withExtendVpcCount(100);
        List<CreateFirewallReqTags> listbodyTags = new ArrayList<>();
        listbodyTags.add(
            new CreateFirewallReqTags()
                .withKey("TagKey")
                .withValue("TagVal")
        );
        body.withChargeInfo(chargeInfobody);
        body.withFlavor(flavorbody);
        body.withTags(listbodyTags);
        body.withEnterpriseProjectId("0");
        body.withName("CFW-TEST");
        request.withBody(body);
        try {
            CreateFirewallResponse response = client.createFirewall(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

The customer whose project ID is 124147da-5b08-471a-93d2-bc82acc290c6 subscribes to the standard firewall. The firewall name is **CFW-Test**, the enterprise project ID is **0**, the resource tag is a key-value pair, the key is **TagKey**, the value is **TagValue**, the added number of protected EIPs is 2000, the added protection bandwidth is 5000 Mbit/s, and the added number of protected VPCs is 100. The yearly/monthly billing mode is used. Auto-renewal and auto-payment are enabled. The usage duration is one month.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

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```
    try:
        request = CreateFirewallRequest()
        chargeInfobody = CreateFirewallReqChargeInfo(
            charge_mode="prePaid",
            period_type="month",
            period_num=1,
            is_auto_renew=True,
            is_auto_pay=True
        )
        flavorbody = CreateFirewallReqFlavor(
            version="standard",
            extend_eip_count=2000,
            extend_bandwidth=5000,
            extend_vpc_count=100
        )
        listTagsbody = [
            CreateFirewallReqTags(
                key="TagKey",
                value="TagVal"
            )
        ]
        request.body = CreateFirewallReq(
            charge_info=chargeInfobody,
            flavor=flavorbody,
            tags=listTagsbody,
            enterprise_project_id="0",
            name="CFW-TEST"
        )
        response = client.create_firewall(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

The customer whose project ID is 124147da-5b08-471a-93d2-bc82acc290c6 subscribes to the standard firewall. The firewall name is **CFW-Test**, the enterprise project ID is **0**, the resource tag is a key-value pair, the key is **TagKey**, the value is **TagValue**, the added number of protected EIPs is 2000, the added protection bandwidth is 5000 Mbit/s, and the added number of protected VPCs is 100. The yearly/monthly billing mode is used. Auto-renewal and auto-payment are enabled. The usage duration is one month.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateFirewallRequest{}
    periodTypeChargeInfo:= "month"
    periodNumChargeInfo:= int32(1)
    chargeInfobody := &model.CreateFirewallReqChargeInfo{
        ChargeMode: "prePaid",
        PeriodType: &periodTypeChargeInfo,
        PeriodNum: &periodNumChargeInfo,
        IsAutoRenew: true,
        IsAutoPay: true,
    }
    extendEipCountFlavor:= int32(2000)
    extendBandwidthFlavor:= int32(5000)
    extendVpcCountFlavor:= int32(100)
    flavorbody := &model.CreateFirewallReqFlavor{
        Version: model.GetCreateFirewallReqFlavorVersionEnum().STANDARD,
        ExtendEipCount: &extendEipCountFlavor,
        ExtendBandwidth: &extendBandwidthFlavor,
        ExtendVpcCount: &extendVpcCountFlavor,
    }
    keyTags:= "TagKey"
    valueTags:= "TagVal"
    var listTagsbody = []model.CreateFirewallReqTags{
        {
            Key: &keyTags,
            Value: &valueTags,
        },
    }
    enterpriseProjectIdCreateFirewallReq:= "0"
    request.Body = &model.CreateFirewallReq{
        ChargeInfo: chargeInfobody,
        Flavor: flavorbody,
        Tags: &listTagsbody,
        EnterpriseProjectId: &enterpriseProjectIdCreateFirewallReq,
        Name: "CFW-TEST",
    }
    response, err := client.CreateFirewall(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

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Status Codes

Status Code	Description
200	Information returned when the firewall is purchased successfully.
400	Returned error information.

Error Codes

See **Error Codes**.

4.1.2 Obtaining the Status of a CFW Task

Function

This API is used to obtain the status of a CFW task.

Calling Method

For details, see **Calling APIs**.

URI

GET /v3/{project_id}/jobs/{job_id}

Table 4-13 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
job_id	Yes	String	Task ID returned when a pay-per-use firewall is created. You can obtain the task ID by calling the **API for creating a firewall**. Its value is obtained from **job_id** in the return value.

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Request Parameters

Table 4-14 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-15 Response body parameters

Parameter	Type	Description
data	**GetCreateFirewallJobResponseData** object	Data returned for creating a pay-per-use firewall.

Table 4-16 GetCreateFirewallJobResponseData

Parameter	Type	Description
id	String	ID of the task for creating a pay-per-use firewall.
status	String	Task execution status, which indicates whether a firewall is successfully created. Enumeration values: • **Running** • **Success** • **Failed**
begin_time	String	Creation time in the "yyyy-mm-ddThh:mm:ssZ" format. **T** is the separator between the calendar and the hourly notation of time. **Z** indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as **+0800**.

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Parameter	Type	Description
end_time	String	End time in the "yyyy-mm-ddThh:mm:ssZ" format. **T** is the separator between the calendar and the hourly notation of time. **Z** indicates the time zone offset. For example, in the Beijing time zone, the time zone offset is shown as **+0800**.

Example Requests

Obtain information about the f588ce71-e26c-400d-8981-f854355f6849 task for creating a pay-per-use firewall in project 09bb24e6fe80d23d2fa2c010b53b418c.

```
https://{Endpoint}/v3/09bb24e6fe80d23d2fa2c010b53b418c/jobs/f588ce71-e26c-400d-8981-f854355f6849
```

Example Responses

Status code: 200

Return value of the API for obtaining the information about a pay-per-use firewall creation task.

```
{
  "data" : {
    "begin_time" : 1641370501000,
    "end_time" : 1641370515000,
    "id" : "f588ce71-e26c-400d-8981-f854355f6849",
    "status" : "Success"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListJobSolution {

    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
```

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```
this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListJobRequest request = new ListJobRequest();
        request.withJobId("{job_id}");
        try {
            ListJobResponse response = client.listJob(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListJobRequest()
        request.job_id = "{job_id}"
        response = client.list_job(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
```

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

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value of the API for obtaining the information about a pay-per-use firewall creation task.

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Error Codes

See **Error Codes**.

4.1.3 Deleting a Firewall

Function

This API is used to delete a firewall. It takes effect only for pay-per-use firewalls.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v2/{project_id}/firewall/{resource_id}

Table 4-17 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
resource_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-18 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

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Table 4-19 Response body parameters

Parameter	Type	Description
data	String	ID of a firewall deletion task.

Example Requests

Delete the pay-per-use firewall 08065281-860a-4c98-aeb5-82cf65c44c46 from project 06217ebc876e427a80a2c05d51264ab1.

```
https://{Endpoint}/v2/06217ebc876e427a80a2c05d51264ab1/firewall/08065281-860a-4c98-aeb5-82cf65c44c46
```

Example Responses

Status code: 200

Return value for deleting a firewall.

```
{
  "data" : "56884cd0-cf3c-4cb7-bbeb-59d8722a2671"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class DeleteFirewallSolution {

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

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

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

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```
                .build();
        DeleteFirewallRequest request = new DeleteFirewallRequest();
        request.withResourceId("{resource_id}");
        try {
            DeleteFirewallResponse response = client.deleteFirewall(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = DeleteFirewallRequest()
        request.resource_id = "{resource_id}"
        response = client.delete_firewall(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)
```

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value for deleting a firewall.

Error Codes

See **Error Codes**.

4.1.4 Querying the Firewall List

Function

This API is used to query a firewall list.

Calling Method

For details, see **Calling APIs**.

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URI

POST /v1/{project_id}/firewalls/list

Table 4-20 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-21 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-22 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Table 4-23 Request body parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
key_word	No	String	Query keyword, which can be a firewall ID or part of a firewall name. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**.
tags	No	Array of **TagInfo** objects	Tag list, which can be obtained by calling the API for querying tags. The return value is the tag list.
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.

Table 4-24 TagInfo

Parameter	Mandatory	Type	Description
key	No	String	Tag key.
values	No	Array of strings	Tag value list.

Response Parameters

Status code: 200

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Table 4-25 Response body parameters

Parameter	Type	Description
user_support_eps	Boolean	Whether enterprise projects are supported: **true** (yes), **false** (no).
has_ndr	Boolean	Whether NDR exists: **true** (yes), **false** (no). NDR is the original out-of-path firewall and is no longer sold.
is_support_postpaid	Boolean	Whether pay-per-use purchase is supported: **true** (yes), **false** (no).
is_support_basic_version	Boolean	Whether the basic edition is supported: **true** (yes), **false** (no).
is_support_buy_professional	Boolean	Whether the professional edition can be purchased: **true** (yes), **false** (no).
data	**HttpFirewallInstanceListResponse-Data** object	Data returned for querying the firewall list.

Table 4-26 HttpFirewallInstanceListResponseData

Parameter	Type	Description
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
project_id	String	Tenant project ID
total	Integer	Total number of firewalls.
records	Array of **FirewallInstance-VO** objects	Query the firewall list.

Table 4-27 FirewallInstanceVO

Parameter	Type	Description
fw_instance_id	String	Firewall instance ID, which is automatically generated by the system after a CFW instance is created.

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Parameter	Type	Description
resource_id	String	Resource ID, which is the same as the firewall instance ID **fw_instance_id**.
name	String	Firewall creation timestamp.
fw_instance_name	String	Firewall name.
enterprise_project_id	String	Enterprise project ID, which is generated after the enterprise project is supported for a user.
ha_type	Integer	Cluster type: **0** (active/standby), **1** (cluster). In active/standby mode, there are four nodes. Two active nodes form a cluster, and the other two are the standby of the active nodes. In cluster mode, only two nodes are started to form a cluster.
charge_mode	Integer	Billing mode: **0** (yearly/monthly), **1** (pay-per-use).
service_type	Integer	Firewall protection type. Currently, its value can only be **0** (Internet protection).
engine_type	Integer	Engine type: **0** (self-developed engine), **1** (Hillstone engine), or **3** (TOPSEC engine).
flavor	**Flavor** object	Firewall specifications.
status	Integer	Firewall status: **-1** (waiting for payment), **0** (creating), **1** (deleting), **2** (running), **3** (upgrading), **4** (deleted), **5** (frozen), **6** (creation failed), **7** (deletion failed), **8** (freezing failed), or **9** (being stored), **10** (storage failed), or **11** (upgrade failed).
tags	String	Tag list, which is a JSON string converted from the tag key value map, for example, "{"key":"value"}".

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Table 4-28 Flavor

Parameter	Type	Description
version	Integer	Firewall edition: **0** (standard), **1** (professional), or **3** (basic). If **charge_mode** is set to **postPaid**, only the professional edition is supported. If **charge_mode** is set to **prePaid**, the standard and professional editions are supported.
eip_count	Integer	Number of EIPs.
vpc_count	Integer	Number of VPCs.
bandwidth	Integer	Bandwidth, in Mbit/s.
log_storage	Integer	Log storage, in bytes.
default_bandwidth	Integer	Default firewall bandwidth, in Mbit/s. The value is 10 for the standard edition, 50 for the professional edition, and 200 for the pay-per-use professional edition.
default_eip_count	Integer	Default number of EIPs. The value is 20 for the standard edition, 50 for the professional edition, and 1,000 for the pay-per-use professional edition.
default_log_storage	Integer	Default log storage, in bytes. The default value is **0**.
default_vpc_count	Integer	Default number of VPCs. The value is 0 for the standard edition, 2 for the professional edition, and 5 for the pay-per-use professional edition.

Example Requests

Query the firewall list on the first page of the enterprise project whose ID is all_granted_eps and project ID is 14181c1245cf4fd786824efe1e2b9388.

```
https://{Endpoint}/v1/14181c1245cf4fd786824efe1e2b9388/firewalls/list?
enterprise_project_id=all_granted_eps

{
  "limit" : 10,
  "offset" : 0
}
```

Example Responses

Status code: 200

Return value for querying the firewall list.

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```
{
  "data" : {
    "limit" : 1,
    "offset" : 0,
    "project_id" : "14181c1245cf4fd786824efe1e2b9388",
    "records" : [ {
      "fw_instance_id" : "ebf891cd-2163-48a0-9963-6309f99dd3c4",
      "resource_id" : "ebf891cd-2163-48a0-9963-6309f99dd3c4",
      "name" : "1709176078374",
      "fw_instance_name" : "test",
      "enterprise_project_id" : "default",
      "tags" : "{\"key_test3\":\"value_test3\"}",
      "ha_type" : 0,
      "charge_mode" : 0,
      "service_type" : 0,
      "engine_type" : 1,
      "flavor" : {
        "version" : 1,
        "eip_count" : 50,
        "vpc_count" : 6,
        "bandwidth" : 50,
        "log_storage" : 0,
        "default_eip_count" : 50,
        "default_vpc_count" : 2,
        "default_bandwidth" : 50,
        "default_log_storage" : 0
      },
      "status" : 2
    } ],
    "total" : 18
  },
  "has_ndr" : false,
  "is_support_basic_version" : true,
  "is_support_buy_professional" : false,
  "is_support_postpaid" : true,
  "user_support_eps" : false
}
```


SDK Sample Code

The SDK sample code is as follows.

Java

Query the firewall list on the first page of the enterprise project whose ID is all_granted_eps and project ID is 14181c1245cf4fd786824efe1e2b9388.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListFirewallListSolution {

    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
```

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```
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListFirewallListRequest request = new ListFirewallListRequest();
        QueryFireWallInstanceDto body = new QueryFireWallInstanceDto();
        body.withOffset(0);
        body.withLimit(10);
        request.withBody(body);
        try {
            ListFirewallListResponse response = client.listFirewallList(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

Query the firewall list on the first page of the enterprise project whose ID is all_granted_eps and project ID is 14181c1245cf4fd786824efe1e2b9388.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListFirewallListRequest()
        request.body = QueryFireWallInstanceDto(
            offset=0,
```

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```
            limit=10
        )
        response = client.list_firewall_list(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

Query the firewall list on the first page of the enterprise project whose ID is all_granted_eps and project ID is 14181c1245cf4fd786824efe1e2b9388.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListFirewallListRequest{}
    request.Body = &model.QueryFireWallInstanceDto{
        Offset: int32(0),
        Limit: int32(10),
    }
    response, err := client.ListFirewallList(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

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Status Codes

Status Code	Description
200	Return value for querying the firewall list.

Error Codes

See **Error Codes**.

4.1.5 Querying Firewall Details

Function

This API is used to query firewall instance details.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/firewall/exist

Table 4-29 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-30 Query Parameters

Parameter	Mandatory	Type	Description
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.

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Parameter	Mandatory	Type	Description
service_type	Yes	Integer	Service type. Currently, only **0** (Internet protection) is supported.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall instance ID, which is automatically generated by the system after a CFW is created. You can call the **API for querying firewall instances**. By default, if this parameter is left blank, information about the first firewall under the account is returned. If this parameter is specified, information about the corresponding firewall is returned.
name	No	String	Firewall name.

Request Parameters

Table 4-31 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

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Table 4-32 Response body parameters

Parameter	Type	Description
data	**GetFirewallInstanceData** object	Query firewall instance data.

Table 4-33 GetFirewallInstanceData

Parameter	Type	Description
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
total	Integer	Total number of firewalls.
records	Array of **GetFirewallInstanceResponseRecord** objects	Query the firewall instance list.

Table 4-34 GetFirewallInstanceResponseRecord

Parameter	Type	Description
fw_instance_id	String	Firewall instance ID, which is automatically generated by the system after a CFW instance is created. You can call the API for **querying firewall instances**. By default, if **fw_instance_Id** is left blank, information about the first firewall under the account is returned. If **fw_instance_Id** is specified, the information about the firewall corresponding to **fw_instance_Id** is returned.
name	String	Firewall name.

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Parameter	Type	Description
ha_type	Integer	Cluster type: **0** (active/standby), **1** (cluster). In active/standby mode, there are four nodes. Two active nodes form a cluster, and the other two are the standby of the active nodes. In cluster mode, only two nodes are started to form a cluster.
charge_mode	Integer	Billing mode: **0** (yearly/monthly), **1** (pay-per-use).
service_type	Integer	Firewall protection type. Currently, its value can only be **0** (Internet protection).
engine_type	Integer	Engine type: **0** (self-developed engine), **1** (Hillstone engine), or **3** (TOPSEC engine).
flavor	**Flavor** object	Firewall specifications.
protect_objects	Array of **ProtectObjectVO** objects	Protected object list.
status	Integer	Firewall status: **-1** (waiting for payment), **0** (creating), **1** (deleting), **2** (running), **3** (upgrading), **4** (deleted), **5** (frozen), **6** (creation failed), **7** (deletion failed), **8** (freezing failed), or **9** (being stored), **10** (storage failed), or **11** (upgrade failed).
is_old_firewall_instance	Boolean	Whether an engine old: **true** (yes), **false** (no).
is_available_obs	Boolean	Whether OBS is supported: **true** (yes), **false** (no).
is_support_threat_tags	Boolean	Whether threat intelligence tags are supported: **true** (yes), **false** (no).
support_ipv6	Boolean	Whether IPv6 is supported: **true** (yes), **false** (no).
feature_toggle	Map<String,Boolean>	Whether a feature is enabled: **true** (yes), **false** (no).
resources	Array of **FirewallInstanceResource** objects	Firewall resource list.
fw_instance_name	String	Firewall name.

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Parameter	Type	Description
enterprise_project_id	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
resource_id	String	Firewall resource ID, which is the same as **fw_instance_id**.
support_url_filtering	Boolean	Whether website filtering is supported: **true** (yes), **false** (no).
tags	String	Tag list, which is a JSON string converted from the tag key value map, for example, "{"key":"value"}".

Table 4-35 Flavor

Parameter	Type	Description
version	Integer	Firewall edition: **0** (standard), **1** (professional), or **3** (basic). If **charge_mode** is set to **postPaid**, only the professional edition is supported. If **charge_mode** is set to **prePaid**, the standard and professional editions are supported.
eip_count	Integer	Number of EIPs.
vpc_count	Integer	Number of VPCs.
bandwidth	Integer	Bandwidth, in Mbit/s.
log_storage	Integer	Log storage, in bytes.
default_bandwidth	Integer	Default firewall bandwidth, in Mbit/s. The value is 10 for the standard edition, 50 for the professional edition, and 200 for the pay-per-use professional edition.
default_eip_count	Integer	Default number of EIPs. The value is 20 for the standard edition, 50 for the professional edition, and 1,000 for the pay-per-use professional edition.
default_log_storage	Integer	Default log storage, in bytes. The default value is **0**.

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Parameter	Type	Description
default_vpc_count	Integer	Default number of VPCs. The value is 0 for the standard edition, 2 for the professional edition, and 5 for the pay-per-use professional edition.

Table 4-36 ProtectObjectVO

Parameter	Type	Description
object_id	String	Protected object ID. It is used to distinguish Internet border protection from VPC border protection after a CFW instance is created.
object_name	String	Protected object name.
type	Integer	Project type: **0** (north-south), **1** (east-west).

Table 4-37 FirewallInstanceResource

Parameter	Type	Description
resource_id	String	Resource ID. It can be the firewall ID, bandwidth ID, EIP ID, VPC ID, or the ID returned after CBC callback.
cloud_service_type	String	Service type, which is used by CBC. The value is **hws.service.type.cfw**.
resource_type	String	Resource type. Enumeration values: • **hws.resource.type.cfw** (cloud firewall) • **hws.resource.type.cfw.exp.eip** (EIP) • **hws.resource.type.cfw.exp.bandwidth** (bandwidth) • **hws.resource.type.cfw.exp** (VPC)

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Parameter	Type	Description
resource_spec_code	String	Inventory unit code: **cfw.standard** (firewall standard edition), **cfw.professional** (firewall professional edition), **cfw.expack.eip.standard** (EIP standard edition), **cfw.expack.eip.professional** (EIP professional edition), **cfw.expack.bandwidth.standard** (bandwidth basic edition), **cfw.expack.bandwidth.professional** (bandwidth professional edition), or **cfw.expack.vpc.professional** (VPC professional edition).
resource_size	Integer	Resource quantity.
resource_size_measure_id	Integer	Resource unit.

Example Requests

Query the firewall list of project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/firewall/exist?
service_type=0&offset=0&limit=10
```

Example Responses

Status code: 200

Response to the request for obtaining an existing firewall instance.


```
{
  "data": {
    "limit": 10,
    "offset": 0,
    "records": [
      {
        "charge_mode": 0,
        "engine_type": 1,
        "enterprise_project_id": "default",
        "feature_toggle": {
          "is_support_anti_virus": true,
          "is_support_application": true,
          "is_support_tcp_proxy": false,
          "is_support_url_profile": true,
          "is_support_threat_tags": true,
          "is_support_flow_associated_host": false,
          "is_support_predefined": true,
          "isSupportSession": false,
          "is_support_acl_region_config": true,
          "is_support_ips": true,
          "is_support_ew_create_er_tenant_inspection_mode": false,
          "ips_rule_list": true,
          "long_connect": true,
          "is_support_ew_create_vpc_peering_inspection_mode": true,
          "alarm_config": true,
          "is_not_support_resource_reduction": false,
```


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```
        "acl_multi_object": true,
        "is_support_advanced_ips_rule": true,
        "is_support_multi_account": false,
        "is_support_capture": true,
        "is_support_ew_create_er_bearer_inspection_mode": true
    },
    "flavor": {
        "bandwidth": 60,
        "eip_count": 51,
        "log_storage": 0,
        "version": 1,
        "vpc_count": 8,
        "default_eip_count": 20,
        "default_vpc_count": 0,
        "default_bandwidth": 10,
        "default_log_storage": 0
    },
    "tags": "{\"key1234\":\"1234\",\"key122\":\"2222\"}",
    "fw_instance_id": "546af3f8-88e9-47f2-a205-2346d7090925",
    "fw_instance_name": "test",
    "ha_type": 1,
    "is_available_obs": false,
    "is_old_firewall_instance": false,
    "is_support_threat_tags": false,
    "name": "1680054140516",
    "protect_objects": [
        {
            "object_id": "ae42418e-f077-41a0-9d3b-5b2f5ad9102b",
            "object_name": "1680054141674",
            "type": 0
        },
        {
            "object_id": "be83d202-df0b-498d-a96e-41589dc85c86",
            "object_name": "ew-1680070626042",
            "type": 1
        }
    ],
    "resource_id": "546af3f8-88e9-47f2-a205-2346d7090925",
    "resources": [
        {
            "cloud_service_type": "hws.service.type.cfw",
            "resource_id": "546af3f8-88e9-47f2-a205-2346d7090925",
            "resource_spec_code": "cfw.professional",
            "resource_type": "hws.resource.type.cfw"
        },
        {
            "cloud_service_type": "hws.service.type.cfw",
            "resource_id": "0acdd5c7-1178-4bea-b5b6-bd55dc5e2669",
            "resource_size": 5,
            "resource_size_measure_id": 14,
            "resource_spec_code": "cfw.expack.vpc.professional",
            "resource_type": "hws.resource.type.cfw.exp.vpc"
        },
        {
            "cloud_service_type": "hws.service.type.cfw",
            "resource_id": "4002620c-916a-49c7-8042-cbe02fc17e61",
            "resource_size": 5,
            "resource_size_measure_id": 36,
            "resource_spec_code": "cfw.expack.bandwidth.professional",
            "resource_type": "hws.resource.type.cfw.exp.bandwidth"
        },
        {
            "cloud_service_type": "hws.service.type.cfw",
            "resource_id": "0235c7db-0baa-4c82-8db2-7b8d5108bd86",
            "resource_size": 2,
            "resource_size_measure_id": 14,
            "resource_spec_code": "cfw.expack.eip.professional",
            "resource_type": "hws.resource.type.cfw.exp.eip"
        },
```


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```
            {
                "cloud_service_type": "hws.service.type.cfw",
                "resource_id": "079ade46-18cd-4917-b7bb-00d402931097",
                "resource_size": 6,
                "resource_size_measure_id": 14,
                "resource_spec_code": "cfw.expack.vpc.professional",
                "resource_type": "hws.resource.type.cfw.exp.vpc"
            },
            {
                "cloud_service_type": "hws.service.type.cfw",
                "resource_id": "dd078faa-abfd-4e63-b681-1a93489955b9",
                "resource_size": 1,
                "resource_size_measure_id": 14,
                "resource_spec_code": "cfw.expack.eip.professional",
                "resource_type": "hws.resource.type.cfw.exp.eip"
            },
            {
                "cloud_service_type": "hws.service.type.cfw",
                "resource_id": "4d78d523-745d-4d54-a9ca-e6d25e555bde",
                "resource_size": 10,
                "resource_size_measure_id": 36,
                "resource_spec_code": "cfw.expack.bandwidth.professional",
                "resource_type": "hws.resource.type.cfw.exp.bandwidth"
            }
        ],
        "service_type": 0,
        "status": 2,
        "support_ipv6": true,
        "support_url_filtering": true
      }
    ],
    "total": 1
  }
}
```


SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListFirewallDetailSolution {

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

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
```

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```
            .withSk(sk);

    CfwClient client = CfwClient.newBuilder()
            .withCredential(auth)
            .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
            .build();
    ListFirewallDetailRequest request = new ListFirewallDetailRequest();
    try {
        ListFirewallDetailResponse response = client.listFirewallDetail(request);
        System.out.println(response.toString());
    } catch (ConnectionException e) {
        e.printStackTrace();
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
  }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListFirewallDetailRequest()
        response = client.list_firewall_detail(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
```

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```
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Response to the request for obtaining an existing firewall instance.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

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4.1.6 Obtaining East-West Firewall Information

Function

This API is used to obtain east-west firewall information.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/firewall/east-west

Table 4-38 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-39 Query Parameters

Parameter	Mandatory	Type	Description
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

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Request Parameters

Table 4-40 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-41 Response body parameters

Parameter	Type	Description
data	**GetEastWestFirewallResponseBody** object	Returned data for obtaining the east-west firewall list.

Table 4-42 GetEastWestFirewallResponseBody

Parameter	Type	Description
object_id	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border. Here, a protected object ID whose **type** is **1** is used. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
project_id	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Parameter	Type	Description
status	Integer	Protection status: **0** (enabled), **1** (disabled).
firewall_associated_subnets	Array of **SubnetInfo** objects	Information about the subnet associated with a cloud firewall.
er	**ErInstance** object	Information about the associated enterprise router in the outbound direction.
inspection_vpc	**VpcDetail** object	Information about the traffic diversion VPC.
protect_infos	Array of **EwProtectResourceInfo** objects	East-west protected resource information.
total	Integer	Total number of protected VPCs.
offset	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
mode	String	Protection mode. Its value is **er**.

Table 4-43 SubnetInfo

Parameter	Type	Description
availability_zone	String	ID of the AZ where a subnet is located, which is obtained from an endpoint. For details, see **Endpoints**.
cidr	String	Available IP address ranges for subnets in a VPC. Ranges: 10.0.0.0/8-24 172.16.0.0/12-24 192.168.0.0/16-24 If **cidr** is not specified, it is left blank by default. The value must be in CIDR format, for example, **192.168.0.0/16**.

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Parameter	Type	Description
name	String	Subnet name.
id	String	Subnet ID.
gateway_ip	String	Subnet gateway. The value is the IP address in the subnet CIDR block **cidr**.
vpc_id	String	UUID generated when a VPC is created.
ipv6_enable	Boolean	Whether IPv6 is supported: **true** (yes), **false** (no).

Table 4-44 ErInstance

Parameter	Type	Description
id	String	Enterprise router ID, which is generated when an enterprise router is created.
name	String	Enterprise router name.
project_id	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
attachment_id	String	Connection ID of an enterprise router. This connection is used to connect the firewall and the enterprise router. This field can be used to obtain the connection details on the connection management page after querying a specified enterprise router by its ID on the Enterprise Router page.

Table 4-45 VpcDetail

Parameter	Type	Description
id	String	Random UUID generated when a traffic diversion VPC is created.
name	String	Traffic diversion VPC name.

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Parameter	Type	Description
cidr	String	Available subnet ranges in a VPC. Ranges: 10.0.0.0/8-24; 172.16.0.0/12-24; and 192.168.0.0/16-24. If **cidr** is not specified, it is left blank by default. Constraint: The value must be in CIDR format, for example, **192.168.0.0/16**.

Table 4-46 EwProtectResourceInfo

Parameter	Type	Description
protected_resource_type	Integer	Protected resource type: **0** (VPC), **1** (VGW), **2** (VPN), or **3** (peering).
protected_resource_name	String	Protected resource name.
protected_resource_id	String	Protected resource ID.
protected_resource_nat_name	String	Name of the NAT gateway to be protected. The professional edition supports NAT rules.
protected_resource_nat_id	String	ID of the NAT gateway to be protected. The professional edition supports NAT rules.
protected_resource_project_id	String	Tenant ID of a protected resource. The firewall supports cross-account protection.
protected_resource_mode	String	Protected resource mode. Its value is **er**.
status	Integer	Protection status of a protected resource: **0** (associated), **1** (not associated).

Status code: 500

Table 4-47 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

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Example Requests

Obtain information about the east-west firewall 80e0f2df-24fd-49c2-8398-11f9a0299b3e whose project ID is 09bb24e6f280d23d0f9fc0104b901480.

```
https://{Endpoint}/v1/09bb24e6f280d23d0f9fc0104b901480/firewall/east-west?
limit=10&offset=0&fw_instance_id=80e0f2df-24fd-49c2-8398-11f9a0299b3e
```

Example Responses

Status code: 200

Response to the request for querying east-west firewall information.


```
{
  "data" : {
    "er" : {
      "id" : "f0f5275a-40aa-4d1e-ac78-2550f7818d43",
      "name" : "er",
      "project_id" : "5c69cf330cda42369cbd726ee1bc5e76",
      "attachment_id" : "e978c028-0ccf-4168-a015-0094ac631e88"
    },
    "inspection_vpc" : {
      "cidr" : "10.13.13.0/24",
      "id" : "3baa2248-03d4-47ac-aefa-ec6f9a30ed80",
      "name" : "inspection-vpc"
    },
    "limit" : 50,
    "mode" : "er",
    "object_id" : "6cc31075-0b03-461d-aa3a-73c4765bf9ac",
    "offset" : 0,
    "project_id" : "5c69cf330cda42369cbd726ee1bc5e76",
    "protect_infos" : [ {
      "protected_resource_id" : "09b26b83-4b7c-499f-805b-50820900cd9f",
      "protected_resource_mode" : "er",
      "protected_resource_name" : "vpc-4",
      "protected_resource_project_id" : "5c69cf330cda42369cbd726ee1bc5e76",
      "protected_resource_type" : 0,
      "status" : 0
    }, {
      "protected_resource_id" : "2956f917-af18-44a2-a0f2-f592633d4431",
      "protected_resource_mode" : "er",
      "protected_resource_name" : "vpc-t3",
      "protected_resource_project_id" : "5c69cf330cda42369cbd726ee1bc5e76",
      "protected_resource_type" : 0,
      "status" : 0
    }, {
      "protected_resource_id" : "69d4c81f-80bd-4c28-9074-f26b400b3a34",
      "protected_resource_mode" : "er",
      "protected_resource_name" : "vpc-t2",
      "protected_resource_project_id" : "5c69cf330cda42369cbd726ee1bc5e76",
      "protected_resource_type" : 0,
      "status" : 0
    }, {
      "protected_resource_id" : "e1b18d3e-8f7d-4c4e-a326-37db7bd89a3a",
      "protected_resource_mode" : "er",
      "protected_resource_name" : "vpc-t1",
      "protected_resource_project_id" : "5c69cf330cda42369cbd726ee1bc5e76",
      "protected_resource_type" : 0,
      "status" : 0
    }, {
      "protected_resource_id" : "f91c1747-1325-4b39-9d58-7fac0bd2786f",
      "protected_resource_mode" : "er",
      "protected_resource_name" : "vpc-5",
      "protected_resource_project_id" : "5c69cf330cda42369cbd726ee1bc5e76",
      "protected_resource_type" : 0,
```


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```
    "status" : 0
   }, {
    "protected_resource_id" : "bd556a7d-447e-49eb-be17-f93af09769f5",
    "protected_resource_mode" : "er",
    "protected_resource_name" : "inspct-a",
    "protected_resource_project_id" : "5c69cf330cda42369cbd726ee1bc5e76",
    "protected_resource_type" : 0,
    "status" : 1
   } ],
   "status" : 0,
   "total" : 6
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListEastWestFirewallSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListEastWestFirewallRequest request = new ListEastWestFirewallRequest();
        try {
            ListEastWestFirewallResponse response = client.listEastWestFirewall(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());
        }
```

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```
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListEastWestFirewallRequest()
        response = client.list_east_west_firewall(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
```

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

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

More

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

Status Codes

Status Code	Description
200	Response to the request for querying east-west firewall information.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error: Internal service error.

Error Codes

See **Error Codes**.

4.1.7 Creating an East-West Firewall

Function

This API is used to create an east-west firewall.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/firewall/east-west

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Table 4-48 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-49 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-50 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Table 4-51 Request body parameters

Parameter	Mandatory	Type	Description
er_id	Yes	String	ID of the associated enterprise router in the outbound direction, which can be obtained by calling the API for querying the enterprise router list of the Enterprise Router service. Find the enterprise router ID in **instances.id** (The period [.] is used to separate different levels of objects).
inspection_cidr	Yes	String	CIDR block used for creating a traffic diversion VPC.
mode	Yes	String	East-west firewall mode. Enter **er**.

Response Parameters

Status code: 200

Table 4-52 Response body parameters

Parameter	Type	Description
data	**CreateEWFirewallResp** object	Return value for creating an east-west firewall.

Table 4-53 CreateEWFirewallResp

Parameter	Type	Description
id	String	East-west protection ID, corresponding to the **object_id** field.
er	**ER** object	Enterprise router information.
inspertion_vpc	**CreateEWFirewallInspectVpcResp** object	Information about the traffic diversion VPC.

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Table 4-54 ER

Parameter	Type	Description
er_id	String	Enterprise router ID, which is referenced when east-west protection is created.
er_attach_id	String	Connection ID of an enterprise router. This connection is used to connect the firewall and the enterprise router. This field can be used to obtain the connection details on the connection management page after querying a specified enterprise router by its ID on the Enterprise Router page.

Table 4-55 CreateEWFirewallInspectVpcResp

Parameter	Type	Description
vpc_id	String	ID of a traffic diversion VPC.
subnet_ids	Array of strings	Subnet ID list of the created traffic diversion VPC.

Example Requests

In project 09bb24e6f280d23d0f9fc0104b901480, create a firewall 55b26ab5-e4b0-40e8-941c-a1778fe2a500 in Enterprise Router mode. Set **inspection_cidr** to **10.1.0.0/24** and **er_id** to **e0b22a23-02cf-4092-ace9-34b39e10dc77**.

```
https://{Endpoint}/v1/09bb24e6f280d23d0f9fc0104b901480/firewall/east-west?fw_instance_id=55b26ab5-e4b0-40e8-941c-a1778fe2a500&enterprise_project_id=default

{
  "inspection_cidr" : "10.1.0.0/24",
  "mode" : "er",
  "er_id" : "e0b22a23-02cf-4092-ace9-34b39e10dc77"
}
```

Example Responses

Status code: 200

Return value for creating an east-west firewall.

```
{
  "data" : {
    "id" : "acc86ca7-818b-4c3d-8a9a-3915a2b21651",
    "er" : {
      "er_id" : "f0f5275a-40aa-4d1e-ac78-2550f7818d43",
      "er_attach_id" : "bd62ddd3-5e20-482b-aefa-9e2940e2b1a9"
    },
    "inspertion_vpc" : {
      "vpc_id" : "00672633-0466-4c35-99ef-5e3f5c813a4b",
```

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```
    "subnet_ids" : [ "294682a0-1e85-45f5-92c8-e52bee09c204", "a86277bb-35d5-4442-
bc0b-2e9d4e6a9080", "95829240-14e0-47e6-b9e7-2ac228e7b00f" ]
   }
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

In project 09bb24e6f280d23d0f9fc0104b901480, create a firewall 55b26ab5-e4b0-40e8-941c-a1778fe2a500 in Enterprise Router mode. Set **inspection_cidr** to **10.1.0.0/24** and **er_id** to **e0b22a23-02cf-4092-ace9-34b39e10dc77**.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class CreateEastWestFirewallSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateEastWestFirewallRequest request = new CreateEastWestFirewallRequest();
        CreateEastWestFirewallRequestBody body = new CreateEastWestFirewallRequestBody();
        body.withMode("er");
        body.withInspectionCidr("10.1.0.0/24");
        body.withErId("e0b22a23-02cf-4092-ace9-34b39e10dc77");
        request.withBody(body);
        try {
            CreateEastWestFirewallResponse response = client.createEastWestFirewall(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());
```

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

Python

In project 09bb24e6f280d23d0f9fc0104b901480, create a firewall 55b26ab5-e4b0-40e8-941c-a1778fe2a500 in Enterprise Router mode. Set **inspection_cidr** to **10.1.0.0/24** and **er_id** to **e0b22a23-02cf-4092-ace9-34b39e10dc77**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = CreateEastWestFirewallRequest()
        request.body = CreateEastWestFirewallRequestBody(
            mode="er",
            inspection_cidr="10.1.0.0/24",
            er_id="e0b22a23-02cf-4092-ace9-34b39e10dc77"
        )
        response = client.create_east_west_firewall(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

In project 09bb24e6f280d23d0f9fc0104b901480, create a firewall 55b26ab5-e4b0-40e8-941c-a1778fe2a500 in Enterprise Router mode. Set **inspection_cidr** to **10.1.0.0/24** and **er_id** to **e0b22a23-02cf-4092-ace9-34b39e10dc77**.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)
```

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateEastWestFirewallRequest{}
    request.Body = &model.CreateEastWestFirewallRequestBody{
        Mode: "er",
        InspectionCidr: "10.1.0.0/24",
        ErId: "e0b22a23-02cf-4092-ace9-34b39e10dc77",
    }
    response, err := client.CreateEastWestFirewall(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for creating an east-west firewall.

Error Codes

See **Error Codes**.

4.1.8 Querying the Number of Protected VPCs

Function

This API is used to query information about protected VPCs.

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Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/vpcs/protection

Table 4-56 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-57 Query Parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border. Here, a protected object ID whose **type** is **1** is used. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).

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Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-58 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-59 Response body parameters

Parameter	Type	Description
data	**VPCProtectsVo** object	Return value for querying protected VPCs.

Table 4-60 VPCProtectsVo

Parameter	Type	Description
total	Integer	Total number of protected VPCs.
self_total	Integer	The firewall can protect VPCs across accounts. **self_total** indicates the total number of protected VPCs in the current project.

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Parameter	Type	Description
other_total	Integer	The east-west firewall protection can protect VPCs across accounts. **other_total** indicates the number of protected VPCs in other projects.
protect_vpcs	Array of **VpcAttachmentDetail** objects	The east-west firewall protection can protect VPCs across accounts. **protect_vpcs** indicates the list of all protected VPCs.
self_protect_vpcs	Array of **VpcAttachmentDetail** objects	The east-west firewall protection can protect VPCs across accounts. **self_protect_vpcs** indicates the list of protected VPCs in the current project.
other_protect_vpcs	Array of **VpcAttachmentDetail** objects	The east-west firewall protection can protect VPCs across accounts. **other_protect_vpcs** indicates the list of protected VPCs of other projects.
total_assets	Integer	Total number of VPC assets of a tenant.

Table 4-61 VpcAttachmentDetail

Parameter	Type	Description
vpc_id	String	ID of a protected VPC added for east-west protection.

Status code: 500

Table 4-62 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Query the east-west firewall protection information about the projected object with the ID 8839526e-b804-4a15-a082-a2c797dce633 in project 0b2179bbe180d3762fb0c01a2d5725c7.

```
https://{Endpoint}/v1/0b2179bbe180d3762fb0c01a2d5725c7/vpcs/protection?object_id=8839526e-b804-4a15-a082-a2c797dce633
```

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Example Responses

Status code: 200

Return value of east-west protection query.

```
{
  "data" : {
    "other_protect_vpcs" : [ ],
    "other_total" : 0,
    "protect_vpcs" : [ ],
    "self_protect_vpcs" : [ ],
    "self_total" : 0,
    "total" : 0,
    "total_assets" : 5
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00109004",
  "error_msg" : "HTTP request error."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListProtectedVpcsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListProtectedVpcsRequest request = new ListProtectedVpcsRequest();
```

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

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListProtectedVpcsRequest()
        response = client.list_protected_vpcs(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/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
```

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

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

   client := cfw.NewCfwClient(
      cfw.CfwClientBuilder().
         WithRegion(region.ValueOf("<YOUR REGION>")).
         WithCredential(auth).
         Build())

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

More

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

Status Codes

Status Code	Description
200	Return value of east-west protection query.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.1.9 Querying the Protection Status of a Firewall

Function

This API is used to query the protection status of a firewall.

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Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/eip/protection-status/{fw_instance_id}

Table 4-63 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

None

Response Parameters

Status code: 200

Table 4-64 Response body parameters

Parameter	Type	Description
data	**FirewallProtectionStatusVO** object	Return value for querying the firewall protection status.
trace_id	String	Call path ID.
error_code	String	Error Code
fail_reason	String	Error Cause
error_description	String	Error description.

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Table 4-65 FirewallProtectionStatusVO

Parameter	Type	Description
protection_status	String	Firewall protection status: **0** (normal), **1** (bypass in progress), **2** (bypass succeeded), **3** (bypass failed), **4** (recovery in progress), or **5** (recovery failed).
id	String	Firewall ID.
object_id	String	Protected object ID.
failed_eip_list	Array of strings	EIPs where the kill switch (one-click unprotection) or one-click protection restoration failed.
failed_eip_id_list	Array of strings	ID list of the EIPs where the kill switch (one-click unprotection) or one-click protection restoration failed.

Example Requests

Query the protection status of the firewall whose ID is 713e174b-cea6-4190-8dfc-c83634eadf2d.

```
/cfw/v1/82ae1aa0-883c-4428-b2e1-2910798d95fd/eip/protection-status/713e174b-cea6-4190-8dfc-c83634eadf2d
```

Example Responses

Status code: 200

OK

```
{
  "data": {
    "protection_status": "BYPASS_FAILED",
    "id": "713e174b-cea6-4190-8dfc-c83634eadf2d",
    "object_id": "82ae1aa0-883c-4428-b2e1-2910798d95fd",
    "failed_eip_list": [10.10.10.100, 10.10.10.101],
    "failed_eip_id_list": [0c45fa66-1dd3-459b-b6f3-55e6e2ccb31c, 1bb840a6-8158-45e6-8a76-279ec903887b]
  }
}
```

Status Codes

Status Code	Description
200	OK

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Error Codes

See **Error Codes**.

4.1.10 Creating a Tag

Function

This API is used to create a tag.

Calling Method

For details, see **Calling APIs**.

URI

POST /v2/{project_id}/cfw-cfw/{fw_instance_id}/tags/create

Table 4-66 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-67 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-68 Request body parameters

Parameter	Mandatory	Type	Description
tags	No	Array of **CreateTag** objects	Create a firewall tag list.

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Table 4-69 CreateTag

Parameter	Mandatory	Type	Description
key	No	String	Tag key.
value	No	String	Tag value.

Response Parameters

Status code: 200

Table 4-70 Response body parameters

Parameter	Type	Description
-	String	

Example Requests

Add a tag whose key is **keytest** and value is **valuetest** to firewall 5e7eba7f-5de4-4ce9-8f60-11330dfc6565 in project 0b2179bbe180d3762fb0c01a2d5725c7.

```
https://{Endpoint}/v2/0b2179bbe180d3762fb0c01a2d5725c7/cfw-cfw/
5e7eba7f-5de4-4ce9-8f60-11330dfc6565/tags/create

{
  "tags" : [ {
    "key" : "keytest",
    "value" : "valuetest"
  } ]
}
```

Example Responses

Status code: 200

OK

```
{ }
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add a tag whose key is **keytest** and value is **valuetest** to firewall 5e7eba7f-5de4-4ce9-8f60-11330dfc6565 in project 0b2179bbe180d3762fb0c01a2d5725c7.

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

import com.huaweicloud.sdk.core.auth.ICredential;
```

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```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class CreateTagSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateTagRequest request = new CreateTagRequest();
        request.withFwInstanceId("{fw_instance_id}");
        CreateTagsDto body = new CreateTagsDto();
        List<CreateTag> listbodyTags = new ArrayList<>();
        listbodyTags.add(
            new CreateTag()
                .withKey("keytest")
                .withValue("valuetest")
        );
        body.withTags(listbodyTags);
        request.withBody(body);
        try {
            CreateTagResponse response = client.createTag(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

Add a tag whose key is **keytest** and value is **valuetest** to firewall 5e7eba7f-5de4-4ce9-8f60-11330dfc6565 in project 0b2179bbe180d3762fb0c01a2d5725c7.

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

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```
import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = CreateTagRequest()
        request.fw_instance_id = "{fw_instance_id}"
        listTagsbody = [
            CreateTag(
                key="keytest",
                value="valuetest"
            )
        ]
        request.body = CreateTagsDto(
            tags=listTagsbody
        )
        response = client.create_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

Add a tag whose key is **keytest** and value is **valuetest** to firewall 5e7eba7f-5de4-4ce9-8f60-11330dfc6565 in project 0b2179bbe180d3762fb0c01a2d5725c7.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateTagRequest{}
    request.FwInstanceId = "{fw_instance_id}"
    keyTags:= "keytest"
    valueTags:= "valuetest"
    var listTagsbody = []model.CreateTag{
        {
            Key: &keyTags,
            Value: &valueTags,
        },
    }
    request.Body = &model.CreateTagsDto{
        Tags: &listTagsbody,
    }
    response, err := client.CreateTag(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.1.11 Deleting a Tag

Function

This API is used to delete a tag.

Calling Method

For details, see **Calling APIs**.

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URI

DELETE /v2/{project_id}/cfw-cfw/{fw_instance_id}/tags/delete

Table 4-71 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-72 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-73 Request body parameters

Parameter	Mandatory	Type	Description
tags	No	Array of **ResourceTag** objects	Firewall tag list.

Table 4-74 ResourceTag

Parameter	Mandatory	Type	Description
key	No	String	Tag key.
value	No	String	Tag value.
update_time	No	String	Tag update time.

Response Parameters

Status code: 200

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Table 4-75 Response body parameters

Parameter	Type	Description
-	String	

Example Requests

Delete a tag from firewall 5e7eba7f-5de4-4ce9-8f60-11330dfc6565 in project 0b2179bbe180d3762fb0c01a2d5725c7. The tag key is **keytest** and the tag value is **valuetest**.

```
https://{Endpoint}/v2/408972e72dcd4c1a9b033e955802a36b/cfw-cfw/
5e7eba7f-5de4-4ce9-8f60-11330dfc6565/tags/delete

{
  "tags" : [ {
    "key" : "keytest",
    "value" : "valuetest"
  } ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Delete a tag from firewall 5e7eba7f-5de4-4ce9-8f60-11330dfc6565 in project 0b2179bbe180d3762fb0c01a2d5725c7. The tag key is **keytest** and the tag value is **valuetest**.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class DeleteTagSolution {

    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");
```

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```
        String projectId = "{project_id}";

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteTagRequest request = new DeleteTagRequest();
        request.withFwInstanceId("{fw_instance_id}");
        DeleteTagsDto body = new DeleteTagsDto();
        List<ResourceTag> listbodyTags = new ArrayList<>();
        listbodyTags.add(
            new ResourceTag()
                .withKey("keytest")
                .withValue("valuetest")
        );
        body.withTags(listbodyTags);
        request.withBody(body);
        try {
            DeleteTagResponse response = client.deleteTag(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

Delete a tag from firewall 5e7eba7f-5de4-4ce9-8f60-11330dfc6565 in project 0b2179bbe180d3762fb0c01a2d5725c7. The tag key is **keytest** and the tag value is **valuetest**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

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```
        .build()

    try:
        request = DeleteTagRequest()
        request.fw_instance_id = "{fw_instance_id}"
        listTagsbody = [
            ResourceTag(
                key="keytest",
                value="valuetest"
            )
        ]
        request.body = DeleteTagsDto(
            tags=listTagsbody
        )
        response = client.delete_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

Delete a tag from firewall 5e7eba7f-5de4-4ce9-8f60-11330dfc6565 in project 0b2179bbe180d3762fb0c01a2d5725c7. The tag key is **keytest** and the tag value is **valuetest**.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteTagRequest{}
    request.FwInstanceId = "{fw_instance_id}"
    keyTags:= "keytest"
    valueTags:= "valuetest"
    var listTagsbody = []model.ResourceTag{
        {
            Key: &keyTags,
            Value: &valueTags,
```

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```
        },
    }
    request.Body = &model.DeleteTagsDto{
        Tags: &listTagsbody,
    }
    response, err := client.DeleteTag(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	OK

Error Codes

See **Error Codes**.

4.2 EIP Management

4.2.1 Enabling or Disabling EIP Protection

Function

This API is used to enable or disable EIP protection. After a customer purchases an EIP, the customer needs to call ListEips to synchronize EIPs asset before enabling EIP protection for the first time. The **sync** field should be set to **1**.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/eip/protect

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Table 4-76 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-77 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-78 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Table 4-79 Request body parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border. Here, a protected object ID whose **type** is **0** is used. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
status	Yes	Integer	Status that an EIP will be changed to: **0** (protected), **1** (unprotected).
ip_infos	Yes	Array of **ip_infos** objects	List of EIPs whose protection status is changed.

Table 4-80 ip_infos

Parameter	Mandatory	Type	Description
id	No	String	EIP ID, which can be obtained by calling the API for querying the EIP list. Find the value in **data.records.id** (The period [.] is used to separate different levels of objects).

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Parameter	Mandatory	Type	Description
public_ip	No	String	EIP IPv4 address, which can be obtained by calling the API for querying the EIP list. Find the value in **data.records.public_ip** (The period [.] is used to separate different levels of objects).
public_ipv6	No	String	EIP IPv6 address, which can be obtained by calling the API for querying the EIP list. Find the value in **data.records.public_ipv6** (The period [.] is used to separate different levels of objects).

Response Parameters

Status code: 200

Table 4-81 Response body parameters

Parameter	Type	Description
data	**EIPSwitchStatus-VO** object	Data returned for changing the EIP protection status.

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Table 4-82 EIPSwitchStatusVO

Parameter	Type	Description
object_id	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border. Here, a protected object ID whose **type** is **0** is used. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
fail_eip_id_list	Array of strings	List of EIP protection statuses that fail to be modified. The status can be **successful** or **fail**.
fail_eip_list	Array of **FailedEipInfo** objects	List of failures to modify the EIP protection status.
id	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Table 4-83 FailedEipInfo

Parameter	Type	Description
id	String	ID of an EIP whose status fails to be changed.
error_message	String	Error code of a status change failure.

Status code: 400

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Table 4-84 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

- Enable traffic protection for the EIP (1.2.3.4) whose EIP ID is 4a589be0-b40a-4694-94ff-c0710af9a0a2, project ID is 857ddec2-55f2-4503-a93a-fe70021b743c, and protected object ID is 6d3db4fd-fd58-4d8e-914b-ef91aa268f62.

```
https://{Endpoint}/v1/857ddec2-55f2-4503-a93a-fe70021b743c/eip/protect

{
  "object_id" : "6d3db4fd-fd58-4d8e-914b-ef91aa268f62",
  "status" : 0,
  "ip_infos" : [ {
    "id" : "4a589be0-b40a-4694-94ff-c0710af9a0a2",
    "public_ip" : "1.2.3.4"
  } ]
}
```

- Disable traffic protection for the EIP (1.2.3.4) whose EIP ID is 4a589be0-b40a-4694-94ff-c0710af9a0a2, project ID is 857ddec2-55f2-4503-a93a-fe70021b743c, and protected object ID is 6d3db4fd-fd58-4d8e-914b-ef91aa268f62.

```
/v1/857ddec2-55f2-4503-a93a-fe70021b743c/eip/protect

{
  "object_id" : "6d3db4fd-fd58-4d8e-914b-ef91aa268f62",
  "status" : 1,
  "ip_infos" : [ {
    "id" : "4a589be0-b40a-4694-94ff-c0710af9a0a2",
    "public_ip" : "1.2.3.4"
  } ]
}
```

Example Responses

Status code: 200

Return value for enabling or disabling EIP protection.

```
{
  "data" : {
    "fail_eip_id_list" : [ ],
    "fail_eip_list" : [ ],
    "object_id" : "ae42418e-f077-41a0-9d3b-5b2f5ad9102b",
    "id" : "b0a2dacc-3886-4805-838e-281653d3cd1f"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

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Java

- Enable traffic protection for the EIP (1.2.3.4) whose EIP ID is 4a589be0-b40a-4694-94ff-c0710af9a0a2, project ID is 857ddec2-55f2-4503-a93a-fe70021b743c, and protected object ID is 6d3db4fd-fd58-4d8e-914b-ef91aa268f62.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class ChangeEipStatusSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ChangeEipStatusRequest request = new ChangeEipStatusRequest();
        EipOperateProtectReq body = new EipOperateProtectReq();
        List<EipOperateProtectReqIpInfos> listbodyIpInfos = new ArrayList<>();
        listbodyIpInfos.add(
            new EipOperateProtectReqIpInfos()
                .withId("4a589be0-b40a-4694-94ff-c0710af9a0a2")
                .withPublicIp("1.2.3.4")
        );
        body.withIpInfos(listbodyIpInfos);
        body.withStatus(0);
        body.withObjectId("6d3db4fd-fd58-4d8e-914b-ef91aa268f62");
        request.withBody(body);
        try {
            ChangeEipStatusResponse response = client.changeEipStatus(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());
        }
```

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```
    }
}
```

- Disable traffic protection for the EIP (1.2.3.4) whose EIP ID is 4a589be0-b40a-4694-94ff-c0710af9a0a2, project ID is 857ddec2-55f2-4503-a93a-fe70021b743c, and protected object ID is 6d3db4fd-fd58-4d8e-914b-ef91aa268f62.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class ChangeEipStatusSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ChangeEipStatusRequest request = new ChangeEipStatusRequest();
        EipOperateProtectReq body = new EipOperateProtectReq();
        List<EipOperateProtectReqIpInfos> listbodyIpInfos = new ArrayList<>();
        listbodyIpInfos.add(
            new EipOperateProtectReqIpInfos()
                .withId("4a589be0-b40a-4694-94ff-c0710af9a0a2")
                .withPublicIp("1.2.3.4")
        );
        body.withIpInfos(listbodyIpInfos);
        body.withStatus(1);
        body.withObjectId("6d3db4fd-fd58-4d8e-914b-ef91aa268f62");
        request.withBody(body);
        try {
            ChangeEipStatusResponse response = client.changeEipStatus(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());
        }
```

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```
    }
}
```

Python

- Enable traffic protection for the EIP (1.2.3.4) whose EIP ID is 4a589be0-b40a-4694-94ff-c0710af9a0a2, project ID is 857ddec2-55f2-4503-a93a-fe70021b743c, and protected object ID is 6d3db4fd-fd58-4d8e-914b-ef91aa268f62.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ChangeEipStatusRequest()
        listIpInfosbody = [
            EipOperateProtectReqIpInfos(
                id="4a589be0-b40a-4694-94ff-c0710af9a0a2",
                public_ip="1.2.3.4"
            )
        ]
        request.body = EipOperateProtectReq(
            ip_infos=listIpInfosbody,
            status=0,
            object_id="6d3db4fd-fd58-4d8e-914b-ef91aa268f62"
        )
        response = client.change_eip_status(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

- Disable traffic protection for the EIP (1.2.3.4) whose EIP ID is 4a589be0-b40a-4694-94ff-c0710af9a0a2, project ID is 857ddec2-55f2-4503-a93a-fe70021b743c, and protected object ID is 6d3db4fd-fd58-4d8e-914b-ef91aa268f62.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *
```

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ChangeEipStatusRequest()
        listIpInfosbody = [
            EipOperateProtectReqIpInfos(
                id="4a589be0-b40a-4694-94ff-c0710af9a0a2",
                public_ip="1.2.3.4"
            )
        ]
        request.body = EipOperateProtectReq(
            ip_infos=listIpInfosbody,
            status=1,
            object_id="6d3db4fd-fd58-4d8e-914b-ef91aa268f62"
        )
        response = client.change_eip_status(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

- Enable traffic protection for the EIP (1.2.3.4) whose EIP ID is 4a589be0-b40a-4694-94ff-c0710af9a0a2, project ID is 857ddec2-55f2-4503-a93a-fe70021b743c, and protected object ID is 6d3db4fd-fd58-4d8e-914b-ef91aa268f62.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

    auth := basic.NewCredentialsBuilder().
```

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```
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ChangeEipStatusRequest{}
    idIpInfos:= "4a589be0-b40a-4694-94ff-c0710af9a0a2"
    publicIpIpInfos:= "1.2.3.4"
    var listIpInfosbody = []model.EipOperateProtectReqIpInfos{
        {
            Id: &idIpInfos,
            PublicIp: &publicIpIpInfos,
        },
    }
    request.Body = &model.EipOperateProtectReq{
        IpInfos: listIpInfosbody,
        Status: int32(0),
        ObjectId: "6d3db4fd-fd58-4d8e-914b-ef91aa268f62",
    }
    response, err := client.ChangeEipStatus(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

- Disable traffic protection for the EIP (1.2.3.4) whose EIP ID is 4a589be0-b40a-4694-94ff-c0710af9a0a2, project ID is 857ddec2-55f2-4503-a93a-fe70021b743c, and protected object ID is 6d3db4fd-fd58-4d8e-914b-ef91aa268f62.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())
```

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```
    request := &model.ChangeEipStatusRequest{}
    idIpInfos:= "4a589be0-b40a-4694-94ff-c0710af9a0a2"
    publicIpIpInfos:= "1.2.3.4"
    var listIpInfosbody = []model.EipOperateProtectReqIpInfos{
        {
            Id: &idIpInfos,
            PublicIp: &publicIpIpInfos,
        },
    }
    request.Body = &model.EipOperateProtectReq{
        IpInfos: listIpInfosbody,
        Status: int32(1),
        ObjectId: "6d3db4fd-fd58-4d8e-914b-ef91aa268f62",
    }
    response, err := client.ChangeEipStatus(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for enabling or disabling EIP protection.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.2.2 Querying the Number of EIPs

Function

This API is used to query the number of EIPs.

Calling Method

For details, see **Calling APIs**.

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URI

GET /v1/{project_id}/eip-count/{object_id}

Table 4-85 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border. Here, a protected object ID whose **type** is **0** is used. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).

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Table 4-86 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-87 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-88 Response body parameters

Parameter	Type	Description
data	**EipCountRespData** object	EIP count.

Table 4-89 EipCountRespData

Parameter	Type	Description
eip_total	Integer	Total number of EIPs.
eip_protected	Integer	Total number of EIPs protected by all firewalls under the account.

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Parameter	Type	Description
eip_protected_self	Integer	Number of EIPs protected by the current firewall.

Status code: 400

Table 4-90 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Query the number of EIPs whose project ID is 9d80d070b6d44942af73c9c3d38e0429 and protected object ID is cfebd347-b655-4b84-b938-3c54317599b2.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/eip-count/cfebd347-b655-4b84-b938-3c54317599b2
```

Example Responses

Status code: 200

OK

```
{
  "data": {
    "eip_protected": 1,
    "eip_protected_self": 4,
    "eip_total": 5,
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200005",
  "error_msg" : "Object not found."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
```

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```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListEipCountSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListEipCountRequest request = new ListEipCountRequest();
        request.withObjectId("{object_id}");
        try {
            ListEipCountResponse response = client.listEipCount(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

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

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

    try:
        request = ListEipCountRequest()
        request.object_id = "{object_id}"
        response = client.list_eip_count(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

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Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.2.3 Querying the EIP List

Function

This API is used to query the EIP list.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/eips/protect

Table 4-91 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-92 Query Parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border. Here, a protected object ID whose **type** is **0** is used. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
key_word	No	String	Keyword for querying the protected EIP list. You can set an EIP ID or an EIP.
status	No	String	Protection status: null (all), **0** (enabled), or **1** (disabled).
sync	No	Integer	Whether to synchronize tenant EIP data: **0** (no), **1** (yes)
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.

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Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
device_key	No	String	Device keyword, which is the name or ID of the asset bound to an EIP.
address_type	No	Integer	Address type: **0** (IPv4), **1** (IPv6).
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
fw_key_word	No	String	Firewall keyword, which can be queried based on the firewall ID or name. For details, see **Obtaining a Firewall ID**.
eps_id	No	String	Enterprise project ID of the EIP, which can be obtained by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
tags	No	String	You can obtain the tag list by querying it on the EIP console.

Request Parameters

Table 4-93 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Response Parameters

Status code: 200

Table 4-94 Response body parameters

Parameter	Type	Description
data	**EipResponseData** object	Returned data for querying an EIP.

Table 4-95 EipResponseData

Parameter	Type	Description
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
total	Integer	Query the total number of EIPs.
records	Array of **EipResource** objects	EIP resource record.

Table 4-96 EipResource

Parameter	Type	Description
id	String	EIP ID.
public_ip	String	EIP.
status	Integer	EIP protection status: **0** (protected), **1** (unprotected).
public_ipv6	String	EIP (IPv6).
enterprise_project_id	String	Enterprise project ID of the account that the EIP belongs to.
device_id	String	ID of the device (such as ECS and NAT) bound to the EIP.
device_name	String	Name of the device (such as ECS and NAT) bound to the EIP

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Parameter	Type	Description
device_owner	String	Owner of the device (such as ECS and NAT) bound to the EIP.
associate_instance_type	String	Type of the associated instance: **NATGW**, **ELB**, or **PORT**.
fw_instance_name	String	Firewall name.
fw_instance_id	String	Firewall instance ID, which is automatically generated after a CFW instance is created. You can obtain the ID by calling the **API for querying a firewall instance**.
fw_enterprise_project_id	String	Enterprise project ID of the firewall bound to the EIP.
object_id	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border. Here, a protected object ID whose **type** is **0** is used. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
tags	String	Tag list.
domain_id	String	ID of the user that an EIP belongs to, which can be obtained by calling the **API for querying domain information** under the EIP account.
fw_domain_id	String	User that a firewall belongs to, which can be obtained by calling the **API for querying domain information** under the firewall account.
bypass_status	Integer	Bypass status: **0** (not bypassed), **1** (bypassed), **2** (failed)

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Status code: 400

Table 4-97 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Query the existing data, without updating it through synchronization, on the first page of protected object cfebd347-b655-4b84-b938-3c54317599b2 in project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/eips/protect?object_id=cfebd347-b655-4b84-b938-3c54317599b2&limit=10&offset=0&sync=0
```

Example Responses

Status code: 200

Return value for querying EIP data.

```
{
  "data" : {
    "limit" : 200,
    "offset" : 0,
    "records" : [ {
      "associate_instance_type" : "PORT",
      "device_id" : "c87579ab-c76a-4afd-83ce-62e0f531f13e",
      "device_name" : "test",
      "device_owner" : "compute:test",
      "domain_id" : "7d07807209524a4280266db9df63c4fa",
      "enterprise_project_id" : "0",
      "fw_domain_id" : "7d07807209524a4280266db9df63c4fa",
      "fw_enterprise_project_id" : "default",
      "fw_instance_id" : "546af3f8-88e9-47f2-a205-2346d7090925",
      "fw_instance_name" : "test",
      "id" : "465b34fe-e017-4831-a21c-9c6c753bb1f2",
      "object_id" : "ae42418e-f077-41a0-9d3b-5b2f5ad9102b",
      "public_ip" : "100.85.223.15",
      "status" : 0,
      "bypass_status" : 0,
      "tags" : "combined_order_id=CBRCS23040615138M2KW912"
    } ],
    "total" : 1
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00109004",
  "error_msg" : "HTTP request error."
}
```

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SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListEipsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListEipsRequest request = new ListEipsRequest();
        try {
            ListEipsResponse response = client.listEips(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
```

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

    credentials = BasicCredentials(ak, sk, projectId)

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

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

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

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More

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

Status Codes

Status Code	Description
200	Return value for querying EIP data.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.2.4 Viewing the EIP Alarm Whitelist

Function

This API is used to query the EIP alarm whitelist.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/eip/alarm-whitelist/{fw_instance_id}

Table 4-98 Path Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

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Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-99 Query Parameters

Parameter	Mandatory	Type	Description
ip_address	No	String	IP address
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-100 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

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Table 4-101 Response body parameters

Parameter	Type	Description
data	**HttpListAlarmWhiteListResponseData** object	Return value for querying the alarm whitelist.

Table 4-102 HttpListAlarmWhiteListResponseData

Parameter	Type	Description
list	Array of **EipInfo** objects	Return value for querying the alarm whitelist.
pages	Integer	Current number of pages.
size	Integer	Number of records on each page.
total	Integer	Total number.

Table 4-103 EipInfo

Parameter	Type	Description
device_name	String	Device Name
eip_id	String	EIP id
fw_instance_id	String	Firewall ID.
object_id	String	Protected object ID.
public_ip	String	IPv4 address.
public_ipv6	String	IPv6 address.
type	Integer	EIP whitelist flag: **0** (EIP is in the whitelist), **1** (EIP is not in the whitelist).

Example Requests

View the EIP alarm whitelist of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, and the enterprise project ID is fb55459c-41b3-47fc-885d-540946fddda4. The maximum number of query results is 1,000, and the offset is 0.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/eip/alarm-whitelist/e743cfaf-8164-4807-aa13-d893d83313cf?fw_instance_id=e743cfaf-8164-4807-aa13-d893d83313cf&enterprise_project_id=fb55459c-41b3-47fc-885d-540946fddda4&limit=1000&offset=0
```

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Example Responses

Status code: 200

Return value for querying the alarm whitelist.

```
{
  "data" : {
    "list" : [ {
      "device_name" : "client_ipv6",
      "eip_id" : "a40f3306-b7f3-428b-afe7-5ae1e7a5c594",
      "object_id" : "",
      "public_ip" : "100.100.100.100",
      "type" : 1
    }, {
      "device_name" : "ecs-172",
      "eip_id" : "5e9c7249-2c05-4c0e-a9ed-192af2c1d129",
      "fw_instance_id" : "e743cfaf-8164-4807-aa13-d893d83313cf",
      "object_id" : "1b90f031-0c7b-4f25-95e2-b6d9940d269e",
      "public_ip" : "100.200.200.200",
      "type" : 0
    } ],
    "pages" : 1,
    "size" : 2,
    "total" : 2
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListAlarmWhitelistSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
```

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```
        ListAlarmWhitelistRequest request = new ListAlarmWhitelistRequest();
        request.withFwInstanceId("{fw_instance_id}");
        try {
            ListAlarmWhitelistResponse response = client.listAlarmWhitelist(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListAlarmWhitelistRequest()
        request.fw_instance_id = "{fw_instance_id}"
        response = client.list_alarm_whitelist(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)
```

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value for querying the alarm whitelist.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.2.5 Using the Kill Switch or Restoring Protection

Function

This API is used to enable the kill switch or restore protection.

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Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/eip/protect/all/{fw_instance_id}/operation

Table 4-104 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-105 Request body parameters

Parameter	Mandatory	Type	Description
bypass_operation	No	String	Protection operation type. **1** indicates the kill switch (one-click unprotection) is used. **0** indicates one-click protection restoration.

Response Parameters

Status code: 200

Table 4-106 Response body parameters

Parameter	Type	Description
data	**data** object	Return value of the kill switch (one-click unprotection) or one-click protection restoration
trace_id	String	Call path ID.
error_code	String	Error Code
fail_reason	String	Error Cause

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Parameter	Type	Description
error_description	String	Error description.

Table 4-107 data

Parameter	Type	Description
protection_status	Integer	Firewall protection status: **0** (normal), **1** (bypass in progress), **2** (bypass succeeded), **3** (bypass failed), **4** (recovery in progress), or **5** (recovery failed).
id	String	Firewall ID.
object_id	String	Protected object ID.

Example Requests

Use the kill switch to disable the protection of the EIPs protected by the firewall instance whose ID is 713e174b-cea6-4190-8dfc-c83634eadf2d.

```
/cfw/v1/82ae1aa0-883c-4428-b2e1-2910798d95fd/eip/protect/all/713e174b-cea6-4190-8dfc-c83634eadf2d/operation

{
  "bypass_operation" : 1
}
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "protection_status" : 1,
    "id" : "713e174b-cea6-4190-8dfc-c83634eadf2d",
    "object_id" : "82ae1aa0-883c-4428-b2e1-2910798d95fd"
  }
}
```

Status Codes

Status Code	Description
200	OK

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Error Codes

See **Error Codes**.

4.2.6 Modifying the Automatic EIP Protection Switch

Function

This API is used to modify the automatic EIP protection switch.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/eip/auto-protect-status/switch

Table 4-108 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-109 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

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Request Parameters

Table 4-110 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Table 4-111 Request body parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, **object_id** is the protected object ID on the Internet border. If the value of **type** is **1**, **object_id** is the protected object ID on the VPC border. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
status	Yes	Integer	Whether to enable automatic protection for new EIPs: **1** (yes), **0** (no).

Response Parameters

Status code: 200

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Table 4-112 Response body parameters

Parameter	Type	Description
data	String	

Status code: 201

Created

Example Requests

Change the automatic EIP protection status of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, and the target protected object ID is 1b90f031-0c7b-4f25-95e2-b6d9940d269e. Change the status to **0**.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/eip/auto-protect-status/switch

{
  "object_id" : "1b90f031-0c7b-4f25-95e2-b6d9940d269e",
  "fw_instance_id" : "e743cfaf-8164-4807-aa13-d893d83313cf",
  "status" : 0
}
```

Example Responses

Status code: 200

Return value for modifying the auto protection status of an EIP.

```
{
  "data" : "1b90f031-0c7b-4f25-95e2-b6d9940d269e"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Change the automatic EIP protection status of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, and the target protected object ID is 1b90f031-0c7b-4f25-95e2-b6d9940d269e. Change the status to **0**.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class SwitchAutoProtectStatusSolution {
```

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        SwitchAutoProtectStatusRequest request = new SwitchAutoProtectStatusRequest();
        SwitchEipStatusDto body = new SwitchEipStatusDto();
        body.withStatus(0);
        body.withObjectId("1b90f031-0c7b-4f25-95e2-b6d9940d269e");
        body.withFwInstanceId("e743cfaf-8164-4807-aa13-d893d83313cf");
        request.withBody(body);
        try {
            SwitchAutoProtectStatusResponse response = client.switchAutoProtectStatus(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

Change the automatic EIP protection status of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, and the target protected object ID is 1b90f031-0c7b-4f25-95e2-b6d9940d269e. Change the status to **0**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

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

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

    try:
        request = SwitchAutoProtectStatusRequest()
        request.body = SwitchEipStatusDto(
            status=0,
            object_id="1b90f031-0c7b-4f25-95e2-b6d9940d269e",
            fw_instance_id="e743cfaf-8164-4807-aa13-d893d83313cf"
        )
        response = client.switch_auto_protect_status(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

Change the automatic EIP protection status of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, and the target protected object ID is 1b90f031-0c7b-4f25-95e2-b6d9940d269e. Change the status to **0**.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.SwitchAutoProtectStatusRequest{}
    statusSwitchEipStatusDto:= int32(0)
    objectIdSwitchEipStatusDto:= "1b90f031-0c7b-4f25-95e2-b6d9940d269e"
    fwInstanceIdSwitchEipStatusDto:= "e743cfaf-8164-4807-aa13-d893d83313cf"
    request.Body = &model.SwitchEipStatusDto{
        Status: &statusSwitchEipStatusDto,
        ObjectId: &objectIdSwitchEipStatusDto,
```

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

More

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

Status Codes

Status Code	Description
200	Return value for modifying the auto protection status of an EIP.
201	Created
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.2.7 Obtaining the Automatic EIP Protection Status

Function

This API is used to obtain the automatic EIP protection status.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/eip/auto-protect-status/{object_id}

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Table 4-113 Path Parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border. Here, a protected object ID whose **type** is **1** is used. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-114 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

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Request Parameters

Table 4-115 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-116 Response body parameters

Parameter	Type	Description
data	**FirewallStatusVO** object	Firewall status object.

Table 4-117 FirewallStatusVO

Parameter	Type	Description
available_eip_count	Integer	Number of EIPs that can be protected.
beyond_max_count	Boolean	Whether the number of EIPs exceeds the upper limit.
eip_protected_self	Integer	Number of protected EIPs.
eip_total	Integer	Total EIPs.
eip_un_protected	Integer	Number of unprotected EIPs.
object_id	String	Protected object ID.
status	Integer	Whether to enable automatic protection for new EIPs: **1** (yes), **0** (no).

Example Requests

Obtain the automatic EIP protection status of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, the enterprise project ID is fb55459c-41b3-47fc-885d-540946fddda4, and the target object ID is 1b90f031-0c7b-4f25-95e2-b6d9940d269e.

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```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/eip/auto-protect-status/
1b90f031-0c7b-4f25-95e2-b6d9940d269e?fw_instance_id=e743cfaf-8164-4807-aa13-
d893d83313cf&enterprise_project_id=fb55459c-41b3-47fc-885d-540946fddda4&object_id=1b90f031-0c7b-4f
25-95e2-b6d9940d269e&project_id=408972e72dcd4c1a9b033e955802a36b
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "available_eip_count" : 50,
    "beyond_max_count" : false,
    "eip_protected_self" : 15,
    "eip_total" : 24,
    "eip_un_protected" : 9,
    "object_id" : "1b90f031-0c7b-4f25-95e2-b6d9940d269e",
    "status" : 1
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ShowAutoProtectStatusSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowAutoProtectStatusRequest request = new ShowAutoProtectStatusRequest();
        request.withObjectId("{object_id}");
        try {
            ShowAutoProtectStatusResponse response = client.showAutoProtectStatus(request);
            System.out.println(response.toString());
```

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```
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ShowAutoProtectStatusRequest()
        request.object_id = "{object_id}"
        response = client.show_auto_protect_status(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/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
```

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```
example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	OK
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.3 ACL Rule Management

4.3.1 Creating an ACL Rule

Function

This API is used to create an ACL rule.

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Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/acl-rule

Table 4-118 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition**: Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

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Table 4-119 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	**Definition**: Enterprise project ID. If you plan enterprise projects based on your organization's plan, each enterprise project will have such an ID. After this parameter is configured, you can filter assets by enterprise project. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. **Constraints**: N/A **Range**: N/A **Default Value**: 0
fw_instance_id	No	String	**Definition**: Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

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Request Parameters

Table 4-120 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	**Definition**: User token, which carries user identity information. After the token is configured, you can use it for API authentication. You can obtain the token by referring to **Obtaining a User Token**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Table 4-121 Request body parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	**Definition**: Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a CFW is created. You can obtain the ID by calling the **API for querying firewall instances**. Find the value in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). **Constraints**: If **type** is set to 0, **object_id** indicates the protected object ID of the Internet border. If **type** is set to **1**, **object_id** indicates the protected object ID of the VPC border. The value of **type** can be obtained from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects). **Range**: 32-bit UUID **Default Value**: N/A

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Parameter	Mandatory	Type	Description
type	Yes	Integer	**Definition**: Rule type, which is used to distinguish different protected objects. **Constraints**: N/A **Range**: **0**: Internet border rule. The source and destination addresses must be EIPs or domain names. **1**: Inter-VPC rule. The source and destination addresses must be private IP addresses. **2**: NAT rule. The source address must be a private IP address, and the destination address must be an EIP or a domain name. **Default Value**: N/A
rules	Yes	Array of **rules** objects	**Definition**: Rule list in a rule addition request. **Constraints**: N/A

Table 4-122 rules

Parameter	Mandatory	Type	Description
name	Yes	String	**Definition**: Rule name, which is defined by a user and is used to identify a rule. **Constraints**: The string lentgh can be 0 to 255 characters. **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
sequence	Yes	OrderRuleAclDto object	**Definition**: Change the rule sequence. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
address_type	Yes	Integer	**Definition**: Internet protocol type of an IP address, which is specified by the customer. **Constraints**: N/A **Range**: **0**: IPv4; **1**: IPv6 **Default Value**: N/A
action_type	Yes	Integer	**Definition**: Rule action type, which is used to distinguish the action of a rule on traffic. **Constraints**: Only **0** and **1** are allowed. **Range**: **0**: permit; **1**: deny **Default Value**: N/A
status	Yes	Integer	**Definition**: Rule status, which is used to determine whether a rule is enabled. **Constraints**: Only **0** and **1** are allowed. **Range**: **0**: disable; **1**: enable **Default Value**: N/A

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Parameter	Mandatory	Type	Description
applications	No	Array of strings	**Definition**: List of protocols that a rule applies to. **Constraints**: N/A **Range**: Rule application type. Its value can be **HTTP**, **HTTPS**, **TLS1**, **DNS**, **SSH**, **MYSQL**, **SMTP**, **RDP**, **RDPS**, **VNC**, **POP3**, **IMAP4**, **SMTPS**, **POP3S**, **FTPS**, **ANY**, or **BGP**. **Default Value**: N/A
long_connect_time	No	Long	**Definition**: Duration (in seconds) of a persistent connection, that is, the maximum duration of a traffic session. **Constraints**: Only numbers are allowed. **Range**: 1-86,400,000. **Default Value**: N/A
long_connect_time_hour	No	Long	**Definition**: Persistent connection duration (in hours). **Constraints**: Only numbers are allowed. **Range**: 0-24,000. **Default Value**: N/A

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Parameter	Mandatory	Type	Description
long_connect_time_minute	No	Long	**Definition**: Persistent connection duration (in minutes). **Constraints**: Only numbers are allowed. **Range**: 0–60 **Default Value**: N/A
long_connect_time_second	No	Long	**Definition**: Persistent connection duration (in seconds). **Constraints**: Only numbers are allowed. **Range**: 0–60 **Default Value**: N/A
long_connect_enable	Yes	Integer	**Definition**: Specifies whether persistent connections are supported. **Constraints**: N/A **Range**: **0**: not supported; **1**: supported **Default Value**: N/A
description	No	String	**Definition**: Rule description, which is used to describe the usage of a rule. **Constraints**: N/A **Range**: Can contain 0 to 255 characters. **Default Value**: N/A

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Parameter	Mandatory	Type	Description
direction	No	Integer	**Definition**: Rule direction. It can be from the cloud to on-premises, or from on-premises to the cloud. **Constraints**: If **type** is set to **0** (Internet rule) or **2** (NAT rule), the **direction** is mandatory. **Range**: **0**: inbound (on-premises to cloud); **1**: outbound (cloud to on-premises). **Default Value**: N/A
source	Yes	**RuleAddressDtoForRequest** object	**Definition**: Source address DTO of a rule. **Constraints**: N/A
destination	Yes	**RuleAddressDtoForRequest** object	**Definition**: Destination address DTO of a rule. **Constraints**: N/A
service	Yes	**RuleServiceDto** object	**Definition**: Service object of a rule. **Constraints**: N/A
tag	No	**TagsVO** object	**Definition**: Tag object of a rule. **Constraints**: N/A

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Table 4-123 OrderRuleAclDto

Parameter	Mandatory	Type	Description
dest_rule_id	No	String	**Definition**: ID of the target rule. After it is configured, the added rules will be placed after this rule. This parameter cannot be left blank when the added rule is not pinned on top, and can be left blank when the added rule is pinned on top. The rule ID can be obtained by calling the **API for querying protection rules**. Find the value in **data.records.rule_id** (The period [.] is used to separate different levels of objects). **Constraints**: If the added rule is not pinned on top, the rule ID specified here must be valid. **Range**: N/A **Default Value**: N/A
top	No	Integer	**Definition**: Whether a rule is pinned on top. **Constraints**: N/A **Range**: **0**: not pinned; **1**: pinned **Default Value**: N/A

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Parameter	Mandatory	Type	Description
bottom	No	Integer	**Definition**: Whether a rule is pinned at the bottom. **Constraints**: N/A **Range**: **0**: not pinned; **1**: pinned **Default Value**: N/A

Table 4-124 RuleAddressDtoForRequest

Parameter	Mandatory	Type	Description
type	Yes	Integer	**Definition**: Input type of the source or destination address **Constraints**: If **type** is set to **0** (Internet rule) or **2** (NAT rule), the **direction** is mandatory. **Range**: **0** (manual input), **1** (associated IP address group), **2** (domain name), **3** (geographical location), **4** (domain name group) **5** (multiple objects), **6** (domain name group - network), **7** (domain name group - application). **Default Value**: N/A

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Parameter	Mandatory	Type	Description
address_type	No	Integer	**Definition**: IP address protocol type, which is used to distinguish different Internet protocols. **Constraints**: If **type** is set to **0** (manual input), this parameter cannot be left blank. **Range**: Address type: **0** (IPv4); **1**: (IPv6) **Default Value**: N/A
address	No	String	**Definition**: IP address information, which is used to specify the IP address of the rule. **Constraints**: If **type** is set to **0** (manual input), this parameter cannot be left blank. **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
address_set_id	No	String	**Definition**: ID of the associated IP address group. You can query the IP address group ID by calling the **API for querying address groups**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). **Constraints**: If **type** is set to **1** (associated IP address group), this parameter cannot be left blank. **Range**: N/A **Default Value**: N/A
address_set_name	No	String	**Definition**: Name of the associated IP address group. You can query the IP address group name by calling the **API for querying address groups**. Find the value in **data.records.name** (The period [.] is used to separate different levels of objects). **Constraints**: If **type** is set to **1** (associated IP address group), this parameter cannot be left blank. **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
domain_address_name	No	String	**Definition**: Domain name or domain name group name, which is used to specify the domain name or domain name group name referenced by the rule. **Constraints**: The value cannot be left blank when **type** is set to **2** (domain name) or **7** (domain name group - application). The value can contain up to 255 characters. **Range**: N/A **Default Value**: N/A
region_list_json	No	String	**Definition**: JSON value of the rule region list, which is used to specify the region name list referenced by the rule. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
region_list	No	Array of **IpRegionDto** objects	**Definition**: Rule region list. **Constraints**: N/A

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Parameter	Mandatory	Type	Description
domain_set_id	No	String	**Definition**: Domain group ID, which is used to specify the domain name group referenced by a rule. Its value can be obtained by calling the **API for querying the domain name group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). **Constraints**: The value cannot be left blank when **type** is set to **4** (domain name group) or **7** (domain name group - application). **Range**: N/A **Default Value**: N/A
domain_set_name	No	String	**Definition**: Domain group name, which is used to specify the domain name group referenced by a rule. Its value can be obtained by calling the **API for querying the domain name group list**. Find the value in **data.records.name** (The period [.] is used to separate different levels of objects). **Constraints**: The value cannot be left blank when **type** is set to **4** (domain name group) or **7** (domain name group - application). **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
ip_address	No	Array of strings	**Definition**: IP address list, which is used to specify the IP address list referenced by a rule. **Constraints**: This parameter cannot be left blank when **type** is set to **5** (multiple objects). **Range**: N/A **Default Value**: N/A
address_set_type	No	Integer	**Definition**: Address group type, which is used to specify the address group type referenced by a rule. **Constraints**: If **address** is set to **1** (associated IP address group), this parameter cannot be left blank. **Range**: **0** (user-defined address group), **1** (WAF proxy IP address group), or **3** (NAT64 address group). **Default Value**: N/A

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Parameter	Mandatory	Type	Description
predefined_group	No	Array of strings	**Definition**: ID list of predefined address groups. It is used to specify the predefined address group ID list referenced by a rule. Its value can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). In the search criteria, **query_address_set_type** must be set to **1** (predefined address group). **Constraints**: This parameter cannot be left blank when **type** is set to **5** (multiple objects). **Range**: It value can be **0** (user-defined address group), **1** (WAF proxy IP address group), **2** (DDoS back-to-source IP address group), or **3** (NAT64 address group). **Default Value**: N/A

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Parameter	Mandatory	Type	Description
address_group	No	Array of strings	**Definition**: Address group ID list, which is used to specify the list of address group IDs referenced by a rule. Its value can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). In the search criteria, **query_address_set_type** must be set to **0** (user-defined address group). **Constraints**: This parameter cannot be left blank when **type** is set to **5** (multiple objects). **Range**: N/A **Default Value**: N/A

Table 4-125 IpRegionDto

Parameter	Mandatory	Type	Description
region_id	No	String	**Definition**: Region ID, which is used to specify the region where a rule is used. You can obtain the region ID by referring to **Obtaining the Names and IDs of an Account, IAM User, Project, User Group, Region, and Agency**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
description_cn	No	String	**Definition**: Region description in Chinese, which is used only for China regions and can be obtained from the **region information table**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
description_en	No	String	**Definition**: Region description in English, which is used only for non-China regions and can be obtained from the **region information table**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
region_type	No	Integer	**Definition**: Area type **Constraints**: N/A **Range**: **0**: country; **1**: province; **2**: continent **Default Value**: N/A

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Table 4-126 RuleServiceDto

Parameter	Mandatory	Type	Description
type	Yes	Integer	**Definition**: Service input type, which is used to specify the service input type of a rule. **Constraints**: N/A **Range**: **0**: manual input; **1**: automatic input **Default Value**: N/A
protocol	No	Integer	**Definition**: Service protocol type, which is used to specify the service protocol type referenced by a rule. **Constraints**: If **type** is set to **0** (manual), this parameter cannot be left blank. **Range**: Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (Any). **Default Value**: N/A
protocols	No	Array of integers	**Definition**: Protocol list, which is used to specify the protocol list referenced by a rule. **Constraints**: If **type** is set to **0** (manual), this parameter cannot be left blank. **Range**: Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (Any). **Default Value**: N/A

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Parameter	Mandatory	Type	Description
source_port	No	String	**Definition**: Source port, that is, the port of the session initiator. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
dest_port	No	String	**Definition**: Destination port, that is, the port of the session receiver. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
service_set_id	No	String	**Definition**: Service group ID, which specifies the service group referenced by a rule. The service group ID can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). **Constraints**: If **address** is set to **1** (associated IP address group), this parameter cannot be left blank. **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
service_set_name	No	String	**Definition**: Name of a service (protocol, source port, or destination port) group. It specifies the service group referenced by a rule. It can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.name** (The period [.] is used to separate different levels of objects). **Constraints**: If **address** is set to **1** (associated IP address group), this parameter cannot be left blank. **Range**: N/A **Default Value**: N/A
custom_service	No	Array of **ServiceItem** objects	**Definition**: Custom service, which is used to specify the service referenced by a rule. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
predefined_group	No	Array of strings	**Definition**: ID list of predefined service groups, which is used to specify predefined service groups referenced by a rule. Service group ID, which can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). **Constraints**: In the search criteria, **query_service_set_type** must be set to **1** (predefined service group). **Range**: N/A **Default Value**: N/A
service_group	No	Array of strings	**Definition**: Service group ID list, which is used to specify the service groups referenced by a rule. Service group ID, which can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). **Constraints**: In the search criteria, **query_service_set_type** must be set to **0** (user-defined service group). **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
service_group_names	No	Array of ServiceGroupVO objects	**Definition**: Name of a service (protocol, source port, or destination port) group. List. **Constraints**: N/A
service_set_type	No	Integer	**Definition**: Service group type, which is used to specify the service group type referenced by a rule. **Constraints**: N/A **Range**: **0** (user-defined service group), **1** (common web service), **2** (common remote login and ping), or **3** (common database). **Default Value**: N/A

Table 4-127 ServiceItem

Parameter	Mandatory	Type	Description
protocol	No	Integer	**Definition**: Protocol type, which is used to specify the network protocol of a rule. **Constraints**: If **RuleServiceDto.type** is set to **0**, this parameter cannot be left blank. **Range**: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (Any). **Default Value**: N/A

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Parameter	Mandatory	Type	Description
source_port	No	String	**Definition**: Source port, that is, the port of the session initiator. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
dest_port	No	String	**Definition**: Destination port, that is, the port of the session receiver. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
description	No	String	**Definition**: Service (protocol, source port, or destination port) member. **Constraints**: The value must be a string consisting of 0 to 255 characters. **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
name	No	String	**Definition**: Service (protocol, source port, or destination port) member. **Constraints**: The value must be a string consisting of 0 to 255 characters. **Range**: N/A **Default Value**: N/A

Table 4-128 ServiceGroupVO

Parameter	Mandatory	Type	Description
name	No	String	**Definition**: Name of a service (protocol, source port, or destination port) group. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
protocols	No	Array of integers	**Definition**: Protocol List **Constraints**: N/A **Range**: Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (Any). **Default Value**: N/A

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Parameter	Mandatory	Type	Description
service_set_type	No	Integer	**Definition**: Type of a service (protocol, source port, or destination port) group. **Constraints**: N/A **Range**: **0**: custom service group; **1**: predefined service group **Default Value**: N/A
set_id	No	String	**Definition**: Service group ID, which can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Table 4-129 TagsVO

Parameter	Mandatory	Type	Description
tag_id	No	String	**Definition**: Rule ID **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
tag_key	No	String	**Definition**: Rule tag key. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
tag_value	No	String	**Definition**: Rule tag value. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Response Parameters

Status code: 200

Table 4-130 Response body parameters

Parameter	Type	Description
data	**RuleIdList** object	**Definition**: Data of the return value for creating a rule. **Constraints**: N/A

Table 4-131 RuleIdList

Parameter	Type	Description
rules	Array of **RuleId** objects	Rule ID list.

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Table 4-132 RuleId

Parameter	Type	Description
id	String	**Definition**: Rule ID **Range**: N/A
name	String	**Definition**: Rule **Range**: N/A

Status code: 400

Table 4-133 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

The following example shows how to add an IPv4 inbound rule. The rule name is **Test rule**, the source is the IP address 1.1.1.1, the destination is the IP address 2.2.2.2, the service type is service, the protocol type is TCP, the source port is 0, and the destination port is 0. Persistent connections are not supported. The action is to allow. The status is enabled.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/acl-rule

{
  "object_id" : "ae42418e-f077-41a0-9d3b-5b2f5ad9102b",
  "rules" : [ {
    "name" : "Test rule.",
    "status" : 1,
    "action_type" : 0,
    "description" : "",
    "source" : {
      "type" : 0,
      "address" : "1.1.1.1"
    },
    "destination" : {
      "type" : 0,
      "address" : "2.2.2.2"
    },
    "service" : {
      "type" : 0,
      "protocol" : 6,
      "source_port" : "0",
      "dest_port" : "0"
    },
```

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```
    "address_type" : 0,
    "tag" : {
      "tag_key" : "",
      "tag_value" : ""
    },
    "long_connect_enable" : 0,
    "direction" : 0,
    "sequence" : {
      "top" : 1
    }
  } ],
  "type" : 0
}
```

Example Responses

Status code: 200

Response to the request for creating an ACL rule.

```
{
  "data" : {
    "rules" : [ {
      "id" : "0475c516-0e41-4caf-990b-0c504eebd73f",
      "name" : "testName"
    } ]
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00900016",
  "error_msg" : "Import is in progress. Please wait until it is complete."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

The following example shows how to add an IPv4 inbound rule. The rule name is **Test rule**, the source is the IP address 1.1.1.1, the destination is the IP address 2.2.2.2, the service type is service, the protocol type is TCP, the source port is 0, and the destination port is 0. Persistent connections are not supported. The action is to allow. The status is enabled.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class AddAclRuleSolution {
```

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

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

      CfwClient client = CfwClient.newBuilder()
            .withCredential(auth)
            .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
            .build();
      AddAclRuleRequest request = new AddAclRuleRequest();
      AddRuleAclDto body = new AddRuleAclDto();
      TagsVO tagRules = new TagsVO();
      tagRules.withTagKey("")
         .withTagValue("");
      RuleServiceDto serviceRules = new RuleServiceDto();
      serviceRules.withType(0)
         .withProtocol(6)
         .withSourcePort("0")
         .withDestPort("0");
      RuleAddressDtoForRequest destinationRules = new RuleAddressDtoForRequest();
      destinationRules.withType(0)
         .withAddress("2.2.2.2");
      RuleAddressDtoForRequest sourceRules = new RuleAddressDtoForRequest();
      sourceRules.withType(0)
         .withAddress("1.1.1.1");
      OrderRuleAclDto sequenceRules = new OrderRuleAclDto();
      sequenceRules.withTop(1);
      List<AddRuleAclDtoRules> listbodyRules = new ArrayList<>();
      listbodyRules.add(
         new AddRuleAclDtoRules()
            .withName("Test rule.")
            .withSequence(sequenceRules)
            .withAddressType(AddRuleAclDtoRules.AddressTypeEnum.NUMBER_0)
            .withActionType(0)
            .withStatus(AddRuleAclDtoRules.StatusEnum.NUMBER_1)
            .withLongConnectEnable(AddRuleAclDtoRules.LongConnectEnableEnum.NUMBER_0)
            .withDescription("")
            .withDirection(AddRuleAclDtoRules.DirectionEnum.NUMBER_0)
            .withSource(sourceRules)
            .withDestination(destinationRules)
            .withService(serviceRules)
            .withTag(tagRules)
      );
      body.withRules(listbodyRules);
      body.withType(AddRuleAclDto.TypeEnum.NUMBER_0);
      body.withObjectId("ae42418e-f077-41a0-9d3b-5b2f5ad9102b");
      request.withBody(body);
      try {
         AddAclRuleResponse response = client.addAclRule(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());
```

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

Python

The following example shows how to add an IPv4 inbound rule. The rule name is **Test rule**, the source is the IP address 1.1.1.1, the destination is the IP address 2.2.2.2, the service type is service, the protocol type is TCP, the source port is 0, and the destination port is 0. Persistent connections are not supported. The action is to allow. The status is enabled.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = AddAclRuleRequest()
        tagRules = TagsVO(
            tag_key="",
            tag_value=""
        )
        serviceRules = RuleServiceDto(
            type=0,
            protocol=6,
            source_port="0",
            dest_port="0"
        )
        destinationRules = RuleAddressDtoForRequest(
            type=0,
            address="2.2.2.2"
        )
        sourceRules = RuleAddressDtoForRequest(
            type=0,
            address="1.1.1.1"
        )
        sequenceRules = OrderRuleAclDto(
            top=1
        )
        listRulesbody = [
            AddRuleAclDtoRules(
                name="Test rule.",
                sequence=sequenceRules,
                address_type=0,
                action_type=0,
```

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```
            status=1,
            long_connect_enable=0,
            description="",
            direction=0,
            source=sourceRules,
            destination=destinationRules,
            service=serviceRules,
            tag=tagRules
        )
    ]
    request.body = AddRuleAclDto(
        rules=listRulesbody,
        type=0,
        object_id="ae42418e-f077-41a0-9d3b-5b2f5ad9102b"
    )
    response = client.add_acl_rule(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

The following example shows how to add an IPv4 inbound rule. The rule name is **Test rule**, the source is the IP address 1.1.1.1, the destination is the IP address 2.2.2.2, the service type is service, the protocol type is TCP, the source port is 0, and the destination port is 0. Persistent connections are not supported. The action is to allow. The status is enabled.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.AddAclRuleRequest{}
    tagKeyTag:= ""
    tagValueTag:= ""
    tagRules := &model.TagsVo{
        TagKey: &tagKeyTag,
```

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```
        TagValue: &tagValueTag,
    }
    protocolService:= int32(6)
    sourcePortService:= "0"
    destPortService:= "0"
    serviceRules := &model.RuleServiceDto{
        Type: int32(0),
        Protocol: &protocolService,
        SourcePort: &sourcePortService,
        DestPort: &destPortService,
    }
    addressDestination:= "2.2.2.2"
    destinationRules := &model.RuleAddressDtoForRequest{
        Type: int32(0),
        Address: &addressDestination,
    }
    addressSource:= "1.1.1.1"
    sourceRules := &model.RuleAddressDtoForRequest{
        Type: int32(0),
        Address: &addressSource,
    }
    topSequence:= int32(1)
    sequenceRules := &model.OrderRuleAclDto{
        Top: &topSequence,
    }
    descriptionRules:= ""
    directionRules:= model.GetAddRuleAclDtoRulesDirectionEnum().E_0
    var listRulesbody = []model.AddRuleAclDtoRules{
        {
            Name: "Test rule.",
            Sequence: sequenceRules,
            AddressType: model.GetAddRuleAclDtoRulesAddressTypeEnum().E_0,
            ActionType: int32(0),
            Status: model.GetAddRuleAclDtoRulesStatusEnum().E_1,
            LongConnectEnable: model.GetAddRuleAclDtoRulesLongConnectEnableEnum().E_0,
            Description: &descriptionRules,
            Direction: &directionRules,
            Source: sourceRules,
            Destination: destinationRules,
            Service: serviceRules,
            Tag: tagRules,
        },
    }
    request.Body = &model.AddRuleAclDto{
        Rules: listRulesbody,
        Type: model.GetAddRuleAclDtoTypeEnum().E_0,
        ObjectId: "ae42418e-f077-41a0-9d3b-5b2f5ad9102b",
    }
    response, err := client.AddAclRule(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

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Status Codes

Status Code	Description
200	Response to the request for creating an ACL rule.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.3.2 Deleting an ACL Rule

Function

This API is used to delete an ACL rule.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v1/{project_id}/acl-rule/{acl_rule_id}

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Table 4-134 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition**: Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A
acl_rule_id	Yes	String	**Definition**: Rule ID, which is the unique ID generated after a rule is created. You can obtain the rule ID by calling the **API for querying protection rules**. Find the value in the returned **data.records.rule_id**. (The period [.] is used to separate different levels of objects). **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Table 4-135 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	**Definition**: Enterprise project ID. If you plan enterprise projects based on your organization's plan, each enterprise project will have such an ID. After this parameter is configured, you can filter assets by enterprise project. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. **Constraints**: N/A **Range**: N/A **Default Value**: 0
fw_instance_id	No	String	**Definition**: Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

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Request Parameters

Table 4-136 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	**Definition**: User token, which carries user identity information. After the token is configured, you can use it for API authentication. You can obtain the token by referring to **Obtaining a User Token**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Response Parameters

Status code: 200

Table 4-137 Response body parameters

Parameter	Type	Description
data	**RuleId** object	**Definition**: Rule ID.

Table 4-138 RuleId

Parameter	Type	Description
id	String	**Definition**: Rule ID **Range**: N/A
name	String	**Definition**: Rule **Range**: N/A

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Status code: 400

Table 4-139 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Delete the rule ceaa0407-b9c8-4dfd-9eca-b6ead2dfd031 from project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/acl-rule/ceaa0407-b9c8-4dfd-9eca-b6ead2dfd031
```

Example Responses

Status code: 200

Data returned for rule deletion.

```
{
  "data" : {
    "id" : "ceaa0407-b9c8-4dfd-9eca-b6ead2dfd031",
    "name" : "name"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00900016",
  "error_msg" : "Import is in progress. Please wait until it is complete."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class DeleteAclRuleSolution {

    public static void main(String[] args) {
```

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteAclRuleRequest request = new DeleteAclRuleRequest();
        request.withAclRuleId("{acl_rule_id}");
        try {
            DeleteAclRuleResponse response = client.deleteAclRule(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = DeleteAclRuleRequest()
        request.acl_rule_id = "{acl_rule_id}"
        response = client.delete_acl_rule(request)
        print(response)
```

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```
    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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Data returned for rule deletion.
400	Bad Request

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Status Code	Description
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.3.3 Deleting ACL Rules in Batches

Function

This API is used to delete ACL rules in batches.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v1/{project_id}/acl-rule

Table 4-140 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition**: Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

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Table 4-141 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	**Definition**: Enterprise project ID. If you plan enterprise projects based on your organization's plan, each enterprise project will have such an ID. After this parameter is configured, you can filter assets by enterprise project. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. **Constraints**: N/A **Range**: N/A **Default Value**: 0
fw_instance_id	No	String	**Definition**: Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

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Request Parameters

Table 4-142 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	**Definition**: User token, which carries user identity information. After the token is configured, you can use it for API authentication. You can obtain the token by referring to **Obtaining a User Token**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Table 4-143 Request body parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	**Definition**: Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a CFW is created. You can obtain the ID by calling the **API for querying firewall instances**. Find the value in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). **Constraints**: If **type** is set to 0, **object_id** indicates the protected object ID of the Internet border. If **type** is set to **1**, **object_id** indicates the protected object ID of the VPC border. The value of **type** can be obtained from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects). **Range**: 32-bit UUID **Default Value**: N/A

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Parameter	Mandatory	Type	Description
rule_ids	Yes	Array of strings	**Definition**: Rule ID list, which is the ID list transferred when rules are deleted in batches. Rule IDs can be obtained by calling the **API for querying protection rules**. Find the value in **data.records.rule_id** (The period [.] is used to separate different levels of objects). **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Response Parameters

Status code: 200

Table 4-144 Response body parameters

Parameter	Type	Description
data	**BatchDeleteAclRulesResponseData** object	**Definition**: Return value for deleting ACL rules in batches.

Table 4-145 BatchDeleteAclRulesResponseData

Parameter	Type	Description
responseDatas	Array of **BatchDeleteRuleInfo** objects	**Definition**: Data returned when rules are deleted in batches.

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Table 4-146 BatchDeleteRuleInfo

Parameter	Type	Description
name	String	**Definition**: Names of the ACL rules to be deleted in batches. **Range**: N/A
id	String	**Definition**: IDs of ACLs to be deleted in batches. **Range**: N/A

Example Requests

Delete rules 0475c516-0e41-4caf-990b-0c504eebd73f and 8662868e-fe7e-4dfc-bfb1-ca4d73081ca6 from the protected object ae42418e-f077-41a0-9d3b-5b2f5ad9102b whose project ID is 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/acl-rule

{
  "rule_ids" : [ "0475c516-0e41-4caf-990b-0c504eebd73f", "8662868e-fe7e-4dfc-bfb1-ca4d73081ca6" ],
  "object_id" : "ae42418e-f077-41a0-9d3b-5b2f5ad9102b"
}
```

Example Responses

Status code: 200

Return value for deleting rules in batches.

```
{
  "data" : {
    "responseDatas" : [ {
      "name" : "test",
      "id" : "0475c516-0e41-4caf-990b-0c504eebd73f"
    }, {
      "name" : "test2",
      "id" : "8662868e-fe7e-4dfc-bfb1-ca4d73081ca6"
    } ]
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Delete rules 0475c516-0e41-4caf-990b-0c504eebd73f and 8662868e-fe7e-4dfc-bfb1-ca4d73081ca6 from the protected object ae42418e-

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f077-41a0-9d3b-5b2f5ad9102b whose project ID is 9d80d070b6d44942af73c9c3d38e0429.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class BatchDeleteAclRulesSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        BatchDeleteAclRulesRequest request = new BatchDeleteAclRulesRequest();
        DeleteRuleAclDto body = new DeleteRuleAclDto();
        List<String> listbodyRuleIds = new ArrayList<>();
        listbodyRuleIds.add("0475c516-0e41-4caf-990b-0c504eebd73f");
        listbodyRuleIds.add("8662868e-fe7e-4dfc-bfb1-ca4d73081ca6");
        body.withRuleIds(listbodyRuleIds);
        body.withObjectId("ae42418e-f077-41a0-9d3b-5b2f5ad9102b");
        request.withBody(body);
        try {
            BatchDeleteAclRulesResponse response = client.batchDeleteAclRules(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

Delete rules 0475c516-0e41-4caf-990b-0c504eebd73f and 8662868e-fe7e-4dfc-bfb1-ca4d73081ca6 from the protected object ae42418e-

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f077-41a0-9d3b-5b2f5ad9102b whose project ID is 9d80d070b6d44942af73c9c3d38e0429.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = BatchDeleteAclRulesRequest()
        listRuleIdsbody = [
            "0475c516-0e41-4caf-990b-0c504eebd73f",
            "8662868e-fe7e-4dfc-bfb1-ca4d73081ca6"
        ]
        request.body = DeleteRuleAclDto(
            rule_ids=listRuleIdsbody,
            object_id="ae42418e-f077-41a0-9d3b-5b2f5ad9102b"
        )
        response = client.batch_delete_acl_rules(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

Delete rules 0475c516-0e41-4caf-990b-0c504eebd73f and 8662868e-fe7e-4dfc-bfb1-ca4d73081ca6 from the protected object ae42418e-f077-41a0-9d3b-5b2f5ad9102b whose project ID is 9d80d070b6d44942af73c9c3d38e0429.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/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.
```

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```
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.BatchDeleteAclRulesRequest{}
    var listRuleIdsbody = []string{
        "0475c516-0e41-4caf-990b-0c504eebd73f",
        "8662868e-fe7e-4dfc-bfb1-ca4d73081ca6",
    }
    request.Body = &model.DeleteRuleAclDto{
        RuleIds: listRuleIdsbody,
        ObjectId: "ae42418e-f077-41a0-9d3b-5b2f5ad9102b",
    }
    response, err := client.BatchDeleteAclRules(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for deleting rules in batches.

Error Codes

See **Error Codes**.

4.3.4 Deleting the Number of Rule Hits

Function

This API is used to delete the rule hit count.

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Calling Method

For details, see **Calling APIs**.

URI

DELETE /v1/{project_id}/acl-rule/count

Table 4-147 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition**: Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

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Table 4-148 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	**Definition**: Enterprise project ID. If you plan enterprise projects based on your organization's plan, each enterprise project will have such an ID. After this parameter is configured, you can filter assets by enterprise project. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. **Constraints**: N/A **Range**: N/A **Default Value**: 0
fw_instance_id	No	String	**Definition**: Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

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Request Parameters

Table 4-149 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	**Definition**: User token, which carries user identity information. After the token is configured, you can use it for API authentication. You can obtain the token by referring to **Obtaining a User Token**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Table 4-150 Request body parameters

Parameter	Mandatory	Type	Description
rule_ids	Yes	Array of strings	**Definition**: List of rules deleted during rule hit deletion. Rule IDs can be obtained by calling the **API for querying protection rules**. Find the value in **data.records.rule_id** (The period [.] is used to separate different levels of objects). **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

Response Parameters

Status code: 200

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Table 4-151 Response body parameters

Parameter	Type	Description
-	String	

Status code: 400

Table 4-152 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Clear the hits of ACL rule 59ff6bd9-0a76-41ec-9650-380086069965 whose project ID is 0b2179bbe180d3762fb0c01a2d5725c7.

```
https://{Endpoint}/v1/0b2179bbe180d3762fb0c01a2d5725c7/acl-rule/count

{
  "rule_ids" : [ "59ff6bd9-0a76-41ec-9650-380086069965" ]
}
```

Example Responses

Status code: 200

Deleting the Rule Hit Count

```
{ }
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00400006",
  "error_msg" : "Error occurred when deleting the rule hit count."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Clear the hits of ACL rule 59ff6bd9-0a76-41ec-9650-380086069965 whose project ID is 0b2179bbe180d3762fb0c01a2d5725c7.

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

import com.huaweicloud.sdk.core.auth.ICredential;
```

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```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class DeleteAclRuleHitCountSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteAclRuleHitCountRequest request = new DeleteAclRuleHitCountRequest();
        ClearAccessLogRuleHitCountsDto body = new ClearAccessLogRuleHitCountsDto();
        List<String> listbodyRuleIds = new ArrayList<>();
        listbodyRuleIds.add("59ff6bd9-0a76-41ec-9650-380086069965");
        body.withRuleIds(listbodyRuleIds);
        request.withBody(body);
        try {
            DeleteAclRuleHitCountResponse response = client.deleteAclRuleHitCount(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

Clear the hits of ACL rule 59ff6bd9-0a76-41ec-9650-380086069965 whose project ID is 0b2179bbe180d3762fb0c01a2d5725c7.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
```

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = DeleteAclRuleHitCountRequest()
        listRuleIdsbody = [
            "59ff6bd9-0a76-41ec-9650-380086069965"
        ]
        request.body = ClearAccessLogRuleHitCountsDto(
            rule_ids=listRuleIdsbody
        )
        response = client.delete_acl_rule_hit_count(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

Clear the hits of ACL rule 59ff6bd9-0a76-41ec-9650-380086069965 whose project ID is 0b2179bbe180d3762fb0c01a2d5725c7.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())
```

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```
    request := &model.DeleteAclRuleHitCountRequest{}
    var listRuleIdsbody = []string{
        "59ff6bd9-0a76-41ec-9650-380086069965",
    }
    request.Body = &model.ClearAccessLogRuleHitCountsDto{
        RuleIds: listRuleIdsbody,
    }
    response, err := client.DeleteAclRuleHitCount(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Deleting the Rule Hit Count
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.3.5 Updating an ACL Rule

Function

This API is used to update an ACL rule.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/acl-rule/{acl_rule_id}

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Table 4-153 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition**: Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A
acl_rule_id	Yes	String	**Definition**: Rule ID, which can be obtained by calling the **API for querying protection rules**. Find the value in **data.records.rule_id** (The period [.] is used to separate different levels of objects). **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Table 4-154 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	**Definition**: Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
fw_instance_id	No	String	**Definition**: Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

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Request Parameters

Table 4-155 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	**Definition**: User token, which carries user identity information. After the token is configured, you can use it for API authentication. You can obtain the token by referring to **Obtaining a User Token**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Table 4-156 Request body parameters

Parameter	Mandatory	Type	Description
address_type	No	Integer	**Definition**: Internet protocol type of an IP address, which is specified by the customer. **Constraints**: N/A **Range**: **0**: IPv4; **1**: IPv6 **Default Value**: N/A

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Parameter	Mandatory	Type	Description
name	No	String	**Definition**: Rule name, which is defined by a user and is used to identify a rule. **Constraints**: The string lentgh can be 0 to 255 characters. **Range**: N/A **Default Value**: N/A
direction	No	Integer	**Definition**: Rule direction. It can be from the cloud to on-premises, or from on-premises to the cloud. **Constraints**: If **type** is set to **0** (Internet rule) or **2** (NAT rule), the direction is mandatory. **Range**: **0**: inbound (on-premises to cloud); **1**: outbound (cloud to on-premises). **Default Value**: N/A
action_type	No	Integer	**Definition**: Rule action type, which is used to distinguish the action of a rule on traffic. **Constraints**: Only **0** and **1** are allowed. **Range**: **0**: permit; **1**: deny **Default Value**: N/A

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Parameter	Mandatory	Type	Description
status	No	Integer	**Definition**: Rule status, which is used to determine whether a rule is enabled. **Constraints**: Only **0** and **1** are allowed. **Range**: **0**: disable; **1**: enable **Default Value**: N/A
applications	No	Array of strings	**Definition**: List of protocols that a rule applies to. **Constraints**: N/A **Range**: Rule application type. Its value can be **HTTP**, **HTTPS**, **TLS1**, **DNS**, **SSH**, **MYSQL**, **SMTP**, **RDP**, **RDPS**, **VNC**, **POP3**, **IMAP4**, **SMTPS**, **POP3S**, **FTPS**, **ANY**, or **BGP**. **Default Value**: N/A
description	No	String	**Definition**: Rule description, which is used to describe the usage of a rule. **Constraints**: N/A **Range**: Can contain 0 to 255 characters. **Default Value**: N/A

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Parameter	Mandatory	Type	Description
long_connect_time_hour	No	Long	**Definition**: Persistent connection duration (in hours). **Constraints**: Only numbers are allowed. **Range**: 0-24,000. **Default Value**: N/A
long_connect_time_minute	No	Long	**Definition**: Persistent connection duration (in minutes). **Constraints**: Only numbers are allowed. **Range**: 0–60 **Default Value**: N/A
long_connect_time_second	No	Long	**Definition**: Persistent connection duration (in seconds). **Constraints**: Only numbers are allowed. **Range**: 0–60 **Default Value**: N/A
long_connect_time	No	Long	**Definition**: Duration (in seconds) of a persistent connection, that is, the maximum duration of a traffic session. **Constraints**: Only numbers are allowed. **Range**: 1-86,400,000. **Default Value**: N/A

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Parameter	Mandatory	Type	Description
long_connect_enable	No	Integer	**Definition**: Specifies whether persistent connections are supported. **Constraints**: N/A **Range**: **0**: not supported; **1**: supported **Default Value**: N/A
source	No	**RuleAddressDto** object	**Definition**: Source address DTO. **Constraints**: N/A
destination	No	**RuleAddressDto** object	**Definition**: Destination address DTO. **Constraints**: N/A
service	No	**RuleServiceDto** object	**Definition**: Service object **Constraints**: N/A

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Parameter	Mandatory	Type	Description
type	No	Integer	**Definition**: Rule type, which is used to distinguish different protected objects. **Constraints**: N/A **Range**: **0**: Internet border rule. The source and destination addresses must be EIPs or domain names. **1**: Inter-VPC rule. The source and destination addresses must be private IP addresses. **2**: NAT rule. The source address must be a private IP address, and the destination address must be an EIP or a domain name. **Default Value**: N/A
tag	No	**TagsVO** object	**Definition**: Tag object attached to a rule. **Constraints**: N/A

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Table 4-157 RuleAddressDto

Parameter	Mandatory	Type	Description
type	Yes	Integer	**Definition**: Address input type, which is used to distinguish different input types. **Constraints**: If **type** is set to **0** (Internet rule) or **2** (NAT rule), the **direction** is mandatory. **Range**: **0** (manual input), **1** (associated IP address group), **2** (domain name), **3** (geographical location), **4** (domain name group) **5** (multiple objects), **6** (domain name group - network), **7** (domain name group - application). **Default Value**: N/A
address_type	No	Integer	**Definition**: IP address protocol type, which is used to distinguish different Internet protocols. **Constraints**: If **type** is set to **0** (manual input), this parameter cannot be left blank. **Range**: Address type: **0** (IPv4); **1**: (IPv6) **Default Value**: N/A

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Parameter	Mandatory	Type	Description
address	No	String	**Definition**: IP address information, which is used to specify the IP addresses for a rule. **Constraints**: If **type** is set to **0** (manual input), this parameter cannot be left blank. **Range**: N/A **Default Value**: N/A
address_set_id	No	String	**Definition**: ID of the associated IP address group. You can query the IP address group ID by calling the **API for querying address groups**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). **Constraints**: If **type** is set to **1** (associated IP address group), this parameter cannot be left blank. **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
address_set_name	No	String	**Definition**: Name of the associated IP address group. You can query the IP address group name by calling the **API for querying address groups**. Find the value in **data.records.name** (The period [.] is used to separate different levels of objects). **Constraints**: If **type** is set to **1** (associated IP address group), this parameter cannot be left blank. **Range**: N/A **Default Value**: N/A.
domain_address_name	No	String	**Definition**: Domain name or domain name group name, which is used to specify the domain name or domain name group name referenced by the rule. **Constraints**: If **type** is set to **2** or **7**, the value cannot be empty and can contain up to 255 characters. **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
region_list_json	No	String	**Definition**: JSON value of the rule region list, which is used to specify the region name list referenced by the rule. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
region_list	No	Array of **IpRegionDto** objects	**Definition**: Rule region list. **Constraints**: N/A
domain_set_id	No	String	**Definition**: Domain group ID, which is used to specify the domain name group referenced by a rule. Its value can be obtained by calling the **API for querying the domain name group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). **Constraints**: The value cannot be left blank when **type** is set to **4** (domain name group) or **7** (domain name group - application). **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
domain_set_name	No	String	**Definition**: Domain group name, which is used to specify the domain name group referenced by a rule. Its value can be obtained by calling the **API for querying the domain name group list**. Find the value in **data.records.name** (The period [.] is used to separate different levels of objects). **Constraints**: The value cannot be left blank when **type** is set to **4** (domain name group) or **7** (domain name group - application). **Range**: N/A **Default Value**: N/A
ip_address	No	Array of strings	**Definition**: IP address list, which is used to specify the IP address list referenced by a rule. **Constraints**: This parameter cannot be left blank when **type** is set to **5** (multiple objects). **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
address_group	No	Array of strings	**Definition**: Address group ID list, which is used to specify the list of address group IDs referenced by a rule. Its value can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). In the search criteria, **query_address_set_type** must be set to **0** (user-defined address group). **Constraints**: This parameter cannot be left blank when **type** is set to **5** (multiple objects). **Range**: N/A **Default Value**: N/A
address_group_names	No	Array of **AddressGroupVO** objects	**Definition**: Address group name list. **Constraints**: N/A

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Parameter	Mandatory	Type	Description
address_set_type	No	Integer	**Definition**: Address group type, which is used to specify the address group type referenced by a rule. **Constraints**: If **address** is set to **1** (associated IP address group), this parameter cannot be left blank. **Range**: It value can be **0** (user-defined address group), **1** (WAF proxy IP address group), **2** (DDoS back-to-source IP address group), or **3** (NAT64 address group). **Default Value**: N/A

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Parameter	Mandatory	Type	Description
predefined_group	No	Array of strings	**Definition**: ID list of predefined address groups. It is used to specify the predefined address group ID list referenced by a rule. Its value can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). In the search criteria, **query_address_set_type** must be set to **1** (predefined address group). **Constraints**: This parameter cannot be left blank when **type** is set to **5** (multiple objects). **Range**: It value can be **0** (user-defined address group), **1** (WAF proxy IP address group), **2** (DDoS back-to-source IP address group), or **3** (NAT64 address group). **Default Value**: N/A

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Table 4-158 IpRegionDto

Parameter	Mandatory	Type	Description
region_id	No	String	**Definition**: Region ID, which is used to specify the region where a rule is used. You can obtain the region ID by referring to **Obtaining the Names and IDs of an Account, IAM User, Project, User Group, Region, and Agency**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
description_cn	No	String	**Definition**: Region description in Chinese, which is used only for China regions and can be obtained from the **region information table**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
description_en	No	String	**Definition**: Region description in English, which is used only for non-China regions and can be obtained from the **region information table**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
region_type	No	Integer	**Definition**: Area type **Constraints**: N/A **Range**: **0**: country; **1**: province; **2**: continent **Default Value**: N/A

Table 4-159 AddressGroupVO

Parameter	Mandatory	Type	Description
address_set_type	No	Integer	Address group type: **0** (user-defined address group), **1** (WAF proxy IP address group), **2** (DDoS back-to-source IP address group), or **3** (NAT64 address group).
name	No	String	Name of an associated IP address group, which can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.name** (The period [.] is used to separate different levels of objects).
set_id	No	String	ID of an associated IP address group, which can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

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Table 4-160 RuleServiceDto

Parameter	Mandatory	Type	Description
type	Yes	Integer	**Definition**: Service input type, which is used to specify the service input type of a rule. **Constraints**: N/A **Range**: **0**: manual input; **1**: automatic input **Default Value**: N/A
protocol	No	Integer	**Definition**: Service protocol type, which is used to specify the service protocol type referenced by a rule. **Constraints**: If **type** is set to **0** (manual), this parameter cannot be left blank. **Range**: Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (Any). **Default Value**: N/A
protocols	No	Array of integers	**Definition**: Protocol list, which is used to specify the protocol list referenced by a rule. **Constraints**: If **type** is set to **0** (manual), this parameter cannot be left blank. **Range**: Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (Any). **Default Value**: N/A

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Parameter	Mandatory	Type	Description
source_port	No	String	**Definition**: Source port, that is, the port of the session initiator. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
dest_port	No	String	**Definition**: Destination port, that is, the port of the session receiver. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
service_set_id	No	String	**Definition**: Service group ID, which specifies the service group referenced by a rule. The service group ID can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). **Constraints**: If **address** is set to **1** (associated IP address group), this parameter cannot be left blank. **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
service_set_name	No	String	**Definition**: Name of a service (protocol, source port, or destination port) group. It specifies the service group referenced by a rule. It can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.name** (The period [.] is used to separate different levels of objects). **Constraints**: If **address** is set to **1** (associated IP address group), this parameter cannot be left blank. **Range**: N/A **Default Value**: N/A
custom_service	No	Array of **ServiceItem** objects	**Definition**: Custom service, which is used to specify the service referenced by a rule. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
predefined_group	No	Array of strings	**Definition**: ID list of predefined service groups, which is used to specify predefined service groups referenced by a rule. Service group ID, which can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). **Constraints**: In the search criteria, **query_service_set_type** must be set to **1** (predefined service group). **Range**: N/A **Default Value**: N/A
service_group	No	Array of strings	**Definition**: Service group ID list, which is used to specify the service groups referenced by a rule. Service group ID, which can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). **Constraints**: In the search criteria, **query_service_set_type** must be set to **0** (user-defined service group). **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
service_group_names	No	Array of ServiceGroupVO objects	**Definition**: Name of a service (protocol, source port, or destination port) group. List. **Constraints**: N/A
service_set_type	No	Integer	**Definition**: Service group type, which is used to specify the service group type referenced by a rule. **Constraints**: N/A **Range**: **0** (user-defined service group), **1** (common web service), **2** (common remote login and ping), or **3** (common database). **Default Value**: N/A

Table 4-161 ServiceItem

Parameter	Mandatory	Type	Description
protocol	No	Integer	**Definition**: Protocol type, which is used to specify the network protocol of a rule. **Constraints**: If **RuleServiceDto.type** is set to **0**, this parameter cannot be left blank. **Range**: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (Any). **Default Value**: N/A

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Parameter	Mandatory	Type	Description
source_port	No	String	**Definition**: Source port, that is, the port of the session initiator. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
dest_port	No	String	**Definition**: Destination port, that is, the port of the session receiver. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
description	No	String	**Definition**: Service (protocol, source port, or destination port) member. **Constraints**: The value must be a string consisting of 0 to 255 characters. **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
name	No	String	**Definition**: Service (protocol, source port, or destination port) member. **Constraints**: The value must be a string consisting of 0 to 255 characters. **Range**: N/A **Default Value**: N/A

Table 4-162 ServiceGroupVO

Parameter	Mandatory	Type	Description
name	No	String	**Definition**: Name of a service (protocol, source port, or destination port) group. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
protocols	No	Array of integers	**Definition**: Protocol List **Constraints**: N/A **Range**: Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (Any). **Default Value**: N/A

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Parameter	Mandatory	Type	Description
service_set_type	No	Integer	**Definition**: Type of a service (protocol, source port, or destination port) group. **Constraints**: N/A **Range**: **0**: custom service group; **1**: predefined service group **Default Value**: N/A
set_id	No	String	**Definition**: Service group ID, which can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Table 4-163 TagsVO

Parameter	Mandatory	Type	Description
tag_id	No	String	**Definition**: Rule ID **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
tag_key	No	String	**Definition**: Rule tag key. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
tag_value	No	String	**Definition**: Rule tag value. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Response Parameters

Status code: 200

Table 4-164 Response body parameters

Parameter	Type	Description
data	**RuleId** object	**Definition**: Return value for updating a rule.

Table 4-165 RuleId

Parameter	Type	Description
id	String	**Definition**: Rule ID **Range**: N/A

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Parameter	Type	Description
name	String	**Definition**: Rule **Range**: N/A

Status code: 400

Table 4-166 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

The following example shows how to update an IPv4 inbound rule. The rule name is **Test rule**, the source is the IP address 1.1.1.1, the destination is the IP address 2.2.2.2, the service type is service, the protocol type is TCP, the source port is 0, and the destination port is 0. Persistent connections are not supported. The action is to allow. The status is enabled.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/acl-rule/ceaa0407-b9c8-4dfd-9eca-b6ead2dfd031

{
  "name" : "Test rule.",
  "status" : 1,
  "action_type" : 0,
  "description" : "",
  "source" : {
    "type" : 0,
    "address" : "1.1.1.1"
  },
  "destination" : {
    "type" : 0,
    "address" : "2.2.2.2"
  },
  "service" : {
    "type" : 0,
    "protocol" : 6,
    "source_port" : "0",
    "dest_port" : "0"
  },
  "type" : 0,
  "address_type" : 0,
  "tag" : {
    "tag_key" : "",
    "tag_value" : ""
  },
  "long_connect_enable" : 0,
  "direction" : 0
}
```

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Example Responses

Status code: 200

OK

```
{
  "data" : {
    "id" : "ceaa0407-b9c8-4dfd-9eca-b6ead2dfd031"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200005",
  "error_msg" : "Object not found."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

The following example shows how to update an IPv4 inbound rule. The rule name is **Test rule**, the source is the IP address 1.1.1.1, the destination is the IP address 2.2.2.2, the service type is service, the protocol type is TCP, the source port is 0, and the destination port is 0. Persistent connections are not supported. The action is to allow. The status is enabled.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class UpdateAclRuleSolution {

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

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

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

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```
            .build();
        UpdateAclRuleRequest request = new UpdateAclRuleRequest();
        request.withAclRuleId("{acl_rule_id}");
        UpdateRuleAclDto body = new UpdateRuleAclDto();
        TagsVO tagbody = new TagsVO();
        tagbody.withTagKey("")
            .withTagValue("");
        RuleServiceDto servicebody = new RuleServiceDto();
        servicebody.withType(0)
            .withProtocol(6)
            .withSourcePort("0")
            .withDestPort("0");
        RuleAddressDto destinationbody = new RuleAddressDto();
        destinationbody.withType(0)
            .withAddress("2.2.2.2");
        RuleAddressDto sourcebody = new RuleAddressDto();
        sourcebody.withType(0)
            .withAddress("1.1.1.1");
        body.withTag(tagbody);
        body.withType(UpdateRuleAclDto.TypeEnum.NUMBER_0);
        body.withService(servicebody);
        body.withDestination(destinationbody);
        body.withSource(sourcebody);
        body.withLongConnectEnable(UpdateRuleAclDto.LongConnectEnableEnum.NUMBER_0);
        body.withDescription("");
        body.withStatus(1);
        body.withActionType(UpdateRuleAclDto.ActionTypeEnum.NUMBER_0);
        body.withDirection(UpdateRuleAclDto.DirectionEnum.NUMBER_0);
        body.withName("Test rule.");
        body.withAddressType(UpdateRuleAclDto.AddressTypeEnum.NUMBER_0);
        request.withBody(body);
        try {
            UpdateAclRuleResponse response = client.updateAclRule(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

The following example shows how to update an IPv4 inbound rule. The rule name is **Test rule**, the source is the IP address 1.1.1.1, the destination is the IP address 2.2.2.2, the service type is service, the protocol type is TCP, the source port is 0, and the destination port is 0. Persistent connections are not supported. The action is to allow. The status is enabled.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 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.
```

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```
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = UpdateAclRuleRequest()
        request.acl_rule_id = "{acl_rule_id}"
        tagbody = TagsVO(
            tag_key="",
            tag_value=""
        )
        servicebody = RuleServiceDto(
            type=0,
            protocol=6,
            source_port="0",
            dest_port="0"
        )
        destinationbody = RuleAddressDto(
            type=0,
            address="2.2.2.2"
        )
        sourcebody = RuleAddressDto(
            type=0,
            address="1.1.1.1"
        )
        request.body = UpdateRuleAclDto(
            tag=tagbody,
            type=0,
            service=servicebody,
            destination=destinationbody,
            source=sourcebody,
            long_connect_enable=0,
            description="",
            status=1,
            action_type=0,
            direction=0,
            name="Test rule.",
            address_type=0
        )
        response = client.update_acl_rule(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

The following example shows how to update an IPv4 inbound rule. The rule name is **Test rule**, the source is the IP address 1.1.1.1, the destination is the IP address 2.2.2.2, the service type is service, the protocol type is TCP, the source port is 0, and the destination port is 0. Persistent connections are not supported. The action is to allow. The status is enabled.

```
package main

import (
    "fmt"
```

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```
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateAclRuleRequest{}
    request.AclRuleId = "{acl_rule_id}"
    tagKeyTag:= ""
    tagValueTag:= ""
    tagbody := &model.TagsVo{
        TagKey: &tagKeyTag,
        TagValue: &tagValueTag,
    }
    protocolService:= int32(6)
    sourcePortService:= "0"
    destPortService:= "0"
    servicebody := &model.RuleServiceDto{
        Type: int32(0),
        Protocol: &protocolService,
        SourcePort: &sourcePortService,
        DestPort: &destPortService,
    }
    addressDestination:= "2.2.2.2"
    destinationbody := &model.RuleAddressDto{
        Type: int32(0),
        Address: &addressDestination,
    }
    addressSource:= "1.1.1.1"
    sourcebody := &model.RuleAddressDto{
        Type: int32(0),
        Address: &addressSource,
    }
    typeUpdateRuleAclDto:= model.GetUpdateRuleAclDtoTypeEnum().E_0
    longConnectEnableUpdateRuleAclDto:= model.GetUpdateRuleAclDtoLongConnectEnableEnum().E_0
    descriptionUpdateRuleAclDto:= ""
    statusUpdateRuleAclDto:= int32(1)
    actionTypeUpdateRuleAclDto:= model.GetUpdateRuleAclDtoActionTypeEnum().E_0
    directionUpdateRuleAclDto:= model.GetUpdateRuleAclDtoDirectionEnum().E_0
    nameUpdateRuleAclDto:= "Test rule."
    addressTypeUpdateRuleAclDto:= model.GetUpdateRuleAclDtoAddressTypeEnum().E_0
    request.Body = &model.UpdateRuleAclDto{
        Tag: tagbody,
        Type: &typeUpdateRuleAclDto,
        Service: servicebody,
        Destination: destinationbody,
        Source: sourcebody,
```

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```
        LongConnectEnable: &longConnectEnableUpdateRuleAclDto,
        Description: &descriptionUpdateRuleAclDto,
        Status: &statusUpdateRuleAclDto,
        ActionType: &actionTypeUpdateRuleAclDto,
        Direction: &directionUpdateRuleAclDto,
        Name: &nameUpdateRuleAclDto,
        AddressType: &addressTypeUpdateRuleAclDto,
    }
    response, err := client.UpdateAclRule(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	OK
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.3.6 Updating Rule Actions in Batches

Function

This API is used to update rule actions in batches.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/acl-rule/action

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Table 4-167 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition**: Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

Table 4-168 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	**Definition**: Enterprise project ID. If you plan enterprise projects based on your organization's plan, each enterprise project will have such an ID. After this parameter is configured, you can filter assets by enterprise project. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. **Constraints**: N/A **Range**: N/A **Default Value**: 0

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Parameter	Mandatory	Type	Description
fw_instance_id	No	String	**Definition**: Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

Request Parameters

Table 4-169 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	**Definition**: User token, which carries user identity information. After the token is configured, you can use it for API authentication. You can obtain the token by referring to **Obtaining a User Token**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Table 4-170 Request body parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	**Definition**: Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a CFW is created. You can obtain the ID by calling the **API for querying firewall instances**. Find the value in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). **Constraints**: If **type** is set to 0, **object_id** indicates the protected object ID of the Internet border. If **type** is set to **1**, **object_id** indicates the protected object ID of the VPC border. The value of **type** can be obtained from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects). **Range**: 32-bit UUID **Default Value**: N/A
action	Yes	String	**Definition**: Action **Constraints**: N/A **Range**: **enable**: permit; **disable**: deny **Default Value**: N/A

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Parameter	Mandatory	Type	Description
rule_ids	Yes	Array of strings	**Definition**: List of rule IDs. You can obtain the rule IDs by calling the **API for querying protection rules**. Find the value in **data.records.rule_id** (The period [.] is used to separate different levels of objects). **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Response Parameters

Status code: 200

Table 4-171 Response body parameters

Parameter	Type	Description
data	Array of strings	**Definition**: IDs of ACL rules to be updated in batches. The value is the rule IDs transferred from the request body. **Range**: N/A

Example Requests

Update the statuses of rules 4e12d889-c1d3-491b-8470-3d1b3dadc1fd and f798a6a8-c4c5-42b4-838c-c922c9908cb4 of firewall 546af3f8-88e9-47f2-a205-2346d7090925 in project 14181c1245cf4fd786824efe1e2b9388 to enabled.

```
https://{Endpoint}/v1/14181c1245cf4fd786824efe1e2b9388/acl-rule/action?
fw_instance_id=546af3f8-88e9-47f2-a205-2346d7090925&enterprise_project_id=default

{
  "action" : "enable",
  "rule_ids" : [ "4e12d889-c1d3-491b-8470-3d1b3dadc1fd", "f798a6a8-c4c5-42b4-838c-c922c9908cb4" ],
  "object_id" : "ae42418e-f077-41a0-9d3b-5b2f5ad9102b"
}
```


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Example Responses

Status code: 200

Returned value for batch ACL rule update.

```
{
  "data" : [ "4e12d889-c1d3-491b-8470-3d1b3dadc1fd", "f798a6a8-c4c5-42b4-838c-c922c9908cb4" ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Update the statuses of rules 4e12d889-c1d3-491b-8470-3d1b3dadc1fd and f798a6a8-c4c5-42b4-838c-c922c9908cb4 of firewall 546af3f8-88e9-47f2-a205-2346d7090925 in project 14181c1245cf4fd786824efe1e2b9388 to enabled.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class BatchUpdateAclRuleActionsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        BatchUpdateAclRuleActionsRequest request = new BatchUpdateAclRuleActionsRequest();
        UpdateSecurityPolciesActionDto body = new UpdateSecurityPolciesActionDto();
        List<String> listbodyRuleIds = new ArrayList<>();
        listbodyRuleIds.add("4e12d889-c1d3-491b-8470-3d1b3dadc1fd");
        listbodyRuleIds.add("f798a6a8-c4c5-42b4-838c-c922c9908cb4");
        body.withRuleIds(listbodyRuleIds);
        body.withAction("enable");
        body.withObjectId("ae42418e-f077-41a0-9d3b-5b2f5ad9102b");
        request.withBody(body);
        try {
            BatchUpdateAclRuleActionsResponse response = client.batchUpdateAclRuleActions(request);
```

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```
            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

Update the statuses of rules 4e12d889-c1d3-491b-8470-3d1b3dadc1fd and f798a6a8-c4c5-42b4-838c-c922c9908cb4 of firewall 546af3f8-88e9-47f2-a205-2346d7090925 in project 14181c1245cf4fd786824efe1e2b9388 to enabled.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = BatchUpdateAclRuleActionsRequest()
        listRuleIdsbody = [
            "4e12d889-c1d3-491b-8470-3d1b3dadc1fd",
            "f798a6a8-c4c5-42b4-838c-c922c9908cb4"
        ]
        request.body = UpdateSecurityPolciesActionDto(
            rule_ids=listRuleIdsbody,
            action="enable",
            object_id="ae42418e-f077-41a0-9d3b-5b2f5ad9102b"
        )
        response = client.batch_update_acl_rule_actions(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

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Go

Update the statuses of rules 4e12d889-c1d3-491b-8470-3d1b3dadc1fd and f798a6a8-c4c5-42b4-838c-c922c9908cb4 of firewall 546af3f8-88e9-47f2-a205-2346d7090925 in project 14181c1245cf4fd786824efe1e2b9388 to enabled.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.BatchUpdateAclRuleActionsRequest{}
    var listRuleIdsbody = []string{
        "4e12d889-c1d3-491b-8470-3d1b3dadc1fd",
        "f798a6a8-c4c5-42b4-838c-c922c9908cb4",
    }
    request.Body = &model.UpdateSecurityPolciesActionDto{
        RuleIds: listRuleIdsbody,
        Action: "enable",
        ObjectId: "ae42418e-f077-41a0-9d3b-5b2f5ad9102b",
    }
    response, err := client.BatchUpdateAclRuleActions(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

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Status Codes

Status Code	Description
200	Returned value for batch ACL rule update.

Error Codes

See **Error Codes**.

4.3.7 Setting the Priority of an ACL Protection Rule

Function

This API is used to set the priority of an ACL protection rule.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/acl-rule/order/{acl_rule_id}

Table 4-172 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition**: Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

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Parameter	Mandatory	Type	Description
acl_rule_id	Yes	String	**Definition**: Rule ID, which can be obtained by calling the **API for querying protection rules**. Find the value in **data.records.rule_id** (The period [.] is used to separate different levels of objects). **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Table 4-173 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	**Definition**: Enterprise project ID. If you plan enterprise projects based on your organization's plan, each enterprise project will have such an ID. After this parameter is configured, you can filter assets by enterprise project. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. **Constraints**: N/A **Range**: N/A **Default Value**: 0

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Parameter	Mandatory	Type	Description
fw_instance_id	No	String	**Definition**: Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default

Request Parameters

Table 4-174 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	**Definition**: User token, which carries user identity information. After the token is configured, you can use it for API authentication. You can obtain the token by referring to **Obtaining a User Token**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Table 4-175 Request body parameters

Parameter	Mandatory	Type	Description
dest_rule_id	No	String	**Definition**: ID of the target rule. After it is configured, the added rules will be placed after this rule. This parameter cannot be left blank when the added rule is not pinned on top, and can be left blank when the added rule is pinned on top. The rule ID can be obtained by calling the **API for querying protection rules**. Find the value in **data.records.rule_id** (The period [.] is used to separate different levels of objects). **Constraints**: If the added rule is not pinned on top, the rule ID specified here must be valid. **Range**: N/A **Default Value**: N/A
top	No	Integer	**Definition**: Whether a rule is pinned on top. **Constraints**: N/A **Range**: **0**: not pinned; **1**: pinned **Default Value**: N/A

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Parameter	Mandatory	Type	Description
bottom	No	Integer	**Definition**: Whether a rule is pinned at the bottom. **Constraints**: N/A **Range**: **0**: not pinned; **1**: pinned **Default Value**: N/A

Response Parameters

Status code: 200

Table 4-176 Response body parameters

Parameter	Type	Description
data	**OrderRuleId** object	**Definition**: Rule ID.

Table 4-177 OrderRuleId

Parameter	Type	Description
id	String	**Definition**: ID of the moved rule. **Range**: N/A

Status code: 400

Table 4-178 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

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Example Requests

In the project id9d80d070b6d44942af73c9c3d38e0429, move the rule whose ID is ffe9af47-d893-483b-86e3-ee5242e8cb15 behind the rule whose ID is 69c32dc5-f801-4294-98ee-978b51f97d35.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/acl-rule/order/ffe9af47-d893-483b-86e3-ee5242e8cb15

{
  "top" : 0,
  "dest_rule_id" : "69c32dc5-f801-4294-98ee-978b51f97d35"
}
```

Example Responses

Status code: 200

Rule sorting response.

```
{
  "data" : {
    "id" : "ffe9af47-d893-483b-86e3-ee5242e8cb15"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "00200005",
  "error_msg" : "Object not found."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

In the project id9d80d070b6d44942af73c9c3d38e0429, move the rule whose ID is ffe9af47-d893-483b-86e3-ee5242e8cb15 behind the rule whose ID is 69c32dc5-f801-4294-98ee-978b51f97d35.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class UpdateAclRuleOrderSolution {

    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
```

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```
this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateAclRuleOrderRequest request = new UpdateAclRuleOrderRequest();
        request.withAclRuleId("{acl_rule_id}");
        OrderRuleAclDto body = new OrderRuleAclDto();
        body.withTop(0);
        body.withDestRuleId("69c32dc5-f801-4294-98ee-978b51f97d35");
        request.withBody(body);
        try {
            UpdateAclRuleOrderResponse response = client.updateAclRuleOrder(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

In the project id9d80d070b6d44942af73c9c3d38e0429, move the rule whose ID is ffe9af47-d893-483b-86e3-ee5242e8cb15 behind the rule whose ID is 69c32dc5-f801-4294-98ee-978b51f97d35.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

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```
    try:
        request = UpdateAclRuleOrderRequest()
        request.acl_rule_id = "{acl_rule_id}"
        request.body = OrderRuleAclDto(
            top=0,
            dest_rule_id="69c32dc5-f801-4294-98ee-978b51f97d35"
        )
        response = client.update_acl_rule_order(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

In the project id9d80d070b6d44942af73c9c3d38e0429, move the rule whose ID is ffe9af47-d893-483b-86e3-ee5242e8cb15 behind the rule whose ID is 69c32dc5-f801-4294-98ee-978b51f97d35.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateAclRuleOrderRequest{}
    request.AclRuleId = "{acl_rule_id}"
    topOrderRuleAclDto:= int32(0)
    destRuleIdOrderRuleAclDto:= "69c32dc5-f801-4294-98ee-978b51f97d35"
    request.Body = &model.OrderRuleAclDto{
        Top: &topOrderRuleAclDto,
        DestRuleId: &destRuleIdOrderRuleAclDto,
    }
    response, err := client.UpdateAclRuleOrder(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

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More

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

Status Codes

Status Code	Description
200	Rule sorting response.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.3.8 Querying a Protection Rule

Function

This API is used to query a protection rule.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/acl-rules

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Table 4-179 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition**: Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

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Table 4-180 Query Parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	**Definition**: Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a CFW is created. You can obtain the ID by calling the **API for querying firewall instances**. Find the value in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). **Constraints**: If **type** is set to 0, **object_id** indicates the protected object ID of the Internet border. If **type** is set to **1**, **object_id** indicates the protected object ID of the VPC border. The value of **type** can be obtained from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects). **Range**: 32-bit UUID **Default Value**: N/A

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Parameter	Mandatory	Type	Description
type	No	Integer	**Definition**: Rule type, which is used to distinguish different protected objects. **Constraints**: N/A **Range**: **0**: Internet border rule. The source and destination addresses must be EIPs or domain names. **1**: Inter-VPC rule. The source and destination addresses must be private IP addresses. **2**: NAT rule. The source address must be a private IP address, and the destination address must be an EIP or a domain name. **Default Value**: N/A
ip	No	String	**Definition**: IP address information. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
name	No	String	**Definition**: Rule name, which is defined by a user and is used to identify a rule. **Constraints**: The string length can be 0 to 255 characters. **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
direction	No	Integer	**Definition**: Rule direction. It can be from the cloud to on-premises, or from on-premises to the cloud. **Constraints**: If **type** is set to **0** (Internet rule) or **2** (NAT rule), the direction is mandatory. **Range**: **0**: inbound (on-premises to cloud); **1**: outbound (cloud to on-premises). **Default Value**: N/A
status	No	Integer	**Definition**: Rule status, which is used to determine whether a rule is enabled. **Constraints**: Only **0** and **1** are allowed. **Range**: **0**: disable; **1**: enable **Default Value**: N/A
action_type	No	Integer	**Definition**: Rule action type, which is used to distinguish the action of a rule on traffic. **Constraints**: Only **0** and **1** are allowed. **Range**: **0**: permit; **1**: deny **Default Value**: N/A

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Parameter	Mandatory	Type	Description
address_type	No	Integer	**Definition**: Internet protocol type of an IP address, which is specified by the customer. **Constraints**: N/A **Range**: **0**: IPv4; **1**: IPv6 **Default Value**: N/A
limit	Yes	Integer	**Definition**: Number of records displayed on each page. **Constraints**: Must be digits **Range**: 1-1024 **Default Value**: N/A
offset	Yes	Integer	**Definition**: Offset, which specifies the start position of the record to be returned. **Constraints**: Must be digits **Range**: Greater than or equal to 0 **Default Value**: N/A

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Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	**Definition**: Enterprise project ID. If you plan enterprise projects based on your organization's plan, each enterprise project will have such an ID. After this parameter is configured, you can filter assets by enterprise project. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. **Constraints**: N/A **Range**: N/A **Default Value**: 0
fw_instance_id	No	String	**Definition**: Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A
tags_id	No	String	**Definition**: Rule tag ID, which is generated when a rule is created. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Parameter	Mandatory	Type	Description
source	No	String	**Definition**: Source address. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
destination	No	String	**Definition**: Destination address. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
service	No	String	**Definition**: Service Port **Constraints**: N/A **Range**: N/A **Default Value**: N/A
application	No	String	**Definition**: List of protocols that a rule applies to. **Constraints**: N/A **Range**: Rule application type. Its value can be **HTTP**, **HTTPS**, **TLS1**, **DNS**, **SSH**, **MYSQL**, **SMTP**, **RDP**, **RDPS**, **VNC**, **POP3**, **IMAP4**, **SMTPS**, **POP3S**, **FTPS**, **ANY**, or **BGP**. **Default Value**: N/A

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Request Parameters

Table 4-181 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	**Definition**: User token, which carries user identity information. After the token is configured, you can use it for API authentication. You can obtain the token by referring to **Obtaining a User Token**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Response Parameters

Status code: 200

Table 4-182 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition**: Return value for querying the rule list.

Table 4-183 data

Parameter	Type	Description
offset	Integer	**Definition**: Offset, which specifies the start position of the record to be returned. **Range**: Greater than or equal to 0

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Parameter	Type	Description
limit	Integer	**Definition**: Number of records displayed on each page. **Range**: 1-1024
total	Integer	**Definition**: Query the total number of rules in the rule list. **Range**: Greater than 0
object_id	String	**Definition**: Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, **object_id** is the protected object ID on the Internet border. If the value of **type** is **1**, **object_id** is the protected object ID on the VPC border. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects). **Range**: 32-bit UUID
up_rules_count	Integer	**Definition**: Number of rules on top. **Range**: N/A
records	Array of **records** objects	**Definition**: Query the rule list.

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Table 4-184 records

Parameter	Type	Description
rule_id	String	**Definition**: Rule ID **Range**: N/A
order_id	Integer	**Definition**: Sorting ID. **Range**: N/A
applications	Array of strings	**Definition**: Application list. **Range**: N/A
address_type	Integer	**Definition**: Address type: **0** (IPv4); **1**: (IPv6) **Range**: N/A
name	String	**Definition**: Rule **Range**: N/A
direction	Integer	**Definition**: Rule direction. **Range**: **0** (inbound), **1** (outbound)
action_type	Integer	**Definition**: Rule action type, which is used to distinguish the action of a rule on traffic. **Range**: **0**: permit; **1**: deny
status	Integer	**Definition**: Rule status, which is used to determine whether a rule is enabled. **Range**: **0**: disable; **1**: enable

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Parameter	Type	Description
description	String	**Definition**: Rule description, which is used to describe the usage of a rule. **Range**: N/A
long_connect_time	Long	**Definition**: Persistent connection duration (in seconds). **Range**: 1-86,400,000.
long_connect_enable	Integer	**Definition**: Specifies whether persistent connections are supported. **Range**: The value 0 indicates that a feature is not supported, and the value 1 indicates that a feature is supported.
long_connect_time_hour	Long	**Definition**: Persistent connection duration (in hours). **Range**: 0-24,000.
long_connect_time_minute	Long	**Definition**: Persistent connection duration (in minutes). **Range**: 0–60
long_connect_time_second	Long	**Definition**: Persistent connection duration (in seconds). **Range**: 0–60
source	**RuleAddressDtoForResponse** object	**Definition**: Source address object.
destination	**RuleAddressDtoForResponse** object	**Definition**: Destination address object.

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Parameter	Type	Description
service	**RuleServiceDtoForResponse** object	**Definition**: Destination address object.
type	Integer	**Definition**: Rule type, which is used to distinguish different protected objects. **Range**: **0**: Internet border rule. The source and destination addresses must be EIPs or domain names. **1**: Inter-VPC rule. The source and destination addresses must be private IP addresses. **2**: NAT rule. The source address must be a private IP address, and the destination address must be an EIP or a domain name.
created_date	String	**Definition**: Specifies the time when the assignment was added. **Range**: N/A
modified_date	String	**Definition**: Time when the rule was modified. **Range**: N/A
last_open_time	String	**Definition**: Last time when the rule was enabled. **Range**: N/A
tag	**TagsVO** object	**Definition**: Tag object attached to a rule.

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Table 4-185 RuleAddressDtoForResponse

Parameter	Type	Description
type	Integer	**Definition**: Address input type, which is used to distinguish different input types. **Constraints**: N/A **Range**: **0** (manual input), **1** (associated IP address group), **2** (domain name), **3** (geographical location), **4** (domain name group) **5** (multiple objects), **6** (domain name group - network), **7** (domain name group - application). **Default Value**: N/A
address_type	Integer	**Definition**: IP address protocol type, which is used to distinguish different Internet protocols. **Constraints**: N/A **Range**: Address type: **0** (IPv4); **1**: (IPv6) **Default Value**: N/A
address	String	**Definition**: IP address information, which is used to specify the IP address of the rule. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Parameter	Type	Description
address_set_id	String	**Definition**: ID of the associated IP address group. You can query the IP address group ID by calling the **API for querying address groups**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). **Constraints**: N/A **Range**: N/A **Default Value**: N/A
address_set_name	String	**Definition**: Name of the associated IP address group. You can query the IP address group name by calling the **API for querying address groups**. Find the value in **data.records.name** (The period [.] is used to separate different levels of objects). **Constraints**: N/A **Range**: N/A **Default Value**: N/A
domain_address_name	String	**Definition**: Domain name or domain name group name, which is used to specify the domain name or domain name group name referenced by the rule. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Parameter	Type	Description
region_list_json	String	**Definition**: JSON value of the rule region list, which is used to specify the region name list referenced by the rule. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
region_list	Array of **IpRegionDto** objects	**Definition**: Rule region list. **Constraints**: N/A
domain_set_id	String	**Definition**: Domain group ID, which is used to specify the domain name group referenced by a rule. Its value can be obtained by calling the **API for querying the domain name group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Parameter	Type	Description
domain_set_name	String	**Definition**: Domain group name, which is used to specify the domain name group referenced by a rule. Its value can be obtained by calling the **API for querying the domain name group list**. Find the value in **data.records.name** (The period [.] is used to separate different levels of objects). **Constraints**: N/A **Range**: N/A **Default Value**: N/A
ip_address	Array of strings	**Definition**: IP address list, which is used to specify the IP address list referenced by a rule. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
address_group	Array of strings	**Definition**: Address group ID list, which is used to specify the list of address group IDs referenced by a rule. Its value can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). In the search criteria, **query_address_set_type** must be set to **0** (user-defined address group). **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Parameter	Type	Description
address_group_names	Array of **AddressGroupVO** objects	**Definition**: Address group name list. **Constraints**: N/A
address_set_type	Integer	**Definition**: Address group type, which is used to specify the address group type referenced by a rule. **Constraints**: N/A **Range**: **0** (user-defined address group), **1** (WAF proxy IP address group), or **3** (NAT64 address group) **Default Value**: N/A

Table 4-186 IpRegionDto

Parameter	Type	Description
region_id	String	**Definition**: Region ID, which is used to specify the region where a rule is used. You can obtain the region ID by referring to **Obtaining the Names and IDs of an Account, IAM User, Project, User Group, Region, and Agency**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Parameter	Type	Description
description_cn	String	**Definition**: Region description in Chinese, which is used only for China regions and can be obtained from the **region information table**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
description_en	String	**Definition**: Region description in English, which is used only for non-China regions and can be obtained from the **region information table**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
region_type	Integer	**Definition**: Area type **Constraints**: N/A **Range**: **0**: country; **1**: province; **2**: continent **Default Value**: N/A

Table 4-187 AddressGroupVO

Parameter	Type	Description
address_set_type	Integer	Address group type: **0** (user-defined address group), **1** (WAF proxy IP address group), **2** (DDoS back-to-source IP address group), or **3** (NAT64 address group).

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Parameter	Type	Description
name	String	Name of an associated IP address group, which can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.name** (The period [.] is used to separate different levels of objects).
set_id	String	ID of an associated IP address group, which can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

Table 4-188 RuleServiceDtoForResponse

Parameter	Type	Description
type	Integer	Service input type: **0** (manual), **1** (automatic).
protocol	Integer	Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (any). It cannot be left blank when **type** is set to **0** (manual), and can be left blank when **type** is set to **1** (automatic).
protocols	Array of integers	Protocol list. Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (any). It cannot be left blank when **type** is set to **0** (manual), and can be left blank when **type** is set to **1** (automatic).
source_port	String	Source port.
dest_port	String	Destination port.
service_set_id	String	Service group ID.
service_set_name	String	Service group name.
custom_service	Array of **ServiceItem** objects	Custom service.
service_group	Array of strings	Service group ID list.

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Parameter	Type	Description
service_group_names	Array of ServiceGroupVO objects	Service group name list.
service_set_type	Integer	Service group type: **0** (user-defined service group), **1** (common web service), **2** (common remote login and ping), or **3** (common database).

Table 4-189 ServiceItem

Parameter	Type	Description
protocol	Integer	**Definition**: Protocol type, which is used to specify the network protocol of a rule. **Constraints**: If **RuleServiceDto.type** is set to **0**, this parameter cannot be left blank. **Range**: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (Any). **Default Value**: N/A
source_port	String	**Definition**: Source port, that is, the port of the session initiator. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Parameter	Type	Description
dest_port	String	**Definition**: Destination port, that is, the port of the session receiver. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
description	String	**Definition**: Service (protocol, source port, or destination port) member. **Constraints**: The value must be a string consisting of 0 to 255 characters. **Range**: N/A **Default Value**: N/A
name	String	**Definition**: Service (protocol, source port, or destination port) member. **Constraints**: The value must be a string consisting of 0 to 255 characters. **Range**: N/A **Default Value**: N/A

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Table 4-190 ServiceGroupVO

Parameter	Type	Description
name	String	**Definition**: Name of a service (protocol, source port, or destination port) group. **Constraints**: N/A **Range**: N/A **Default Value**: N/A
protocols	Array of integers	**Definition**: Protocol List **Constraints**: N/A **Range**: Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (Any). **Default Value**: N/A
service_set_type	Integer	**Definition**: Type of a service (protocol, source port, or destination port) group. **Constraints**: N/A **Range**: **0**: custom service group; **1**: predefined service group **Default Value**: N/A

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Parameter	Type	Description
set_id	String	**Definition**: Service group ID, which can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Table 4-191 TagsVO

Parameter	Type	Description
tag_id	String	**Definition**: Rule ID **Constraints**: N/A **Range**: N/A **Default Value**: N/A
tag_key	String	**Definition**: Rule tag key. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Parameter	Type	Description
tag_value	String	**Definition**: Rule tag value. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Status code: 400

Table 4-192 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Query data on the first page of the protected object e12bd2cd-ebfc-4af7-ad6f-ebe6da398029 whose project ID is 9d80d070b6d44942af73c9c3d38e0429, with **limit** set to **10**.

```
Example URL: https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/acl-rules?object_id=e12bd2cd-ebfc-4af7-ad6f-ebe6da398029&limit=10&offset=0
```

Example Responses

Status code: 200

Return value for querying the rule list.

```
{
  "data" : {
    "limit" : 10,
    "object_id" : "cfebd347-b655-4b84-b938-3c54317599b2",
    "offset" : 0,
    "records" : [ {
      "action_type" : 0,
      "address_type" : 0,
      "destination" : {
        "address" : "0.0.0.0/0",
        "address_type" : 0,
        "type" : 0
      },
      "direction" : 1,
      "long_connect_enable" : 0,
      "created_date" : "2024-02-27 04:01:17",
      "modified_date" : "2024-02-27 04:01:17",
```

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```
    "last_open_time" : "2024-02-27 04:01:17",
    "description" : "description",
    "name" : "eip_ipv4_n_w_allow",
    "rule_id" : "ffe9af47-d893-483b-86e3-ee5242e8cb15",
    "order_id" : 1000000,
    "service" : {
      "dest_port" : "0",
      "protocol" : -1,
      "source_port" : "0",
      "type" : 0
    },
    "source" : {
      "address_set_id" : "48bfb09b-6f3a-4371-8ddb-05d5d7148bcc",
      "address_set_name" : "ip_group",
      "address_type" : 0,
      "type" : 1
    },
    "status" : 1,
    "type" : "0"
  } ],
  "total" : 1,
  "up_rules_count" : 0
 }
}
```


Status code: 400

Bad Request


```
{
 "error_code" : "CFW.0020016",
 "error_msg" : "Incorrect instance status."
}
```


SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListAclRulesSolution {

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

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

```
        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAclRulesRequest request = new ListAclRulesRequest();
        try {
            ListAclRulesResponse response = client.listAclRules(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListAclRulesRequest()
        response = client.list_acl_rules(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
```

```
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value for querying the rule list.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

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4.3.9 Querying Rule Tags

Function

This API is used to query rule tags.

Calling Method

For details, see **Calling APIs**.

URI

GET /v2/{project_id}/cfw-acl/tags

Table 4-193 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition**: Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

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Table 4-194 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	**Definition**: Enterprise project ID. If you plan enterprise projects based on your organization's plan, each enterprise project will have such an ID. After this parameter is configured, you can filter assets by enterprise project. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. **Constraints**: N/A **Range**: N/A **Default Value**: 0
fw_instance_id	Yes	String	**Definition**: Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A
offset	Yes	Integer	**Definition**: Offset, which specifies the start position of the record to be returned. **Constraints**: Must be digits **Range**: Greater than or equal to 0 **Default Value**: N/A

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Parameter	Mandatory	Type	Description
limit	Yes	Integer	**Definition**: Number of records displayed on each page. **Constraints**: Must be digits **Range**: 1-1024 **Default Value**: N/A

Request Parameters

Table 4-195 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	**Definition**: User token, which carries user identity information. After the token is configured, you can use it for API authentication. You can obtain the token by referring to **Obtaining a User Token**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Response Parameters

Status code: 200

Table 4-196 Response body parameters

Parameter	Type	Description
data	**HttpGetAclTagResponseData** object	**Definition**: Obtain rule tag data.

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Table 4-197 HttpGetAclTagResponseData

Parameter	Type	Description
offset	Integer	**Definition**: Offset, which specifies the start position of the record to be returned. **Range**: Greater than or equal to 0
limit	Integer	**Definition**: Number of records displayed on each page. **Range**: 1-1024
total	Integer	**Definition**: Total number of rule tags. **Range**: Greater than 0
records	Array of **TagsVO** objects	**Definition**: Rule tag list.

Table 4-198 TagsVO

Parameter	Type	Description
tag_id	String	**Definition**: Rule ID **Constraints**: N/A **Range**: N/A **Default Value**: N/A
tag_key	String	**Definition**: Rule tag key. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

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Parameter	Type	Description
tag_value	String	**Definition**: Rule tag value. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Example Requests

Query the existing ACL tags of the firewall 546af3f8-88e9-47f2-a205-2346d7090925 in project 14181c1245cf4fd786824efe1e2b9388.

```
https://{Endpoint}/v2/14181c1245cf4fd786824efe1e2b9388/cfw-acl/tags?
limit=1000&offset=0&fw_instance_id=546af3f8-88e9-47f2-
a205-2346d7090925&enterprise_project_id=default
```

Example Responses

Status code: 200

Return value for querying rule tags.

```
{
  "data" : {
    "limit" : 1000,
    "offset" : 0,
    "records" : [ {
      "tag_id" : "98fdf013-e7ad-4581-9c71-6de04c76a18f",
      "tag_key" : "1",
      "tag_value" : "1"
    }, {
      "tag_id" : "36e6fbfe-7fcd-48be-872b-4f6074e1e4e8",
      "tag_key" : "1",
      "tag_value" : "2"
    }, {
      "tag_id" : "0bf41046-6587-42f2-8399-a6864022b504",
      "tag_key" : "Test",
      "tag_value" : "Test"
    } ],
    "total" : 3
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

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

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```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListRuleAclTagsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListRuleAclTagsRequest request = new ListRuleAclTagsRequest();
        try {
            ListRuleAclTagsResponse response = client.listRuleAclTags(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

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

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

    try:
        request = ListRuleAclTagsRequest()
        response = client.list_rule_acl_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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

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Status Codes

Status Code	Description
200	Return value for querying rule tags.

Error Codes

See **Error Codes**.

4.3.10 Obtaining the Number of Rule Hits

Function

This API is used to obtain the number of rule hits.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/acl-rule/count

Table 4-199 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition**: Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

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Table 4-200 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	**Definition**: Enterprise project ID. If you plan enterprise projects based on your organization's plan, each enterprise project will have such an ID. After this parameter is configured, you can filter assets by enterprise project. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. **Constraints**: N/A **Range**: N/A **Default Value**: 0
fw_instance_id	No	String	**Definition**: Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

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Request Parameters

Table 4-201 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	**Definition**: User token, which carries user identity information. After the token is configured, you can use it for API authentication. You can obtain the token by referring to **Obtaining a User Token**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A.

Table 4-202 Request body parameters

Parameter	Mandatory	Type	Description
rule_ids	Yes	Array of strings	List of rule IDs. You can obtain the rule IDs by calling the **API for querying protection rules**. Find the value in **data.records.rule_id** (The period [.] is used to separate different levels of objects).

Response Parameters

Status code: 200

Table 4-203 Response body parameters

Parameter	Type	Description
data	**RuleHitCountRecords** object	**Definition**: Response to the request for obtaining the number of rule hits.

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Table 4-204 RuleHitCountRecords

Parameter	Type	Description
limit	Integer	**Definition**: Number of records displayed on each page. **Range**: 1-1024
offset	Integer	**Definition**: Offset: The start position of the returned records. The value must be a number. **Range**: The value must be greater than or equal to 0. The default value is 0.
total	Integer	**Definition**: Obtain the total number of rule hits. **Range**: N/A
records	Array of **RuleHitCountObject** objects	**Definition**: List of rule hits. **Constraints**: N/A

Table 4-205 RuleHitCountObject

Parameter	Type	Description
rule_id	String	**Definition**: Rule ID **Range**: N/A
rule_hit_count	Integer	**Definition**: Number of hits of a rule. When an ACL rule is triggered, the number of hits of the corresponding rule ID increases by one. **Range**: N/A

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Example Requests

Query the hits of ACL rule 59ff6bd9-0a76-41ec-9650-380086069965 whose project ID is 0b2179bbe180d3762fb0c01a2d5725c7.

```
https://{Endpoint}/v1/0b2179bbe180d3762fb0c01a2d5725c7/acl-rule/count

{
  "rule_ids" : [ "59ff6bd9-0a76-41ec-9650-380086069965" ]
}
```

Example Responses

Status code: 200

Response to the request for obtaining the number of rule hits.

```
{
  "data" : {
    "limit" : 1,
    "offset" : 1,
    "records" : [ {
      "rule_hit_count" : 0,
      "rule_id" : "59ff6bd9-0a76-41ec-9650-380086069965"
    } ],
    "total" : 1
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Query the hits of ACL rule 59ff6bd9-0a76-41ec-9650-380086069965 whose project ID is 0b2179bbe180d3762fb0c01a2d5725c7.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class ListAclRuleHitCountSolution {

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

        ICredential auth = new BasicCredentials()
```

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```
            .withProjectId(projectId)
            .withAk(ak)
            .withSk(sk);

    CfwClient client = CfwClient.newBuilder()
            .withCredential(auth)
            .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
            .build();
    ListAclRuleHitCountRequest request = new ListAclRuleHitCountRequest();
    ListRuleHitCountDto body = new ListRuleHitCountDto();
    List<String> listbodyRuleIds = new ArrayList<>();
    listbodyRuleIds.add("59ff6bd9-0a76-41ec-9650-380086069965");
    body.withRuleIds(listbodyRuleIds);
    request.withBody(body);
    try {
        ListAclRuleHitCountResponse response = client.listAclRuleHitCount(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

Query the hits of ACL rule 59ff6bd9-0a76-41ec-9650-380086069965 whose project ID is 0b2179bbe180d3762fb0c01a2d5725c7.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListAclRuleHitCountRequest()
        listRuleIdsbody = [
            "59ff6bd9-0a76-41ec-9650-380086069965"
        ]
        request.body = ListRuleHitCountDto(
            rule_ids=listRuleIdsbody
        )
```

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```
        response = client.list_acl_rule_hit_count(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

Query the hits of ACL rule 59ff6bd9-0a76-41ec-9650-380086069965 whose project ID is 0b2179bbe180d3762fb0c01a2d5725c7.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListAclRuleHitCountRequest{}
    var listRuleIdsbody = []string{
        "59ff6bd9-0a76-41ec-9650-380086069965",
    }
    request.Body = &model.ListRuleHitCountDto{
        RuleIds: listRuleIdsbody,
    }
    response, err := client.ListAclRuleHitCount(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

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Status Codes

Status Code	Description
200	Response to the request for obtaining the number of rule hits.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.3.11 Viewing the Region List

Function

This API is used to view the region list.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/regions

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Table 4-206 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition**: Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

Table 4-207 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition**: Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

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Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	**Definition**: Enterprise project ID. If you plan enterprise projects based on your organization's plan, each enterprise project will have such an ID. After this parameter is configured, you can filter assets by enterprise project. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. **Constraints**: N/A **Range**: N/A **Default Value**: 0

Request Parameters

Table 4-208 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	**Definition**: User token, which carries user identity information. After the token is configured, you can use it for API authentication. You can obtain the token by referring to **Obtaining a User Token**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Response Parameters

Status code: 200

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Table 4-209 Response body parameters

Parameter	Type	Description
data	Object	**Definition**: Region list. **Range**: N/A

Example Requests

Query the region list. The project ID is 408972e72dcd4c1a9b033e955802a36b, and the firewall ID is fced7179-64a4-4438-bc6d-b510a2da2f64.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/regions?fw_instance_id=fced7179-64a4-4438-bc6d-b510a2da2f64
```

Example Responses

Status code: 200

Response data of the API for viewing the region list.

```
{
  "data" : [ {
    "region_id" : "RW",
    "description_cn" : "Rwanda",
    "description_en" : "Rwanda",
    "region_type" : 0,
    "superior_region_id" : "AF"
  }, {
    "region_id" : "SO",
    "description_cn" : "Somalia",
    "description_en" : "Somalia",
    "region_type" : 0,
    "superior_region_id" : "AF"
  }, {
    "region_id" : "YE",
    "description_cn" : "Yemen",
    "description_en" : "Yemen",
    "region_type" : 0,
    "superior_region_id" : "AS"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
```

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```
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListRegionsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListRegionsRequest request = new ListRegionsRequest();
        try {
            ListRegionsResponse response = client.listRegions(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

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```
    try:
        request = ListRegionsRequest()
        response = client.list_regions(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Response data of the API for viewing the region list.

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Status Code	Description
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.3.12 Checking the ACL Import Status

Function

This API is used to query the ACL import status.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/acl-rule/import-status

Table 4-210 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition**: Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints**: N/A **Range**: 32-bit UUID **Default Value**: N/A

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Table 4-211 Query Parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	**Definition**: Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a CFW is created. You can obtain the ID by calling the **API for querying firewall instances**. Find the value in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). **Constraints**: If **type** is set to 0, **object_id** indicates the protected object ID of the Internet border. If **type** is set to **1**, **object_id** indicates the protected object ID of the VPC border. The value of **type** can be obtained from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects). **Range**: 32-bit UUID **Default Value**: N/A

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Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	**Definition**: Enterprise project ID. If you plan enterprise projects based on your organization's plan, each enterprise project will have such an ID. After this parameter is configured, you can filter assets by enterprise project. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. **Constraints**: N/A **Range**: N/A **Default Value**: 0

Request Parameters

Table 4-212 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	**Definition**: User token, which carries user identity information. After the token is configured, you can use it for API authentication. You can obtain the token by referring to **Obtaining a User Token**. **Constraints**: N/A **Range**: N/A **Default Value**: N/A

Response Parameters

Status code: 200

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Table 4-213 Response body parameters

Parameter	Type	Description
data	**ShowImportStatusId** object	**Definition**: View import status.

Table 4-214 ShowImportStatusId

Parameter	Type	Description
id	String	**Definition**: Protected object ID. **Range**: N/A
status	Integer	**Definition**: Rule import status. **Range**: N/A

Example Requests

Query the ACL rule import status of the project whose ID is 176d761dc156471c9c9b227376594160. The ID of the target protected object is cfb245cf-28b0-4c23-8164-dac013fdfc0c.

```
https://{Endpoint}/v1/176d761dc156471c9c9b227376594160/acl-rule/import-status?
object_id=cfb245cf-28b0-4c23-8164-dac013fdfc0c
```

Example Responses

Status code: 200

Response to the request for querying the ACL rule import status.

```
{
  "data" : {
    "id" : "cfb245cf-28b0-4c23-8164-dac013fdfc0c",
    "status" : 4
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
```

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```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ShowImportStatusSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowImportStatusRequest request = new ShowImportStatusRequest();
        try {
            ShowImportStatusResponse response = client.showImportStatus(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

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

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

    try:
        request = ShowImportStatusRequest()
        response = client.show_import_status(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

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Status Codes

Status Code	Description
200	Response to the request for querying the ACL rule import status.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.4 Blacklist/Whitelist Management

4.4.1 Creating a Blacklist or Whitelist Rule

Function

This API is used to create a blacklist or whitelist rule.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/black-white-list

Table 4-215 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-216 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-217 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Table 4-218 Request body parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, **object_id** is the protected object ID on the Internet border. If the value of **type** is **1**, **object_id** is the protected object ID on the VPC border. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
list_type	Yes	Integer	Blacklist/Whitelist type: **4** (blacklist), **5** (whitelist).
direction	Yes	Integer	Address direction: **0** (source), **1** (destination).
address_type	Yes	Integer	IP address type: **0** (IPv4), **1** (IPv6).
address	Yes	String	IP address
protocol	Yes	Integer	Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (any). It cannot be left blank when **type** is set to **0** (manual), and can be left blank when **type** is set to **1** (automatic).
port	Yes	String	Destination port.
description	No	String	Description.

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Response Parameters

Status code: 200

Table 4-219 Response body parameters

Parameter	Type	Description
data	**BlackWhiteListId** object	Response to the request for adding a blacklist/whitelist item.

Table 4-220 BlackWhiteListId

Parameter	Type	Description
id	String	Blacklist/Whitelist ID.
name	String	Name of the blacklist or whitelist. Its value is the address of the blacklist or whitelist.

Status code: 400

Table 4-221 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Add an IPv4 whitelist to object cfebd347-b655-4b84-b938-3c54317599b2 of project 9d80d070b6d44942af73c9c3d38e0429. Direction: source address; IP address: 1.1.1.1; protocol type: TCP; port number: 1.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/black-white-list

{
  "object_id" : "cfebd347-b655-4b84-b938-3c54317599b2",
  "list_type" : 5,
  "direction" : 0,
  "address" : "1.1.1.1",
  "protocol" : 6,
  "port" : "1",
  "address_type" : 0
}
```

Example Responses

Status code: 200

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Response to the request for adding a blacklist or whitelist rule.

```
{
  "data" : {
    "id" : "6e91797b-05bd-4c69-9454-6af905178729",
    "name" : "10.10.1.3"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.0020016",
  "error_msg" : "Incorrect instance status."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add an IPv4 whitelist to object cfebd347-b655-4b84-b938-3c54317599b2 of project 9d80d070b6d44942af73c9c3d38e0429. Direction: source address; IP address: 1.1.1.1; protocol type: TCP; port number: 1.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class AddBlackWhiteListSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        AddBlackWhiteListRequest request = new AddBlackWhiteListRequest();
        AddBlackWhiteListDto body = new AddBlackWhiteListDto();
        body.withPort("1");
        body.withProtocol(6);
        body.withAddress("1.1.1.1");
        body.withAddressType(0);
```

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```
        body.withDirection(0);
        body.withListType(5);
        body.withObjectId("cfebd347-b655-4b84-b938-3c54317599b2");
        request.withBody(body);
        try {
            AddBlackWhiteListResponse response = client.addBlackWhiteList(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

Add an IPv4 whitelist to object cfebd347-b655-4b84-b938-3c54317599b2 of project 9d80d070b6d44942af73c9c3d38e0429. Direction: source address; IP address: 1.1.1.1; protocol type: TCP; port number: 1.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = AddBlackWhiteListRequest()
        request.body = AddBlackWhiteListDto(
            port="1",
            protocol=6,
            address="1.1.1.1",
            address_type=0,
            direction=0,
            list_type=5,
            object_id="cfebd347-b655-4b84-b938-3c54317599b2"
        )
        response = client.add_black_white_list(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
```

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

Go

Add an IPv4 whitelist to object cfebd347-b655-4b84-b938-3c54317599b2 of project 9d80d070b6d44942af73c9c3d38e0429. Direction: source address; IP address: 1.1.1.1; protocol type: TCP; port number: 1.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.AddBlackWhiteListRequest{}
    request.Body = &model.AddBlackWhiteListDto{
        Port: "1",
        Protocol: int32(6),
        Address: "1.1.1.1",
        AddressType: int32(0),
        Direction: int32(0),
        ListType: int32(5),
        ObjectId: "cfebd347-b655-4b84-b938-3c54317599b2",
    }
    response, err := client.AddBlackWhiteList(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

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Status Codes

Status Code	Description
200	Response to the request for adding a blacklist or whitelist rule.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.4.2 Updating a Blacklist or Whitelist

Function

This API is used to update a blacklist or whitelist.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/black-white-list/{list_id}

Table 4-222 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
list_id	Yes	String	Blacklist or whitelist ID, which can be obtained through the **API for querying the blacklist or whitelist**. Find the value in **data.records.list_id** (The period [.] is used to separate different levels of objects).

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Table 4-223 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-224 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-225 Request body parameters

Parameter	Mandatory	Type	Description
direction	No	Integer	Address direction: **0** (source), **1** (destination).
address_type	No	Integer	Address type: **0** (IPv4), **1** (IPv6).
address	Yes	String	IP address
protocol	No	Integer	Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (any).
port	No	String	Port
description	No	String	Description.

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Response Parameters

Status code: 200

Table 4-226 Response body parameters

Parameter	Type	Description
data	BlackWhiteListId object	Response to the request for updating the blacklist/whitelist.

Table 4-227 BlackWhiteListId

Parameter	Type	Description
id	String	Blacklist/Whitelist ID.
name	String	Name of the blacklist or whitelist. Its value is the address of the blacklist or whitelist.

Status code: 400

Table 4-228 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Update the whitelist of object cfebd347-b655-4b84-b938-3c54317599b2 of project 9d80d070b6d44942af73c9c3d38e0429. Direction: source address; IP address: 1.1.1.1; protocol type: TCP; port number: 1.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/black-white-list/
9d80d070b6d44942af73c9c3d38e042b

{
  "direction" : 0,
  "address" : "1.1.1.1",
  "protocol" : 6,
  "port" : "1",
  "address_type" : 0
}
```

Example Responses

Status code: 200

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Response to the request for updating a blacklist or whitelist.

```
{
  "data" : {
    "id" : "5d37afe6-c5b4-400d-8ff3-a8d6396d7ace",
    "name" : "10.1.1.10"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200005",
  "error_msg" : "Object not found."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Update the whitelist of object cfebd347-b655-4b84-b938-3c54317599b2 of project 9d80d070b6d44942af73c9c3d38e0429. Direction: source address; IP address: 1.1.1.1; protocol type: TCP; port number: 1.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class UpdateBlackWhiteListSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateBlackWhiteListRequest request = new UpdateBlackWhiteListRequest();
        request.withListId("{list_id}");
        UpdateBlackWhiteListDto body = new UpdateBlackWhiteListDto();
        body.withPort("1");
        body.withProtocol(6);
        body.withAddress("1.1.1.1");
```

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```
        body.withAddressType(0);
        body.withDirection(0);
        request.withBody(body);
        try {
            UpdateBlackWhiteListResponse response = client.updateBlackWhiteList(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

Update the whitelist of object cfebd347-b655-4b84-b938-3c54317599b2 of project 9d80d070b6d44942af73c9c3d38e0429. Direction: source address; IP address: 1.1.1.1; protocol type: TCP; port number: 1.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = UpdateBlackWhiteListRequest()
        request.list_id = "{list_id}"
        request.body = UpdateBlackWhiteListDto(
            port="1",
            protocol=6,
            address="1.1.1.1",
            address_type=0,
            direction=0
        )
        response = client.update_black_white_list(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

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Go

Update the whitelist of object cfebd347-b655-4b84-b938-3c54317599b2 of project 9d80d070b6d44942af73c9c3d38e0429. Direction: source address; IP address: 1.1.1.1; protocol type: TCP; port number: 1.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateBlackWhiteListRequest{}
    request.ListId = "{list_id}"
    portUpdateBlackWhiteListDto:= "1"
    protocolUpdateBlackWhiteListDto:= int32(6)
    addressTypeUpdateBlackWhiteListDto:= int32(0)
    directionUpdateBlackWhiteListDto:= int32(0)
    request.Body = &model.UpdateBlackWhiteListDto{
        Port: &portUpdateBlackWhiteListDto,
        Protocol: &protocolUpdateBlackWhiteListDto,
        Address: "1.1.1.1",
        AddressType: &addressTypeUpdateBlackWhiteListDto,
        Direction: &directionUpdateBlackWhiteListDto,
    }
    response, err := client.UpdateBlackWhiteList(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

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Status Codes

Status Code	Description
200	Response to the request for updating a blacklist or whitelist.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.4.3 Deleting a Blacklist or Whitelist Rule

Function

This API is used to delete a blacklist or whitelist rule.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v1/{project_id}/black-white-list/{list_id}

Table 4-229 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
list_id	Yes	String	Blacklist or whitelist ID, which can be obtained through the **API for querying the blacklist or whitelist**. Find the value in **data.records.list_id** (The period [.] is used to separate different levels of objects).

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Table 4-230 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-231 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-232 Response body parameters

Parameter	Type	Description
data	**BlackWhiteListId** object	Response to the request for deleting a blacklist/whitelist item.

Table 4-233 BlackWhiteListId

Parameter	Type	Description
id	String	Blacklist/Whitelist ID.
name	String	Name of the blacklist or whitelist. Its value is the address of the blacklist or whitelist.

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Status code: 400

Table 4-234 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Delete the blacklist or whitelist whose ID is 2eee3fe8-0b9b-49ac-8e7f-eaafa321e99a from the project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/black-white-list/2eee3fe8-0b9b-49ac-8e7f-eaafa321e99a
```

Example Responses

Status code: 200

Blacklist/Whitelist deletion response.

```
{
  "data" : {
    "id" : "2eee3fe8-0b9b-49ac-8e7f-eaafa321e99a"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200005",
  "error_msg" : "Object not found."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class DeleteBlackWhiteListSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
```

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```
security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteBlackWhiteListRequest request = new DeleteBlackWhiteListRequest();
        request.withListId("{list_id}");
        try {
            DeleteBlackWhiteListResponse response = client.deleteBlackWhiteList(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = DeleteBlackWhiteListRequest()
        request.list_id = "{list_id}"
        response = client.delete_black_white_list(request)
        print(response)
    except exceptions.ClientRequestException as e:
```

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```
        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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Blacklist/Whitelist deletion response.
400	Bad Request
401	Unauthorized: Request error.

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Status Code	Description
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.4.4 Querying a Blacklist or Whitelist

Function

This API is used to query a blacklist or whitelist.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/black-white-lists

Table 4-235 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-236 Query Parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, **object_id** is the protected object ID on the Internet border. If the value of **type** is **1**, **object_id** is the protected object ID on the VPC border. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
list_type	Yes	Integer	Blacklist/Whitelist type: **4** (blacklist), **5** (whitelist).
address_type	No	Integer	IP address type: **0** (IPv4), **1** (IPv6).
address	No	String	IP address
port	No	String	Port
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.

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Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-237 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-238 Response body parameters

Parameter	Type	Description
data	**data** object	Return value for querying the blacklist/whitelist.

Table 4-239 data

Parameter	Type	Description
offset	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.

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Parameter	Type	Description
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
total	Integer	Query the total number of blacklist/whitelist records.
records	Array of **records** objects	Blacklist/Whitelist.

Table 4-240 records

Parameter	Type	Description
list_id	String	Blacklist/Whitelist ID.
direction	Integer	Direction of a blacklist/whitelist address: **0** (source address), **1** (destination address).
address_type	Integer	IP address type: **0** (IPv4), **1** (IPv6).
address	String	IP address
protocol	Integer	Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (any). It cannot be left blank when **type** is set to **0** (manual), and can be left blank when **type** is set to **1** (automatic).
port	String	Port
description	String	Description.

Status code: 400

Table 4-241 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Query five whitelist records on the first page of object cfebd347-b655-4b84-b938-3c54317599b2 in project 9d80d070b6d44942af73c9c3d38e0429.

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```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/black-white-lists?object_id=cfebd347-b655-4b84-b938-3c54317599b2&limit=10&offset=0&list_type=5
```

Example Responses

Status code: 200

Return value of a blacklist or whitelist query.

```
{
  "data" : {
    "limit" : 10,
    "offset" : 0,
    "records" : [ {
      "address" : "1.1.1.1",
      "address_type" : 0,
      "description" : "",
      "direction" : 0,
      "list_id" : "1310d401-daf5-44f2-8276-f79e1643984d",
      "protocol" : 6
    } ],
    "total" : 1
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.0020016",
  "error_msg" : "Incorrect instance status."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListBlackWhiteListsSolution {

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

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
```

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```
            .withSk(sk);

    CfwClient client = CfwClient.newBuilder()
            .withCredential(auth)
            .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
            .build();
    ListBlackWhiteListsRequest request = new ListBlackWhiteListsRequest();
    try {
        ListBlackWhiteListsResponse response = client.listBlackWhiteLists(request);
        System.out.println(response.toString());
    } catch (ConnectionException e) {
        e.printStackTrace();
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
  }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListBlackWhiteListsRequest()
        response = client.list_black_white_lists(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
```

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```
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value of a blacklist or whitelist query.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

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4.5 Address Group Management

4.5.1 Adding an Address Group

Function

This API is used to add an address group.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/address-set

Table 4-242 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-243 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

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Request Parameters

Table 4-244 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-245 Request body parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, **object_id** is the protected object ID on the Internet border. If the value of **type** is **1**, **object_id** is the protected object ID on the VPC border. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects). Here, only the protected object ID of the **type** with the value **0** can be used.
name	Yes	String	IP address group name.
description	No	String	Address group description.
address_type	No	Integer	Address type: **0** (IPv4), **1** (IPv6).

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Response Parameters

Status code: 200

Table 4-246 Response body parameters

Parameter	Type	Description
data	**AddressSetId** object	Data returned after an address group is added.

Table 4-247 AddressSetId

Parameter	Type	Description
id	String	Address group ID.
name	String	IP address group name.

Status code: 400

Table 4-248 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Add an IPv4 address group whose project ID is 14181c1245cf4fd786824efe1e2b9388, protected object ID is 1530de8a-522d-4771-9067-9fa4e2f53b48, and name is **ceshi**.

```
https://{Endpoint}/v1/14181c1245cf4fd786824efe1e2b9388/address-set

{
  "object_id" : "1530de8a-522d-4771-9067-9fa4e2f53b48",
  "name" : "ceshi",
  "description" : "",
  "address_type" : 0
}
```

Example Responses

Status code: 200

Return value for adding an address group.

```
{
  "data" : {
    "id" : "9dffcd62-23bf-4456-83fa-80fa0fee47db",
```

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```
    "name" : "name"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00900020",
  "error_msg" : "The number of address groups exceeds the upper limit."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add an IPv4 address group whose project ID is 14181c1245cf4fd786824efe1e2b9388, protected object ID is 1530de8a-522d-4771-9067-9fa4e2f53b48, and name is **ceshi**.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class AddAddressSetSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        AddAddressSetRequest request = new AddAddressSetRequest();
        AddAddressSetDto body = new AddAddressSetDto();
        body.withAddressType(0);
        body.withDescription("");
        body.withName("ceshi");
        body.withObjectId("1530de8a-522d-4771-9067-9fa4e2f53b48");
        request.withBody(body);
        try {
            AddAddressSetResponse response = client.addAddressSet(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
```

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```
            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

Add an IPv4 address group whose project ID is 14181c1245cf4fd786824efe1e2b9388, protected object ID is 1530de8a-522d-4771-9067-9fa4e2f53b48, and name is **ceshi**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = AddAddressSetRequest()
        request.body = AddAddressSetDto(
            address_type=0,
            description="",
            name="ceshi",
            object_id="1530de8a-522d-4771-9067-9fa4e2f53b48"
        )
        response = client.add_address_set(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

Add an IPv4 address group whose project ID is 14181c1245cf4fd786824efe1e2b9388, protected object ID is 1530de8a-522d-4771-9067-9fa4e2f53b48, and name is **ceshi**.

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```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.AddAddressSetRequest{}
    addressTypeAddAddressSetDto:= int32(0)
    descriptionAddAddressSetDto:= ""
    request.Body = &model.AddAddressSetDto{
        AddressType: &addressTypeAddAddressSetDto,
        Description: &descriptionAddAddressSetDto,
        Name: "ceshi",
        ObjectId: "1530de8a-522d-4771-9067-9fa4e2f53b48",
    }
    response, err := client.AddAddressSet(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for adding an address group.
400	Bad Request
401	Unauthorized: Request error.

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Status Code	Description
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.5.2 Adding an Address Group Member

Function

This API is used to add a member to an address group.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/address-items

Table 4-249 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-250 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

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Parameter	Mandatory	Type	Description
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-251 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-252 Request body parameters

Parameter	Mandatory	Type	Description
set_id	No	String	Address group ID, which can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).
address_items	No	Array of **address_items** objects	Address group member list.

Table 4-253 address_items

Parameter	Mandatory	Type	Description
address_type	No	Integer	Address type: **0** (IPv4), **1** (IPv6).
address	Yes	String	ip
description	No	String	Address group member description.

Response Parameters

Status code: 200

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Table 4-254 Response body parameters

Parameter	Type	Description
data	**AddressItems** object	Data returned after an address group member is added.

Table 4-255 AddressItems

Parameter	Type	Description
items	Array of **AddressItemIdWithoutName** objects	List of address group member IDs.
covered_ip	Array of **CoveredIPVO** objects	List of covered IP addresses.

Table 4-256 AddressItemIdWithoutName

Parameter	Type	Description
id	String	ID of an address group member.

Table 4-257 CoveredIPVO

Parameter	Type	Description
ip	String	IP address
covered_Ip	String	Covered IP address.

Status code: 400

Table 4-258 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

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Example Requests

Add an address group member whose IP address is 2.2.2.2 and name is **ceshi** to the group whose **set_id** is 8773c082-2a6c-4529-939a-edc28ef1a67c in project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/address-items

{
  "set_id" : "8773c082-2a6c-4529-939a-edc28ef1a67c",
  "address_items" : [ {
    "description" : "",
    "address" : "2.2.2.2"
  } ]
}
```

Example Responses

Status code: 200

Return value for adding an address group member.

```
{
  "data" : {
    "covered_ip" : [ ],
    "items" : [ {
      "id" : "65cb47fc-e666-4af4-8c2c-1fbd2f4b1eae"
    } ]
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200001",
  "error_msg" : "Empty parameter."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add an address group member whose IP address is 2.2.2.2 and name is **ceshi** to the group whose **set_id** is 8773c082-2a6c-4529-939a-edc28ef1a67c in project 9d80d070b6d44942af73c9c3d38e0429.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

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```
public class AddAddressItemSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        AddAddressItemRequest request = new AddAddressItemRequest();
        AddAddressItemsInfoDto body = new AddAddressItemsInfoDto();
        List<AddAddressItemsInfoDtoAddressItems> listbodyAddressItems = new ArrayList<>();
        listbodyAddressItems.add(
            new AddAddressItemsInfoDtoAddressItems()
                .withAddress("2.2.2.2")
                .withDescription("")
        );
        body.withAddressItems(listbodyAddressItems);
        body.withSetId("8773c082-2a6c-4529-939a-edc28ef1a67c");
        request.withBody(body);
        try {
            AddAddressItemResponse response = client.addAddressItem(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

Add an address group member whose IP address is 2.2.2.2 and name is **ceshi** to the group whose **set_id** is 8773c082-2a6c-4529-939a-edc28ef1a67c in project 9d80d070b6d44942af73c9c3d38e0429.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 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
```

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```
example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = AddAddressItemRequest()
        listAddressItemsbody = [
            AddAddressItemsInfoDtoAddressItems(
                address="2.2.2.2",
                description=""
            )
        ]
        request.body = AddAddressItemsInfoDto(
            address_items=listAddressItemsbody,
            set_id="8773c082-2a6c-4529-939a-edc28ef1a67c"
        )
        response = client.add_address_item(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

Add an address group member whose IP address is 2.2.2.2 and name is **ceshi** to the group whose **set_id** is 8773c082-2a6c-4529-939a-edc28ef1a67c in project 9d80d070b6d44942af73c9c3d38e0429.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
```

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```
        Build())

    request := &model.AddAddressItemRequest{}
    descriptionAddressItems:= ""
    var listAddressItemsbody = []model.AddAddressItemsInfoDtoAddressItems{
        {
            Address: "2.2.2.2",
            Description: &descriptionAddressItems,
        },
    }
    setIdAddAddressItemsInfoDto:= "8773c082-2a6c-4529-939a-edc28ef1a67c"
    request.Body = &model.AddAddressItemsInfoDto{
        AddressItems: &listAddressItemsbody,
        SetId: &setIdAddAddressItemsInfoDto,
    }
    response, err := client.AddAddressItem(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for adding an address group member.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.5.3 Deleting an Address Group

Function

This API is used to delete an address group.

Calling Method

For details, see **Calling APIs**.

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URI

DELETE /v1/{project_id}/address-sets/{set_id}

Table 4-259 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
set_id	Yes	String	Address group ID, which can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

Table 4-260 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-261 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Response Parameters

Status code: 200

Table 4-262 Response body parameters

Parameter	Type	Description
data	**AddressSetId** object	Data returned after an address group is deleted.

Table 4-263 AddressSetId

Parameter	Type	Description
id	String	Address group ID.
name	String	IP address group name.

Status code: 400

Table 4-264 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Delete address group cf18f0b1-0ce7-4eb8-83b6-4b33c8448e16 from project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/address-sets/
cf18f0b1-0ce7-4eb8-83b6-4b33c8448e16
```

Example Responses

Status code: 200

Return value for deleting an address group.

```
{
  "data" : {
    "id" : "cf18f0b1-0ce7-4eb8-83b6-4b33c8448e16",
    "name" : "test"
  }
}
```

Status code: 400

Bad Request

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```
{
  "error_code" : "CFW.00200004",
  "error_msg" : "Failed to delete the resource because it is being referenced."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class DeleteAddressSetSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteAddressSetRequest request = new DeleteAddressSetRequest();
        request.withSetId("{set_id}");
        try {
            DeleteAddressSetResponse response = client.deleteAddressSet(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
```

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```
import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = DeleteAddressSetRequest()
        request.set_id = "{set_id}"
        response = client.delete_address_set(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteAddressSetRequest{}
```

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

More

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

Status Codes

Status Code	Description
200	Return value for deleting an address group.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.5.4 Deleting an Address Group Member

Function

This API is used to delete a member from an address group.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v1/{project_id}/address-items/{item_id}

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Table 4-265 Path Parameters

Parameter	Mandatory	Type	Description
item_id	Yes	String	Address group member ID, which can be obtained by calling the **API for querying address group members**. Find the value in **data.records.item_id** (The period [.] is used to separate different levels of objects).
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-266 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-267 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

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Table 4-268 Response body parameters

Parameter	Type	Description
data	**AddressItemId** object	Delete an address group member ID.

Table 4-269 AddressItemId

Parameter	Type	Description
id	String	ID of an address group member.
name	String	IP address of an address group member.

Status code: 400

Table 4-270 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Delete address group member 65cb47fc-e666-4af4-8c2c-1fbd2f4b1eae from project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/address-items/65cb47fc-e666-4af4-8c2c-1fbd2f4b1eae
```

Example Responses

Status code: 200

Return value for deleting an address group member.

```
{
  "data" : {
    "id" : "65cb47fc-e666-4af4-8c2c-1fbd2f4b1eae",
    "name" : "1.1.1.1"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.0020016",
```

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```
  "error_msg" : "Incorrect instance status."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class DeleteAddressItemSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteAddressItemRequest request = new DeleteAddressItemRequest();
        request.withItemId("{item_id}");
        try {
            DeleteAddressItemResponse response = client.deleteAddressItem(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
```

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```
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = DeleteAddressItemRequest()
        request.item_id = "{item_id}"
        response = client.delete_address_item(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteAddressItemRequest{}
    request.ItemId = "{item_id}"
    response, err := client.DeleteAddressItem(request)
```

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

More

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

Status Codes

Status Code	Description
200	Return value for deleting an address group member.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.5.5 Deleting Address Group Members in Batches

Function

This API is used to delete address group members in batches.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v1/{project_id}/address-items

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Table 4-271 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-272 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-273 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-274 Request body parameters

Parameter	Mandatory	Type	Description
set_id	Yes	String	Address group ID, which can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

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Parameter	Mandatory	Type	Description
address_item_ids	Yes	Array of strings	List of address group member IDs. Address group member IDs can be obtained by calling the **API for querying address group members**. Find the value in **data.records.item_id** (The period [.] is used to separate different levels of objects).

Response Parameters

Status code: 200

Table 4-275 Response body parameters

Parameter	Type	Description
data	Array of strings	ID list of the address group members to be deleted in batches.

Example Requests

Delete address group member d072ad2e-033c-40a9-b0b5-751f9c2943a6 from address group e4884376-7efb-40e7-b98b-13668d6f8b85 in project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/address-items?
fw_instance_id=7a004e79-0b8b-4679-ab20-267f3946e8ba&enterprise_project_id=default

{
  "set_id" : "e4884376-7efb-40e7-b98b-13668d6f8b85",
  "address_item_ids" : [ "d072ad2e-033c-40a9-b0b5-751f9c2943a6" ]
}
```

Example Responses

Status code: 200

Return value for deleting address group members in batches.

```
{
  "data" : [ "d072ad2e-033c-40a9-b0b5-751f9c2943a6" ]
}
```

SDK Sample Code

The SDK sample code is as follows.

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Java

Delete address group member d072ad2e-033c-40a9-b0b5-751f9c2943a6 from address group e4884376-7efb-40e7-b98b-13668d6f8b85 in project 9d80d070b6d44942af73c9c3d38e0429.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class BatchDeleteAddressItemsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        BatchDeleteAddressItemsRequest request = new BatchDeleteAddressItemsRequest();
        DeleteAddressItemsInfoDto body = new DeleteAddressItemsInfoDto();
        List<String> listbodyAddressItemIds = new ArrayList<>();
        listbodyAddressItemIds.add("d072ad2e-033c-40a9-b0b5-751f9c2943a6");
        body.withAddressItemIds(listbodyAddressItemIds);
        body.withSetId("e4884376-7efb-40e7-b98b-13668d6f8b85");
        request.withBody(body);
        try {
            BatchDeleteAddressItemsResponse response = client.batchDeleteAddressItems(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());
        }
    }
}
```

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Python

Delete address group member d072ad2e-033c-40a9-b0b5-751f9c2943a6 from address group e4884376-7efb-40e7-b98b-13668d6f8b85 in project 9d80d070b6d44942af73c9c3d38e0429.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = BatchDeleteAddressItemsRequest()
        listAddressItemIdsbody = [
            "d072ad2e-033c-40a9-b0b5-751f9c2943a6"
        ]
        request.body = DeleteAddressItemsInfoDto(
            address_item_ids=listAddressItemIdsbody,
            set_id="e4884376-7efb-40e7-b98b-13668d6f8b85"
        )
        response = client.batch_delete_address_items(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

Delete address group member d072ad2e-033c-40a9-b0b5-751f9c2943a6 from address group e4884376-7efb-40e7-b98b-13668d6f8b85 in project 9d80d070b6d44942af73c9c3d38e0429.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/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
```

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.BatchDeleteAddressItemsRequest{}
    var listAddressItemIdsbody = []string{
        "d072ad2e-033c-40a9-b0b5-751f9c2943a6",
    }
    request.Body = &model.DeleteAddressItemsInfoDto{
        AddressItemIds: listAddressItemIdsbody,
        SetId: "e4884376-7efb-40e7-b98b-13668d6f8b85",
    }
    response, err := client.BatchDeleteAddressItems(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for deleting address group members in batches.

Error Codes

See **Error Codes**.

4.5.6 Updating Address Group Information

Function

This API is used to update address group information.

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Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/address-sets/{set_id}

Table 4-276 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
set_id	Yes	String	Address group ID, which can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

Table 4-277 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

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Request Parameters

Table 4-278 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-279 Request body parameters

Parameter	Mandatory	Type	Description
name	No	String	IP address group name.
description	No	String	Address group description.

Response Parameters

Status code: 200

Table 4-280 Response body parameters

Parameter	Type	Description
data	**UpdateAddressSetResponseData** object	Data returned after an address group is updated.

Table 4-281 UpdateAddressSetResponseData

Parameter	Type	Description
id	String	Address group ID.
name	String	IP address group name.

Status code: 400

Table 4-282 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

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Example Requests

Change the name of address group cf18f0b1-0ce7-4eb8-83b6-4b33c8448e16 in project 9d80d070b6d44942af73c9c3d38e0429 to **ABCD**.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/address-sets/
cf18f0b1-0ce7-4eb8-83b6-4b33c8448e16

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

Example Responses

Status code: 200

Return value for updating an address group.

```
{
  "data" : {
    "id" : "cf18f0b1-0ce7-4eb8-83b6-4b33c8448e16"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200005",
  "error_msg" : "Object not found."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Change the name of address group cf18f0b1-0ce7-4eb8-83b6-4b33c8448e16 in project 9d80d070b6d44942af73c9c3d38e0429 to **ABCD**.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class UpdateAddressSetSolution {

    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
```

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```
this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateAddressSetRequest request = new UpdateAddressSetRequest();
        request.withSetId("{set_id}");
        UpdateAddressSetDto body = new UpdateAddressSetDto();
        body.withDescription("");
        body.withName("ABCD");
        request.withBody(body);
        try {
            UpdateAddressSetResponse response = client.updateAddressSet(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

Change the name of address group cf18f0b1-0ce7-4eb8-83b6-4b33c8448e16 in project 9d80d070b6d44942af73c9c3d38e0429 to **ABCD**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = UpdateAddressSetRequest()
```

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```
        request.set_id = "{set_id}"
        request.body = UpdateAddressSetDto(
            description="",
            name="ABCD"
        )
        response = client.update_address_set(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

Change the name of address group cf18f0b1-0ce7-4eb8-83b6-4b33c8448e16 in project 9d80d070b6d44942af73c9c3d38e0429 to **ABCD**.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateAddressSetRequest{}
    request.SetId = "{set_id}"
    descriptionUpdateAddressSetDto:= ""
    nameUpdateAddressSetDto:= "ABCD"
    request.Body = &model.UpdateAddressSetDto{
        Description: &descriptionUpdateAddressSetDto,
        Name: &nameUpdateAddressSetDto,
    }
    response, err := client.UpdateAddressSet(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

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More

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

Status Codes

Status Code	Description
200	Return value for updating an address group.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.5.7 Querying the Address Group List

Function

This API is used to query the address group list.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/address-sets

Table 4-283 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-284 Query Parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, **object_id** is the protected object ID on the Internet border. If the value of **type** is **1**, **object_id** is the protected object ID on the VPC border. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
key_word	No	String	Keyword, including the name or part of the description of an address group.
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
address	No	String	IP address
address_type	No	Integer	Address type: **0** (IPv4), **1** (IPv6).

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Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
query_address_set_type	No	Integer	Type of the address group to be queried: **0** (user-defined address group), **1** (predefined address group). This parameter takes effect only if **address_set_type** is not **0** and **query_address_set_type** is **1**.
address_set_type	No	Integer	Address group type: **0** (user-defined address group), **1** (WAF proxy IP address group), **2** (DDoS back-to-source IP address group), or **3** (NAT64 address group).

Request Parameters

Table 4-285 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

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Table 4-286 Response body parameters

Parameter	Type	Description
data	**data** object	Returned data for querying the address group list.

Table 4-287 data

Parameter	Type	Description
offset	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
total	Integer	Total number of address groups.
records	Array of **records** objects	IP address group list.

Table 4-288 records

Parameter	Type	Description
set_id	String	Address group ID.
ref_count	Integer	Number of times an address group is referenced by rules.
description	String	Description.
address_type	Integer	Address type: **0** (IPv4), **1** (IPv6).

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Parameter	Type	Description
object_id	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, **object_id** is the protected object ID on the Internet border. If the value of **type** is **1**, **object_id** is the protected object ID on the VPC border. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
address_set_type	Integer	Address group type: **0** (user-defined address group), **1** (WAF proxy IP address group), **2** (DDoS back-to-source IP address group), or **3** (NAT64 address group).
name	String	Address group name list.

Status code: 400

Table 4-289 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Query the IP address groups on the first page of the protected object 8a41d6a5-f215-428a-a76c-dc923b5d599a in project 5c69cf330cda42369cbd726ee1bc5e76.

```
https://{Endpoint}/v1/5c69cf330cda42369cbd726ee1bc5e76/address-sets?object_id=8a41d6a5-f215-428a-a76c-dc923b5d599a&limit=10&offset=0
```

Example Responses

Status code: 200

Return value for querying the address group list.

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```
{
  "data" : {
    "limit" : 10,
    "offset" : 0,
    "records" : [ {
      "address_set_type" : 0,
      "object_id" : "cf18f0b1-0ce7-4eb8-83b6-4b33c8448e16",
      "address_type" : 0,
      "description" : "",
      "name" : "test",
      "ref_count" : 0,
      "set_id" : "50da1eff-e58d-4380-b899-a78f94137d3b"
    } ],
    "total" : 1
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.0020016",
  "error_msg" : "Incorrect instance status."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListAddressSetsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAddressSetsRequest request = new ListAddressSetsRequest();
        try {
            ListAddressSetsResponse response = client.listAddressSets(request);
```

```
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListAddressSetsRequest()
        response = client.list_address_sets(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/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
```

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```
example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value for querying the address group list.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.5.8 Querying Address Group Details

Function

This API is used to query address group details.

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Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/address-sets/{set_id}

Table 4-290 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
set_id	Yes	String	Address group ID, which can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

Table 4-291 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
query_address_set_type	No	Integer	Type of the address group to be queried: **0** (user-defined address group), **1** (predefined address group).

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Request Parameters

Table 4-292 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-293 Response body parameters

Parameter	Type	Description
data	**data** object	Query address group details.

Table 4-294 data

Parameter	Type	Description
id	String	Address group ID.
name	String	IP address group name.
description	String	Address group description.
address_set_type	Integer	Address group type: **0** (user-defined address group), **1** (WAF proxy IP address group), **2** (DDoS back-to-source IP address group), or **3** (NAT64 address group).
address_type	Integer	Address type: **0** (IPv4), **1** (IPv6).

Status code: 400

Table 4-295 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

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Example Requests

Query details about the address group cf18f0b1-0ce7-4eb8-83b6-4b33c8448e16 in project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/address-sets/
cf18f0b1-0ce7-4eb8-83b6-4b33c8448e16
```

Example Responses

Status code: 200

Response body for querying address group details.

```
{
  "data" : {
    "address_set_type" : 0,
    "address_type" : 0,
    "description" : "",
    "id" : "cf18f0b1-0ce7-4eb8-83b6-4b33c8448e16",
    "name" : "ABC"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200005",
  "error_msg" : "Object not found."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListAddressSetDetailSolution {

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

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
```

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```
            .withSk(sk);

    CfwClient client = CfwClient.newBuilder()
            .withCredential(auth)
            .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
            .build();
    ListAddressSetDetailRequest request = new ListAddressSetDetailRequest();
    request.withSetId("{set_id}");
    try {
        ListAddressSetDetailResponse response = client.listAddressSetDetail(request);
        System.out.println(response.toString());
    } catch (ConnectionException e) {
        e.printStackTrace();
    } catch (RequestTimeoutException e) {
        e.printStackTrace();
    } catch (ServiceResponseException e) {
        e.printStackTrace();
        System.out.println(e.getHttpStatusCode());
        System.out.println(e.getRequestId());
        System.out.println(e.getErrorCode());
        System.out.println(e.getErrorMsg());
    }
  }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListAddressSetDetailRequest()
        request.set_id = "{set_id}"
        response = client.list_address_set_detail(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"
```

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```
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Response body for querying address group details.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

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Error Codes

See **Error Codes**.

4.5.9 Querying Address Group Members

Function

This API is used to query members in an address group.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/address-items

Table 4-296 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-297 Query Parameters

Parameter	Mandatory	Type	Description
set_id	Yes	String	Address group ID, which can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).
key_word	No	String	Keyword, including the name or part of the description of an address group member.
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.

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Parameter	Mandatory	Type	Description
address	No	String	IP address
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
query_address_set_type	No	Integer	Type of the address group to be queried: **0** (user-defined address group), **1** (predefined address group).

Request Parameters

Table 4-298 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-299 Response body parameters

Parameter	Type	Description
data	**data** object	Returned data for querying address group members.

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Table 4-300 data

Parameter	Type	Description
offset	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
total	Integer	Total number of address group members.
set_id	String	Address group ID.
records	Array of **records** objects	List of address group member records.

Table 4-301 records

Parameter	Type	Description
item_id	String	ID of an address group member.
name	String	Name of an address group member.
description	String	Description.
address_type	Integer	Address type: **0** (IPv4), **1** (IPv6).
address	String	Address information.

Status code: 400

Table 4-302 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Query members in the address group 8773c082-2a6c-4529-939a-edc28ef1a67c in project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/address-items?
set_id=8773c082-2a6c-4529-939a-edc28ef1a67c&limit=10&offset=0
```

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Example Responses

Status code: 200

Return value for querying address group members.

```
{
  "data" : {
    "limit" : 10,
    "offset" : 0,
    "records" : [ {
      "address" : "1.1.1.1",
      "address_type" : 0,
      "description" : "",
      "item_id" : "294fab71-34bf-4858-a380-8f7530e1c816"
    } ],
    "set_id" : "8773c082-2a6c-4529-939a-edc28ef1a67c",
    "total" : 1
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200005",
  "error_msg" : "Object not found."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListAddressItemsSolution {

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

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

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

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```
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAddressItemsRequest request = new ListAddressItemsRequest();
        try {
            ListAddressItemsResponse response = client.listAddressItems(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListAddressItemsRequest()
        response = client.list_address_items(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)
```

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value for querying address group members.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

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4.5.10 Updating the Object Configuration Description

Function

This API is used to update the object configuration description.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/config/object/description

Table 4-303 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Request Parameters

Table 4-304 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-305 Request body parameters

Parameter	Mandatory	Type	Description
description	No	String	Member description.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

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Parameter	Mandatory	Type	Description
item_id	No	String	Address group member ID, which can be obtained by calling the **API for querying address group members**. Find the value in **data.records.item_id** (The period [.] is used to separate different levels of objects). Service group member ID, which can be obtained by calling the **API for querying the service group member list**. Find the value in **data.records.item_id** (The period [.] is used to separate different levels of objects). Domain name ID. It can be obtained by calling the **API for querying the domain name list under a domain name group**. Find the value in **data.records.domain_address_id** (The period [.] is used to separate different levels of objects).
set_id	No	String	Address group ID, which can be obtained by calling the **API for querying the address group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). Service group ID, which can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). Domain name group ID, which can be obtained by calling the **API for querying the domain name group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

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Parameter	Mandatory	Type	Description
type	No	String	Group type: **ADDR_SET** (address group), **SERV_SET** (service group), **DOMAIN_SET** (domain name group), or **URL_SET** (URL group).

Response Parameters

Status code: 200

Table 4-306 Response body parameters

Parameter	Type	Description
data	String	Member ID.

Example Requests

Update the description of the address group member in the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is b273e6c6-59f3-44cc-9a0d-89824814b474, the address group ID is 4fc0f061-3f3f-4a16-821c-30d7f6fb895d, the address group member ID is 0eac72c9-da3e-4386-b2f2-eb7dbc37d25f, and the description is **test**.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/config/object/description

{
  "set_id" : "4fc0f061-3f3f-4a16-821c-30d7f6fb895d",
  "type" : "ADDR_SET",
  "item_id" : "0eac72c9-da3e-4386-b2f2-eb7dbc37d25f",
  "description" : "test",
  "fw_instance_id" : "b273e6c6-59f3-44cc-9a0d-89824814b474"
}
```

Example Responses

Status code: 200

Return value for updating the object configuration description.

```
{
  "data" : "0eac72c9-da3e-4386-b2f2-eb7dbc37d25f"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Update the description of the address group member in the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is

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b273e6c6-59f3-44cc-9a0d-89824814b474, the address group ID is 4fc0f061-3f3f-4a16-821c-30d7f6fb895d, the address group member ID is 0eac72c9-da3e-4386-b2f2-eb7dbc37d25f, and the description is **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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class UpdateObjectConfigDescSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateObjectConfigDescRequest request = new UpdateObjectConfigDescRequest();
        ObjectInfoDto body = new ObjectInfoDto();
        body.withType("ADDR_SET");
        body.withSetId("4fc0f061-3f3f-4a16-821c-30d7f6fb895d");
        body.withItemId("0eac72c9-da3e-4386-b2f2-eb7dbc37d25f");
        body.withFwInstanceId("b273e6c6-59f3-44cc-9a0d-89824814b474");
        body.withDescription("test");
        request.withBody(body);
        try {
            UpdateObjectConfigDescResponse response = client.updateObjectConfigDesc(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

Update the description of the address group member in the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is b273e6c6-59f3-44cc-9a0d-89824814b474, the address group ID is

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4fc0f061-3f3f-4a16-821c-30d7f6fb895d, the address group member ID is 0eac72c9-da3e-4386-b2f2-eb7dbc37d25f, and the description is **test**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = UpdateObjectConfigDescRequest()
        request.body = ObjectInfoDto(
            type="ADDR_SET",
            set_id="4fc0f061-3f3f-4a16-821c-30d7f6fb895d",
            item_id="0eac72c9-da3e-4386-b2f2-eb7dbc37d25f",
            fw_instance_id="b273e6c6-59f3-44cc-9a0d-89824814b474",
            description="test"
        )
        response = client.update_object_config_desc(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

Update the description of the address group member in the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is b273e6c6-59f3-44cc-9a0d-89824814b474, the address group ID is 4fc0f061-3f3f-4a16-821c-30d7f6fb895d, the address group member ID is 0eac72c9-da3e-4386-b2f2-eb7dbc37d25f, and the description is **test**.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/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.
```

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```
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateObjectConfigDescRequest{}
    request.Body = &model.ObjectInfoDto{
        Type: "ADDR_SET",
        SetId: "4fc0f061-3f3f-4a16-821c-30d7f6fb895d",
        ItemId: "0eac72c9-da3e-4386-b2f2-eb7dbc37d25f",
        FwInstanceId: "b273e6c6-59f3-44cc-9a0d-89824814b474",
        Description: "test",
    }
    response, err := client.UpdateObjectConfigDesc(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for updating the object configuration description.

Error Codes

See **Error Codes**.

4.6 Service Group Management

4.6.1 Creating a Service Group

Function

This API is used to create a service group.

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Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/service-set

Table 4-307 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-308 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-309 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Table 4-310 Request body parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, **object_id** is the protected object ID on the Internet border. If the value of **type** is **1**, **object_id** is the protected object ID on the VPC border. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects). Here, only the protected object ID of the **type** with the value **0** can be used.
name	Yes	String	Service group name.
description	No	String	Service group description.

Response Parameters

Status code: 200

Table 4-311 Response body parameters

Parameter	Type	Description
data	**ServiceSetId** object	Data returned for creating a service group.

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Table 4-312 ServiceSetId

Parameter	Type	Description
id	String	Service group ID.
name	String	Service group name.

Status code: 400

Table 4-313 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Add a service group whose project ID is 9d80d070b6d44942af73c9c3d38e0429, protected object is cfebd347-b655-4b84-b938-3c54317599b2, and name is **ceshi**.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/service-set

{
  "object_id" : "cfebd347-b655-4b84-b938-3c54317599b2",
  "name" : "ceshi",
  "description" : ""
}
```

Example Responses

Status code: 200

Return value for creating a service group.

```
{
  "data" : {
    "id" : "221cfdca-3abf-4c30-ab0d-516a03c70866"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200024",
  "error_msg" : "Exceeded the upper limit."
}
```

SDK Sample Code

The SDK sample code is as follows.

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Java

Add a service group whose project ID is 9d80d070b6d44942af73c9c3d38e0429, protected object is cfebd347-b655-4b84-b938-3c54317599b2, and name is **ceshi**.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class AddServiceSetSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        AddServiceSetRequest request = new AddServiceSetRequest();
        AddServiceSetUsingPOSTRequestBody body = new AddServiceSetUsingPOSTRequestBody();
        body.withDescription("");
        body.withName("ceshi");
        body.withObjectId("cfebd347-b655-4b84-b938-3c54317599b2");
        request.withBody(body);
        try {
            AddServiceSetResponse response = client.addServiceSet(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

Add a service group whose project ID is 9d80d070b6d44942af73c9c3d38e0429, protected object is cfebd347-b655-4b84-b938-3c54317599b2, and name is **ceshi**.

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

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```
import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = AddServiceSetRequest()
        request.body = AddServiceSetUsingPOSTRequestBody(
            description="",
            name="ceshi",
            object_id="cfebd347-b655-4b84-b938-3c54317599b2"
        )
        response = client.add_service_set(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

Add a service group whose project ID is 9d80d070b6d44942af73c9c3d38e0429, protected object is cfebd347-b655-4b84-b938-3c54317599b2, and name is **ceshi**.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

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```
    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.AddServiceSetRequest{}
    descriptionAddServiceSetUsingPostRequestBody:= ""
    request.Body = &model.AddServiceSetUsingPostRequestBody{
        Description: &descriptionAddServiceSetUsingPostRequestBody,
        Name: "ceshi",
        ObjectId: "cfebd347-b655-4b84-b938-3c54317599b2",
    }
    response, err := client.AddServiceSet(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for creating a service group.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.6.2 Adding Service Group Members

Function

This API is used to add service group members in batches.

Calling Method

For details, see **Calling APIs**.

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URI

POST /v1/{project_id}/service-items

Table 4-314 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-315 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-316 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Table 4-317 Request body parameters

Parameter	Mandatory	Type	Description
set_id	Yes	String	Service group ID, which can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).
service_items	Yes	Array of **service_items** objects	Service group member list.

Table 4-318 service_items

Parameter	Mandatory	Type	Description
protocol	Yes	Integer	Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (any). It cannot be left blank when **type** is set to **0** (manual), and can be left blank when **type** is set to **1** (automatic).
source_port	Yes	String	Source port.
dest_port	Yes	String	Destination port.
description	No	String	Service member description.

Response Parameters

Status code: 200

Table 4-319 Response body parameters

Parameter	Type	Description
data	**ServiceItemIds** object	Data returned for creating a service group member.

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Table 4-320 ServiceItemIds

Parameter	Type	Description
items	Array of **items** objects	List of service group member IDs.

Table 4-321 items

Parameter	Type	Description
id	String	Service group member ID.

Status code: 400

Table 4-322 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Add a service group member named **ceshi** to project 9d80d070b6d44942af73c9c3d38e0429. The description is **Add a service group member**.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/service-items

{
  "set_id" : "7cdebed3-af07-494e-a3c2-b88bb8d58b57",
  "service_items" : [ {
    "description" : "Add members to a service group.",
    "dest_port" : "1",
    "source_port" : "1",
    "protocol" : 6
  } ]
}
```

Example Responses

Status code: 200

Return value for adding service group members.

```
{
  "data" : {
    "items" : [ {
      "id" : "cc41c4af-86e8-4ed2-80ad-87d399aeaed0"
    } ]
  }
}
```

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Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200001",
  "error_msg" : "Empty parameter."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add a service group member named **ceshi** to project 9d80d070b6d44942af73c9c3d38e0429. The description is **Add a service group member**.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class AddServiceItemsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        AddServiceItemsRequest request = new AddServiceItemsRequest();
        AddServiceItemsUsingPOSTRequestBody body = new AddServiceItemsUsingPOSTRequestBody();
        List<AddServiceItemsUsingPOSTRequestBodyServiceItems> listbodyServiceItems = new ArrayList<>();
        listbodyServiceItems.add(
            new AddServiceItemsUsingPOSTRequestBodyServiceItems()
                .withProtocol(6)
                .withSourcePort("1")
                .withDestPort("1")
                .withDescription("Add members to a service group.")
        );
        body.withServiceItems(listbodyServiceItems);
        body.withSetId("7cdebed3-af07-494e-a3c2-b88bb8d58b57");
        request.withBody(body);
```

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```
        try {
            AddServiceItemsResponse response = client.addServiceItems(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

Add a service group member named **ceshi** to project 9d80d070b6d44942af73c9c3d38e0429. The description is **Add a service group member**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = AddServiceItemsRequest()
        listServiceItemsbody = [
            AddServiceItemsUsingPOSTRequestBodyServiceItems(
                protocol=6,
                source_port="1",
                dest_port="1",
                description="Add members to a service group."
            )
        ]
        request.body = AddServiceItemsUsingPOSTRequestBody(
            service_items=listServiceItemsbody,
            set_id="7cdebed3-af07-494e-a3c2-b88bb8d58b57"
        )
        response = client.add_service_items(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
```

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

Go

Add a service group member named **ceshi** to project 9d80d070b6d44942af73c9c3d38e0429. The description is **Add a service group member**.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.AddServiceItemsRequest{}
    descriptionServiceItems:= "Add members to a service group."
    var listServiceItemsbody = []model.AddServiceItemsUsingPostRequestBodyServiceItems{
        {
            Protocol: int32(6),
            SourcePort: "1",
            DestPort: "1",
            Description: &descriptionServiceItems,
        },
    }
    request.Body = &model.AddServiceItemsUsingPostRequestBody{
        ServiceItems: listServiceItemsbody,
        SetId: "7cdebed3-af07-494e-a3c2-b88bb8d58b57",
    }
    response, err := client.AddServiceItems(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

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Status Codes

Status Code	Description
200	Return value for adding service group members.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.6.3 Deleting a Service Group

Function

This API is used to delete a service group.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v1/{project_id}/service-sets/{set_id}

Table 4-323 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
set_id	Yes	String	Service group ID, which can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

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Table 4-324 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-325 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-326 Response body parameters

Parameter	Type	Description
data	**ServiceSetId** object	Data returned for deleting a service group.

Table 4-327 ServiceSetId

Parameter	Type	Description
id	String	Service group ID.
name	String	Service group name.

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Status code: 400

Table 4-328 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Delete service group 221cfdca-3abf-4c30-ab0d-516a03c70866 in project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/service-sets/221cfdca-3abf-4c30-ab0d-516a03c70866
```

Example Responses

Status code: 200

Return value for deleting a service group.

```
{
  "data" : {
    "id" : "221cfdca-3abf-4c30-ab0d-516a03c70866",
    "name" : "test"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200004",
  "error_msg" : "Failed to delete the resource because it is being referenced."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class DeleteServiceSetSolution {

    public static void main(String[] args) {
```

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteServiceSetRequest request = new DeleteServiceSetRequest();
        request.withSetId("{set_id}");
        try {
            DeleteServiceSetResponse response = client.deleteServiceSet(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = DeleteServiceSetRequest()
        request.set_id = "{set_id}"
        response = client.delete_service_set(request)
        print(response)
```

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```
    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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value for deleting a service group.
400	Bad Request

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Status Code	Description
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.6.4 Deleting a Service Group Member

Function

This API is used to delete a member from a service group.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v1/{project_id}/service-items/{item_id}

Table 4-329 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
item_id	Yes	String	Service group member ID, which can be obtained by calling the **API for querying the service group member list**. Find the value in **data.records.item_id** (The period [.] is used to separate different levels of objects).

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Table 4-330 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-331 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-332 Response body parameters

Parameter	Type	Description
data	**DeleteServiceItemResponseBodyData** object	Delete service group member data.

Table 4-333 DeleteServiceItemResponseBodyData

Parameter	Type	Description
id	String	Service group member ID.

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Parameter	Type	Description
name	String	Name of a service group member. Its value is the source and destination ports.

Status code: 400

Table 4-334 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Delete the service group member whose ID is 6b37ed55-1e21-46a5-a7dc-a59ef418d359 from project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/service-items/6b37ed55-1e21-46a5-a7dc-a59ef418d359
```

Example Responses

Status code: 200

Information returned for service group member deletion.

```
{
  "data" : {
    "id" : "26f562c4-fe11-43d0-9654-f54298d5b12e",
    "name" : "Service group member"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.0020016",
  "error_msg" : "Incorrect instance status."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

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

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```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class DeleteServiceItemSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteServiceItemRequest request = new DeleteServiceItemRequest();
        request.withItemId("{item_id}");
        try {
            DeleteServiceItemResponse response = client.deleteServiceItem(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

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

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

    try:
        request = DeleteServiceItemRequest()
        request.item_id = "{item_id}"
        response = client.delete_service_item(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

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Status Codes

Status Code	Description
200	Information returned for service group member deletion.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.6.5 Deleting Service Group Members in Batches

Function

This API is used to delete service group members in batches.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v1/{project_id}/service-items

Table 4-335 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-336 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-337 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-338 Request body parameters

Parameter	Mandatory	Type	Description
set_id	Yes	String	Service group ID, which can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).
service_item_ids	Yes	Array of strings	List of service group member IDs. Service group member IDs can be obtained by calling the **API for querying the service group member list**. Find the value in **data.records.item_id** (The period [.] is used to separate different levels of objects).

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Response Parameters

Status code: 200

Table 4-339 Response body parameters

Parameter	Type	Description
data	Array of strings	ID list of the service group members to be deleted in batches.

Status code: 400

Table 4-340 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Delete service group member f837f7ae-22c9-449d-a99c-4be24533e243 from service group 688faf62-20fc-4ca6-b9f9-6fbc518df5ae in project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/service-items?
fw_instance_id=7a004e79-0b8b-4679-ab20-267f3946e8ba&enterprise_project_id=default

{
  "set_id" : "688faf62-20fc-4ca6-b9f9-6fbc518df5ae",
  "service_item_ids" : [ "f837f7ae-22c9-449d-a99c-4be24533e243" ]
}
```

Example Responses

Status code: 200

Return value for deleting service group members in batches.

```
{
  "data" : [ "f837f7ae-22c9-449d-a99c-4be24533e243" ]
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200005",
  "error_msg" : "Object not found."
}
```

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SDK Sample Code

The SDK sample code is as follows.

Java

Delete service group member f837f7ae-22c9-449d-a99c-4be24533e243 from service group 688faf62-20fc-4ca6-b9f9-6fbc518df5ae in project 9d80d070b6d44942af73c9c3d38e0429.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class BatchDeleteServiceItemsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        BatchDeleteServiceItemsRequest request = new BatchDeleteServiceItemsRequest();
        DeleteServiceItemDto body = new DeleteServiceItemDto();
        List<String> listbodyServiceItemIds = new ArrayList<>();
        listbodyServiceItemIds.add("f837f7ae-22c9-449d-a99c-4be24533e243");
        body.withServiceItemIds(listbodyServiceItemIds);
        body.withSetId("688faf62-20fc-4ca6-b9f9-6fbc518df5ae");
        request.withBody(body);
        try {
            BatchDeleteServiceItemsResponse response = client.batchDeleteServiceItems(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());
        }
    }
}
```

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Python

Delete service group member f837f7ae-22c9-449d-a99c-4be24533e243 from service group 688faf62-20fc-4ca6-b9f9-6fbc518df5ae in project 9d80d070b6d44942af73c9c3d38e0429.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = BatchDeleteServiceItemsRequest()
        listServiceItemIdsbody = [
            "f837f7ae-22c9-449d-a99c-4be24533e243"
        ]
        request.body = DeleteServiceItemDto(
            service_item_ids=listServiceItemIdsbody,
            set_id="688faf62-20fc-4ca6-b9f9-6fbc518df5ae"
        )
        response = client.batch_delete_service_items(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

Delete service group member f837f7ae-22c9-449d-a99c-4be24533e243 from service group 688faf62-20fc-4ca6-b9f9-6fbc518df5ae in project 9d80d070b6d44942af73c9c3d38e0429.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/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
```

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.BatchDeleteServiceItemsRequest{}
    var listServiceItemIdsbody = []string{
        "f837f7ae-22c9-449d-a99c-4be24533e243",
    }
    request.Body = &model.DeleteServiceItemDto{
        ServiceItemIds: listServiceItemIdsbody,
        SetId: "688faf62-20fc-4ca6-b9f9-6fbc518df5ae",
    }
    response, err := client.BatchDeleteServiceItems(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for deleting service group members in batches.
400	Bad Request

Error Codes

See **Error Codes**.

4.6.6 Modifying a Service Group

Function

This API is used to update a service group.

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Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/service-sets/{set_id}

Table 4-341 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
set_id	Yes	String	Service group ID, which can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

Table 4-342 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

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Request Parameters

Table 4-343 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-344 Request body parameters

Parameter	Mandatory	Type	Description
name	No	String	Service group name.
description	No	String	Service group description.

Response Parameters

Status code: 200

Table 4-345 Response body parameters

Parameter	Type	Description
data	**ServiceSetId** object	Data returned for updating a service group.

Table 4-346 ServiceSetId

Parameter	Type	Description
id	String	Service group ID.
name	String	Service group name.

Status code: 400

Table 4-347 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

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Example Requests

Change the name of the service group 221cfdca-3abf-4c30-ab0d-516a03c70866 in project 9d80d070b6d44942af73c9c3d38e0429 to **ceshi2** and change its description to **Description**.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/service-sets/221cfdca-3abf-4c30-ab0d-516a03c70866

{
  "name" : "ceshi2",
  "description" : "Description."
}
```

Example Responses

Status code: 200

Return value for updating a service group.

```
{
  "data" : {
    "id" : "221cfdca-3abf-4c30-ab0d-516a03c70866"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200005",
  "error_msg" : "Object not found."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Change the name of the service group 221cfdca-3abf-4c30-ab0d-516a03c70866 in project 9d80d070b6d44942af73c9c3d38e0429 to **ceshi2** and change its description to **Description**.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class UpdateServiceSetSolution {

    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
```

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```
this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateServiceSetRequest request = new UpdateServiceSetRequest();
        request.withSetId("{set_id}");
        UpdateServiceSetUsingPUTRequestBody body = new UpdateServiceSetUsingPUTRequestBody();
        body.withDescription("Description.");
        body.withName("ceshi2");
        request.withBody(body);
        try {
            UpdateServiceSetResponse response = client.updateServiceSet(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

Change the name of the service group 221cfdca-3abf-4c30-ab0d-516a03c70866 in project 9d80d070b6d44942af73c9c3d38e0429 to **ceshi2** and change its description to **Description**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

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```
    try:
        request = UpdateServiceSetRequest()
        request.set_id = "{set_id}"
        request.body = UpdateServiceSetUsingPUTRequestBody(
            description="Description.",
            name="ceshi2"
        )
        response = client.update_service_set(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

Change the name of the service group 221cfdca-3abf-4c30-ab0d-516a03c70866 in project 9d80d070b6d44942af73c9c3d38e0429 to **ceshi2** and change its description to **Description**.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateServiceSetRequest{}
    request.SetId = "{set_id}"
    descriptionUpdateServiceSetUsingPutRequestBody:= "Description."
    nameUpdateServiceSetUsingPutRequestBody:= "ceshi2"
    request.Body = &model.UpdateServiceSetUsingPutRequestBody{
        Description: &descriptionUpdateServiceSetUsingPutRequestBody,
        Name: &nameUpdateServiceSetUsingPutRequestBody,
    }
    response, err := client.UpdateServiceSet(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

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More

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

Status Codes

Status Code	Description
200	Return value for updating a service group.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.6.7 Obtaining the Service Group List

Function

This API is used to obtain the service group list.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/service-sets

Table 4-348 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-349 Query Parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, **object_id** is the protected object ID on the Internet border. If the value of **type** is **1**, **object_id** is the protected object ID on the VPC border. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
key_word	No	String	Keyword, which can be the service group name or part of the service group description.
limit	Yes	Integer	Number of query records on each page. The value ranges from 1 to 1024.
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

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Parameter	Mandatory	Type	Description
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
query_service_set_type	No	Integer	Type of the service group to be queried: **0** (user-defined service group), **1** (predefined service group).

Request Parameters

Table 4-350 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-351 Response body parameters

Parameter	Type	Description
data	**ServiceSetRecords** object	Query the service group list.

Table 4-352 ServiceSetRecords

Parameter	Type	Description
offset	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
total	Integer	Query the total number of service groups.

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Parameter	Type	Description
records	Array of ServiceSet objects	Service group list.

Table 4-353 ServiceSet

Parameter	Type	Description
set_id	String	Service group ID.
name	String	Service group name.
description	String	Service group description.
service_set_type	Integer	Service group type: **0** (user-defined service group), **1** (common web service), **2** (common remote login and ping), or **3** (common database).
ref_count	Integer	Number of times a service group is referenced by rules.
project_id	String	Project ID.
protocols	Array of integers	Protocol list. Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (any). It cannot be left blank when **type** is set to **0** (manual).

Status code: 400

Table 4-354 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Query the service group list on the first page of protected object a37bb4eb-c49e-4e88-bf77-944a75b0ce8a in project 2349ba469daf4b7daf268bb0261d18b0.

```
https://{Endpoint}/v1/2349ba469daf4b7daf268bb0261d18b0/service-sets?object_id=a37bb4eb-c49e-4e88-bf77-944a75b0ce8a&limit=10&offset=0
```

Example Responses

Status code: 200

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Return value for the service group list query.

```
{
  "data" : {
    "limit" : 50,
    "offset" : 0,
    "records" : [ {
      "name" : "test",
      "project_id" : "2349ba469daf4b7daf268bb0261d18b0",
      "protocols" : [ 6 ],
      "ref_count" : 2,
      "service_set_type" : 0,
      "set_id" : "6f475bad-5d33-45d1-98f8-c79f2f308d5a"
    } ],
    "total" : 1
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.0020016",
  "error_msg" : "Incorrect instance status."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListServiceSetsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListServiceSetsRequest request = new ListServiceSetsRequest();
        try {
```

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

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListServiceSetsRequest()
        response = client.list_service_sets(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/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.
```

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```
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value for the service group list query.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.6.8 Querying Service Group Details

Function

This API is used to query details about a service group.

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Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/service-sets/{set_id}

Table 4-355 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
set_id	Yes	String	Service group ID, which can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

Table 4-356 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
query_service_set_type	No	Integer	Type of the service group to be queried: **0** (user-defined service group), **1** (predefined service group).

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Request Parameters

Table 4-357 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-358 Response body parameters

Parameter	Type	Description
data	**ServiceSetDetail-ResponseDto** object	Service group details.

Table 4-359 ServiceSetDetailResponseDto

Parameter	Type	Description
id	String	Service group ID.
name	String	Service group name.
description	String	Service group description.
service_set_type	Integer	Service group type: **0** (user-defined service group), **1** (common web service), **2** (common remote login and ping), or **3** (common database).

Status code: 400

Table 4-360 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

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Example Requests

Query details about service group 221cfdca-3abf-4c30-ab0d-516a03c70866 in project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/service-sets/221cfdca-3abf-4c30-ab0d-516a03c70866
```

Example Responses

Status code: 200

Return value for querying service group details.

```
{
  "data" : {
    "service_set_type" : 0,
    "id" : "221cfdca-3abf-4c30-ab0d-516a03c70866",
    "name" : "ceshi2"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200005",
  "error_msg" : "Object not found."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListServiceSetDetailSolution {

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

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

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```
        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListServiceSetDetailRequest request = new ListServiceSetDetailRequest();
        request.withSetId("{set_id}");
        try {
            ListServiceSetDetailResponse response = client.listServiceSetDetail(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListServiceSetDetailRequest()
        request.set_id = "{set_id}"
        response = client.list_service_set_detail(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
```

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```
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value for querying service group details.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

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4.6.9 Querying the Service Group Member List

Function

This API is used to query the service group member list.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/service-items

Table 4-361 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-362 Query Parameters

Parameter	Mandatory	Type	Description
set_id	Yes	String	Service group ID, which can be obtained by calling the **API for querying the service group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).
key_word	No	String	Query field, which can be a service group member name or a part of the service group member description.
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.

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Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
query_service_set_type	No	Integer	Type of the service group to be queried: **0** (user-defined service group), **1** (predefined service group). This parameter is valid only if **set_id** is the ID of a predefined service group.

Request Parameters

Table 4-363 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-364 Response body parameters

Parameter	Type	Description
data	**data** object	Service group member list.

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Table 4-365 data

Parameter	Type	Description
offset	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
total	Integer	Total number of service group members.
set_id	String	Service group ID.
records	Array of **records** objects	Record.

Table 4-366 records

Parameter	Type	Description
item_id	String	Service member ID.
protocol	Integer	Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (any). It cannot be left blank when **type** is set to **0** (manual), and can be left blank when **type** is set to **1** (automatic).
source_port	String	Source port.
dest_port	String	Destination port.
description	String	Service member description.

Status code: 400

Table 4-367 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Status code: 401

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Table 4-368 Response body parameters

Parameter	Type	Description
-	String	

Status code: 403

Table 4-369 Response body parameters

Parameter	Type	Description
-	String	

Status code: 404

Table 4-370 Response body parameters

Parameter	Type	Description
-	String	

Status code: 500

Table 4-371 Response body parameters

Parameter	Type	Description
-	String	

Example Requests

Query the members of service group 7cdebed3-af07-494e-a3c2-b88bb8d58b57 in project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/service-items?set_id=7cdebed3-af07-494e-a3c2-b88bb8d58b57&limit=10&offset=0
```

Example Responses

Status code: 200

Return value of the service group member list.

```
{
  "data" : {
    "limit" : 10,
    "offset" : 0,
    "records" : [ {
```

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```
    "dest_port" : "0",
    "item_id" : "805b711d-c558-41e3-aab1-a4b8c3f1f90b",
    "description" : "",
    "protocol" : 1,
    "source_port" : "0"
  } ],
  "set_id" : "7cdebed3-af07-494e-a3c2-b88bb8d58b57",
  "total" : 1
 }
}
```

Status code: 400

Bad Request

```
{
 "error_code" : "CFW.00200005",
 "error_msg" : "Object not found."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListServiceItemsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListServiceItemsRequest request = new ListServiceItemsRequest();
        try {
            ListServiceItemsResponse response = client.listServiceItems(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
```

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

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListServiceItemsRequest()
        response = client.list_service_items(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

    auth := basic.NewCredentialsBuilder().
```

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```
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value of the service group member list.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.7 Domain Name Resolution and Domain Name Group Management

4.7.1 Adding a Domain Name Group

Function

This API is used to add a domain name group.

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Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/domain-set

Table 4-372 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-373 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-374 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Table 4-375 Request body parameters

Parameter	Mandatory	Type	Description
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, **object_id** is the protected object ID on the Internet border. If the value of **type** is **1**, **object_id** is the protected object ID on the VPC border. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects). Here, only the protected object ID the **type** with the value **0** can be used.
name	Yes	String	Domain name group name.
description	No	String	Domain name group description.
domain_names	Yes	Array of **DomainSetInfoDto** objects	Domain name information list.
domain_set_type	No	Integer	Domain name group typ: **0** (application domain name group), **1** (network domain name group).

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Table 4-376 DomainSetInfoDto

Parameter	Mandatory	Type	Description
domain_name	Yes	String	Domain name. Example: www.example.com
description	No	String	Domain name description.

Response Parameters

Status code: 200

Table 4-377 Response body parameters

Parameter	Type	Description
data	**DomainSetResponseData** object	Returned data for adding a domain name group.

Table 4-378 DomainSetResponseData

Parameter	Type	Description
id	String	Domain name group ID.
name	String	Domain name group name.

Example Requests

Add an application domain name group whose name is **test**, domain name is **www.aaa.com**, and protected object ID is fde07429-2e02-45c0-a85f-4f1cacea24d2 to the firewall 546af3f8-88e9-47f2-a205-2346d7090925 in project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/domain-set?
fw_instance_id=546af3f8-88e9-47f2-a205-2346d7090925&enterprise_project_id=default

{
  "name" : "test",
  "description" : "",
  "domain_names" : [ {
    "domain_name" : "www.aaa.com",
    "description" : ""
  } ],
  "fw_instance_id" : "546af3f8-88e9-47f2-a205-2346d7090925",
  "object_id" : "fde07429-2e02-45c0-a85f-4f1cacea24d2"
}
```

Example Responses

Status code: 200

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Return value for adding a domain name group.

```
{
  "data" : {
    "id" : "e43db369-a863-45ed-8850-58d6b571b1ab",
    "name" : "test"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add an application domain name group whose name is **test**, domain name is **www.aaa.com**, and protected object ID is fde07429-2e02-45c0-a85f-4f1cacea24d2 to the firewall 546af3f8-88e9-47f2-a205-2346d7090925 in project 9d80d070b6d44942af73c9c3d38e0429.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class AddDomainSetSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        AddDomainSetRequest request = new AddDomainSetRequest();
        AddDomainSetInfoDto body = new AddDomainSetInfoDto();
        List<DomainSetInfoDto> listbodyDomainNames = new ArrayList<>();
        listbodyDomainNames.add(
            new DomainSetInfoDto()
                .withDomainName("www.aaa.com")
                .withDescription("")
        );
        body.withDomainNames(listbodyDomainNames);
        body.withDescription("");
        body.withName("test");
```

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```
        body.withObjectId("fde07429-2e02-45c0-a85f-4f1cacea24d2");
        body.withFwInstanceId("546af3f8-88e9-47f2-a205-2346d7090925");
        request.withBody(body);
        try {
            AddDomainSetResponse response = client.addDomainSet(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

Add an application domain name group whose name is **test**, domain name is **www.aaa.com**, and protected object ID is fde07429-2e02-45c0-a85f-4f1cacea24d2 to the firewall 546af3f8-88e9-47f2-a205-2346d7090925 in project 9d80d070b6d44942af73c9c3d38e0429.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = AddDomainSetRequest()
        listDomainNamesbody = [
            DomainSetInfoDto(
                domain_name="www.aaa.com",
                description=""
            )
        ]
        request.body = AddDomainSetInfoDto(
            domain_names=listDomainNamesbody,
            description="",
            name="test",
            object_id="fde07429-2e02-45c0-a85f-4f1cacea24d2",
            fw_instance_id="546af3f8-88e9-47f2-a205-2346d7090925"
        )
        response = client.add_domain_set(request)
```

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```
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Add an application domain name group whose name is **test**, domain name is **www.aaa.com**, and protected object ID is fde07429-2e02-45c0-a85f-4f1cacea24d2 to the firewall 546af3f8-88e9-47f2-a205-2346d7090925 in project 9d80d070b6d44942af73c9c3d38e0429.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.AddDomainSetRequest{}
    descriptionDomainNames:= ""
    var listDomainNamesbody = []model.DomainSetInfoDto{
        {
            DomainName: "www.aaa.com",
            Description: &descriptionDomainNames,
        },
    }
    descriptionAddDomainSetInfoDto:= ""
    fwInstanceIdAddDomainSetInfoDto:= "546af3f8-88e9-47f2-a205-2346d7090925"
    request.Body = &model.AddDomainSetInfoDto{
        DomainNames: listDomainNamesbody,
        Description: &descriptionAddDomainSetInfoDto,
        Name: "test",
        ObjectId: "fde07429-2e02-45c0-a85f-4f1cacea24d2",
        FwInstanceId: &fwInstanceIdAddDomainSetInfoDto,
    }
    response, err := client.AddDomainSet(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
```

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```
  }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for adding a domain name group.

Error Codes

See **Error Codes**.

4.7.2 Deleting a Domain Name Group

Function

This API is used to delete a domain name group.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v1/{project_id}/domain-set/{set_id}

Table 4-379 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
set_id	Yes	String	Domain name group ID, which can be obtained by calling the **API for querying the domain name group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

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Table 4-380 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-381 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-382 Response body parameters

Parameter	Type	Description
data	**DomainSetResponseData** object	Returned data for deleting a domain name group.

Table 4-383 DomainSetResponseData

Parameter	Type	Description
id	String	Domain name group ID.
name	String	Domain name group name.

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Example Requests

Delete domain name group 89bce6a4-9b59-4d7a-b5f9-cac5ac16d88a from firewall 7a004e79-0b8b-4679-ab20-267f3946e8ba in project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/domain-set/89bce6a4-9b59-4d7a-b5f9-cac5ac16d88a?fw_instance_id=7a004e79-0b8b-4679-ab20-267f3946e8ba&enterprise_project_id=default
```

Example Responses

Status code: 200

Return value for deleting a domain name group.

```
{
  "data" : {
    "id" : "89bce6a4-9b59-4d7a-b5f9-cac5ac16d88a",
    "name" : "test"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class DeleteDomainSetSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteDomainSetRequest request = new DeleteDomainSetRequest();
        request.withSetId("{set_id}");
        try {
            DeleteDomainSetResponse response = client.deleteDomainSet(request);
            System.out.println(response.toString());
```

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```
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = DeleteDomainSetRequest()
        request.set_id = "{set_id}"
        response = client.delete_domain_set(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/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
```

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```
example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value for deleting a domain name group.

Error Codes

See **Error Codes**.

4.7.3 Updating a Domain Name Group

Function

This API is used to update a domain name group.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/domain-set/{set_id}

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Table 4-384 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
set_id	Yes	String	Domain name group ID, which can be obtained by calling the **API for querying the domain name group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

Table 4-385 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	Yes	String	Firewall instance ID, which is automatically generated after a CFW instance is created. You can obtain the ID by calling the **API for querying a firewall instance**.

Request Parameters

Table 4-386 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Table 4-387 Request body parameters

Parameter	Mandatory	Type	Description
name	Yes	String	Domain name group name.
description	No	String	Domain name group description.

Response Parameters

Status code: 200

Table 4-388 Response body parameters

Parameter	Type	Description
data	**DomainSetResponseData** object	Returned data of for updating a domain name group.

Table 4-389 DomainSetResponseData

Parameter	Type	Description
id	String	Domain name group ID.
name	String	Domain name group name.

Example Requests

Change the name of the domain name group 94da194d-24b2-4f60-919e-cf0bc76c75b3 of firewall 7a004e79-0b8b-4679-ab20-267f3946e8ba in project 9d80d070b6d44942af73c9c3d38e0429 to **test**.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/domain-set/94da194d-24b2-4f60-919e-cf0bc76c75b3?fw_instance_id=7a004e79-0b8b-4679-ab20-267f3946e8ba&enterprise_project_id=default

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

Example Responses

Status code: 200

Return value for updating a domain name group.

```
{
  "data" : {
    "id" : "94da194d-24b2-4f60-919e-cf0bc76c75b3",
    "name" : "test"
```

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```
 }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Change the name of the domain name group 94da194d-24b2-4f60-919e-cf0bc76c75b3 of firewall 7a004e79-0b8b-4679-ab20-267f3946e8ba in project 9d80d070b6d44942af73c9c3d38e0429 to **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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class UpdateDomainSetSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateDomainSetRequest request = new UpdateDomainSetRequest();
        request.withSetId("{set_id}");
        UpdateDomainSetInfoDto body = new UpdateDomainSetInfoDto();
        body.withDescription("");
        body.withName("test");
        request.withBody(body);
        try {
            UpdateDomainSetResponse response = client.updateDomainSet(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());
        }
```

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```
    }
}
```

Python

Change the name of the domain name group 94da194d-24b2-4f60-919e-cf0bc76c75b3 of firewall 7a004e79-0b8b-4679-ab20-267f3946e8ba in project 9d80d070b6d44942af73c9c3d38e0429 to **test**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = UpdateDomainSetRequest()
        request.set_id = "{set_id}"
        request.body = UpdateDomainSetInfoDto(
            description="",
            name="test"
        )
        response = client.update_domain_set(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

Change the name of the domain name group 94da194d-24b2-4f60-919e-cf0bc76c75b3 of firewall 7a004e79-0b8b-4679-ab20-267f3946e8ba in project 9d80d070b6d44942af73c9c3d38e0429 to **test**.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

func main() {
```

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateDomainSetRequest{}
    request.SetId = "{set_id}"
    descriptionUpdateDomainSetInfoDto:= ""
    request.Body = &model.UpdateDomainSetInfoDto{
        Description: &descriptionUpdateDomainSetInfoDto,
        Name: "test",
    }
    response, err := client.UpdateDomainSet(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for updating a domain name group.

Error Codes

See **Error Codes**.

4.7.4 Updating the DNS Server List

Function

This API is used to update the DNS server list.

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Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/dns/servers

Table 4-390 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-391 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-392 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Table 4-393 Request body parameters

Parameter	Mandatory	Type	Description
dns_server	Yes	Array of **dns_server** objects	DNS server list.
health_check_domain_name	No	String	Health check domain name, which can be obtained by calling the **API for querying the DNS server list**. Find the value in **data.health_check_domain_name** (The period [.] is used to separate different levels of objects).

Table 4-394 dns_server

Parameter	Mandatory	Type	Description
server_ip	Yes	String	DNS server IP address, which can be obtained by calling the **API for querying the DNS server list**. Find the value in **data.server_ip** (The period [.] is used to separate different levels of objects).
is_customized	Yes	Integer	Whether the DNS server is user-defined: **0** (no), **1** (yes).
is_applied	Yes	Integer	Whether to apply: **0** (no), **1** (yes).

Response Parameters

Status code: 200

Table 4-395 Response body parameters

Parameter	Type	Description
data	Array of strings	DNS server list.

Status code: 400

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Table 4-396 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Update the settings of the DNS resolver whose project ID is 2349ba469daf4b7daf268bb0261d18b0. Put the default server 8.8.8.8 in use. Stop using the non-default server 192.168.0.2.

```
https://{Endpoint}/v1/2349ba469daf4b7daf268bb0261d18b0/dns/servers?
fw_instance_id=80e0f2df-24fd-49c2-8398-11f9a0299b3e

{
  "dns_server" : [ {
    "server_ip" : "8.8.8.8",
    "is_customized" : 0,
    "is_applied" : 1
  }, {
    "server_ip" : "192.168.0.2",
    "is_customized" : 1,
    "is_applied" : 0
  } ]
}
```

Example Responses

Status code: 200

Response to the request for updating the DNS server list.

```
{
  "data" : [ "100.95.150.83", "114.114.114.114", "223.5.5.5", "223.6.6.6", "119.29.29.29", "8.8.8.8",
"100.79.1.250", "100.79.1.240" ]
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00109003",
  "error_msg" : "{\"error_code\":\"00000012\"}"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Update the settings of the DNS resolver whose project ID is 2349ba469daf4b7daf268bb0261d18b0. Put the default server 8.8.8.8 in use. Stop using the non-default server 192.168.0.2.

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

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```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class UpdateDnsServersSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateDnsServersRequest request = new UpdateDnsServersRequest();
        UpdateDnsServersRequestBody body = new UpdateDnsServersRequestBody();
        List<UpdateDnsServersRequestBodyDnsServer> listbodyDnsServer = new ArrayList<>();
        listbodyDnsServer.add(
            new UpdateDnsServersRequestBodyDnsServer()
                .withServerIp("8.8.8.8")
                .withIsCustomized(0)
                .withIsApplied(1)
        );
        listbodyDnsServer.add(
            new UpdateDnsServersRequestBodyDnsServer()
                .withServerIp("192.168.0.2")
                .withIsCustomized(1)
                .withIsApplied(0)
        );
        body.withDnsServer(listbodyDnsServer);
        request.withBody(body);
        try {
            UpdateDnsServersResponse response = client.updateDnsServers(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());
        }
    }
}
```

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Python

Update the settings of the DNS resolver whose project ID is 2349ba469daf4b7daf268bb0261d18b0. Put the default server 8.8.8.8 in use. Stop using the non-default server 192.168.0.2.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = UpdateDnsServersRequest()
        listDnsServerbody = [
            UpdateDnsServersRequestBodyDnsServer(
                server_ip="8.8.8.8",
                is_customized=0,
                is_applied=1
            ),
            UpdateDnsServersRequestBodyDnsServer(
                server_ip="192.168.0.2",
                is_customized=1,
                is_applied=0
            )
        ]
        request.body = UpdateDnsServersRequestBody(
            dns_server=listDnsServerbody
        )
        response = client.update_dns_servers(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

Update the settings of the DNS resolver whose project ID is 2349ba469daf4b7daf268bb0261d18b0. Put the default server 8.8.8.8 in use. Stop using the non-default server 192.168.0.2.

```
package main

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

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```
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateDnsServersRequest{}
    var listDnsServerbody = []model.UpdateDnsServersRequestBodyDnsServer{
        {
            ServerIp: "8.8.8.8",
            IsCustomized: int32(0),
            IsApplied: int32(1),
        },
        {
            ServerIp: "192.168.0.2",
            IsCustomized: int32(1),
            IsApplied: int32(0),
        },
    }
    request.Body = &model.UpdateDnsServersRequestBody{
        DnsServer: listDnsServerbody,
    }
    response, err := client.UpdateDnsServers(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Response to the request for updating the DNS server list.
400	Bad Request

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Status Code	Description
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error: Internal system error.

Error Codes

See **Error Codes**.

4.7.5 Querying the Domain Name Group List

Function

This API is used to query the domain name group list.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/domain-sets

Table 4-397 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-398 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, **object_id** is the protected object ID on the Internet border. If the value of **type** is **1**, **object_id** is the protected object ID on the VPC border. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).

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Parameter	Mandatory	Type	Description
key_word	No	String	Keyword, which can be the domain name group name or description.
domain_set_type	No	Integer	Domain name group typ: **0** (application domain name group), **1** (network domain name group).
config_status	No	Integer	Configuration status: **-1** (unconfigured), **0** (configuration failed), **1** (configuration succeeded), **2** (configuring), **3** (normal), or **4** (abnormal).

Request Parameters

Table 4-399 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-400 Response body parameters

Parameter	Type	Description
data	**ListDomainsetsResponseData** object	Returned data for querying the domain name group list.

Table 4-401 ListDomainsetsResponseData

Parameter	Type	Description
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.

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Parameter	Type	Description
offset	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
total	Integer	Total number of domain name groups.
records	Array of **DomainSetVo** objects	Domain name group list.

Table 4-402 DomainSetVo

Parameter	Type	Description
set_id	String	Domain name group ID.
name	String	Domain name group name.
description	String	Domain name group description.
ref_count	Integer	Number of times a domain name group is referenced by rules.
domain_set_type	Integer	Domain name group typ: **0** (application domain name group), **1** (network domain name group).
config_status	Integer	Configuration status: **-1** (unconfigured), **0** (configuration failed), **1** (configuration succeeded), **2** (configuring), **3** (normal), or **4** (abnormal).
rules	Array of **UseRuleVO** objects	Used rule ID list.

Table 4-403 UseRuleVO

Parameter	Type	Description
id	String	Rule ID
name	String	Rule name.

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Example Requests

Query the domain name group list of firewall 546af3f8-88e9-47f2-a205-2346d7090925 in project 9d80d070b6d44942af73c9c3d38e0429. The protected object ID is ae42418e-f077-41a0-9d3b-5b2f5ad9102b.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/domain-sets?
fw_instance_id=546af3f8-88e9-47f2-
a205-2346d7090925&enterprise_project_id=default&limit=50&offset=0&object_id=ae42418e-
f077-41a0-9d3b-5b2f5ad9102b
```

Example Responses

Status code: 200

Return value for querying the domain name group list.

```
{
  "data" : {
    "limit" : 50,
    "offset" : 0,
    "records" : [ {
      "config_status" : 3,
      "description" : "",
      "domain_set_type" : 0,
      "name" : "ccdd",
      "ref_count" : 0,
      "rules" : [ ],
      "set_id" : "e43db369-a863-45ed-8850-58d6b571b1ab"
    } ],
    "total" : 1
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListDomainSetsSolution {

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

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
```

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```
            .withAk(ak)
            .withSk(sk);

        CfwClient client = CfwClient.newBuilder()
            .withCredential(auth)
            .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
            .build();
        ListDomainSetsRequest request = new ListDomainSetsRequest();
        try {
            ListDomainSetsResponse response = client.listDomainSets(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListDomainSetsRequest()
        response = client.list_domain_sets(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"
```

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```
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value for querying the domain name group list.

Error Codes

See **Error Codes**.

4.7.6 Querying the DNS Server List

Function

This API is used to query the DNS server list.

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Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/dns/servers

Table 4-404 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-405 Query Parameters

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

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Request Parameters

Table 4-406 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-407 Response body parameters

Parameter	Type	Description
data	Array of **DnsServersResponseDTO** objects	DNS server list.
total	Integer	Total number of DNS servers.

Table 4-408 DnsServersResponseDTO

Parameter	Type	Description
id	Integer	Domain name server ID.
is_applied	Integer	Whether the DNS server is applied: **0** (no), **1** (yes).
is_customized	Integer	Whether the DNS server is user-defined: **0** (no), **1** (yes).
server_ip	String	DNS server IP address.
health_check_domain_name	String	Health check domain name.

Example Requests

Obtain the DNS server list of project 2349ba469daf4b7daf268bb0261d18b0.

```
https://{Endpoint}/v1/2349ba469daf4b7daf268bb0261d18b0/dns/servers?
fw_instance_id=80e0f2df-24fd-49c2-8398-11f9a0299b3e
```

Example Responses

Status code: 200

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Response to the request for obtaining DNS servers.

```
{
  "data" : [ {
    "health_check_domain_name" : "www.baidu.com",
    "id" : 7106,
    "is_applied" : 1,
    "is_customized" : 0,
    "server_ip" : "114.114.114.114",
    "status" : 2
  }, {
    "health_check_domain_name" : "www.baidu.com",
    "id" : 7111,
    "is_applied" : 0,
    "is_customized" : 0,
    "server_ip" : "119.29.29.29"
  }, {
    "health_check_domain_name" : "www.baidu.com",
    "id" : 7107,
    "is_applied" : 1,
    "is_customized" : 0,
    "server_ip" : "223.5.5.5",
    "status" : 2
  } ],
  "total" : 3
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListDnsServersSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListDnsServersRequest request = new ListDnsServersRequest();
        try {
```

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

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListDnsServersRequest()
        response = client.list_dns_servers(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/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.
```

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```
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Response to the request for obtaining DNS servers.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error: Internal system error.

Error Codes

See **Error Codes**.

4.7.7 Querying the IP Address for Domain Name Resolution

Function

This API is used to check the validity of a domain name.

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Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/domain/parse/{domain_name}

Table 4-409 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
domain_name	Yes	String	Domain name. Example: www.example.com

Table 4-410 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
address_type	No	Integer	Address type: **0** (IPv4), **1** (IPv6).

Request Parameters

Table 4-411 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Response Parameters

Status code: 200

Table 4-412 Response body parameters

Parameter	Type	Description
data	Array of strings	IP address list for domain name resolution.

Status code: 400

Table 4-413 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Check whether the domain name **ceshi.com** of project 5c69cf330cda42369cbd726ee1bc5e76 is valid.

```
https://{Endpoint}/v1/5c69cf330cda42369cbd726ee1bc5e76/domain/parse/ceshi.com
```

Example Responses

Status code: 200

Return value for querying domain name validity.

```
{
  "data" : [ "192.168.88.85", "192.168.88.50", "192.168.88.22", "192.168.88.87", "192.168.88.86",
"192.168.5.1", "192.168.88.88", "192.168.88.90", "192.168.88.83", "192.168.88.84" ]
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00109004",
  "error_msg" : "HTTP request error."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

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```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListDomainParseDetailSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListDomainParseDetailRequest request = new ListDomainParseDetailRequest();
        request.withDomainName("{domain_name}");
        try {
            ListDomainParseDetailResponse response = client.listDomainParseDetail(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

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

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

    try:
        request = ListDomainParseDetailRequest()
        request.domain_name = "{domain_name}"
        response = client.list_domain_parse_detail(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

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Status Codes

Status Code	Description
200	Return value for querying domain name validity.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error: Internal system error.

Error Codes

See **Error Codes**.

4.7.8 Obtain the list of domain names in a domain name group

Function

Obtain the list of domain names in a domain name group

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/domain-set/domains/{domain_set_id}

Table 4-414 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Parameter	Mandatory	Type	Description
domain_set_id	Yes	String	Domain name group ID, which can be obtained by calling the **API for querying the domain name group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

Table 4-415 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
domain_name	No	String	Domain name. Example: www.example.com

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Parameter	Mandatory	Type	Description
object_Id	No	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, **object_id** is the protected object ID on the Internet border. If the value of **type** is **1**, **object_id** is the protected object ID on the VPC border. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).

Request Parameters

Table 4-416 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-417 Response body parameters

Parameter	Type	Description
data	**ListDomainResponseData** object	Returned data for querying the domain name list.

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Table 4-418 ListDomainResponseData

Parameter	Type	Description
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
project_id	String	Project ID.
records	Array of **DomainInfo** objects	Domain name information list.
set_id	String	Domain name group ID.
total	Integer	Total number of domain names.

Table 4-419 DomainInfo

Parameter	Type	Description
domain_address_id	String	Domain name ID.
domain_name	String	Domain name. Example: www.example.com
description	String	Domain name description.

Example Requests

Query the domain name list of project 14181c1245cf4fd786824efe1e2b9388. The domain name group ID is 78719348-6d79-477e-acec-676a29842ab2, and the firewall ID is 546af3f8-88e9-47f2-a205-2346d7090925.

```
https://{Endpoint}/v1/14181c1245cf4fd786824efe1e2b9388/domain-set/domains/78719348-6d79-477e-acec-676a29842ab2?fw_instance_id=546af3f8-88e9-47f2-a205-2346d7090925&enterprise_project_id=default&limit=200&offset=0
```

Example Responses

Status code: 200

The return value of the domain name list is queried

```
{
  "data" : {
    "limit" : 200,
    "offset" : 0,
```

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```
  "project_id" : "14181c1245cf4fd786824efe1e2b9388",
  "records" : [ {
    "description" : "",
    "domain_address_id" : "6718279e-9761-4623-a48d-b16957b19e1b",
    "domain_name" : "www.example.com"
  } ],
  "set_id" : "78719348-6d79-477e-acec-676a29842ab2",
  "total" : 1
 }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListDomainsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListDomainsRequest request = new ListDomainsRequest();
        request.withDomainSetId("{domain_set_id}");
        try {
            ListDomainsResponse response = client.listDomains(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());
        }
    }
}
```

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Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListDomainsRequest()
        request.domain_set_id = "{domain_set_id}"
        response = client.list_domains(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
```

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```
        WithCredential(auth).
        Build())

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

More

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

Status Codes

Status Code	Description
200	The return value of the domain name list is queried

Error Codes

See **Error Codes**.

4.7.9 Adding a Domain Name List

Function

This API is used to add a domain name list.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/domain-set/domains/{set_id}

Table 4-420 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Parameter	Mandatory	Type	Description
set_id	Yes	String	Domain name group ID, which can be obtained by calling the **API for querying the domain name group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

Table 4-421 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-422 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Table 4-423 Request body parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall instance ID, which is automatically generated after a CFW instance is created. You can obtain the ID by calling the **API for querying a firewall instance**.
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, **object_id** is the protected object ID on the Internet border. If the value of **type** is **1**, **object_id** is the protected object ID on the VPC border. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
domain_names	Yes	Array of **DomainSetInfoDto** objects	Domain name list.

Table 4-424 DomainSetInfoDto

Parameter	Mandatory	Type	Description
domain_name	Yes	String	Domain name. Example: www.example.com
description	No	String	Domain name description.

Response Parameters

Status code: 200

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Table 4-425 Response body parameters

Parameter	Type	Description
data	**DomainSetResponseData** object	Return data of a domain name group.

Table 4-426 DomainSetResponseData

Parameter	Type	Description
id	String	Domain name group ID.
name	String	Domain name group name.

Example Requests

Add domain names **www.bnm.com** and **www.vbc.com** to the domain name group of project 14181c1245cf4fd786824efe1e2b9388. The firewall ID is 546af3f8-88e9-47f2-a205-2346d7090925, protected object ID is ae42418e-f077-41a0-9d3b-5b2f5ad9102b, and domain name group ID is 78719348-6d79-477e-acec-676a29842ab2.

```
https://{Endpoint}v1/14181c1245cf4fd786824efe1e2b9388/domain-set/domains/78719348-6d79-477e-acec-676a29842ab2?fw_instance_id=546af3f8-88e9-47f2-a205-2346d7090925&enterprise_project_id=default
```

```
{
  "domain_names" : [ {
    "description" : "",
    "domain_name" : "www.bnm.com"
  }, {
    "description" : "",
    "domain_name" : "www.vbc.com"
  } ],
  "fw_instance_id" : "546af3f8-88e9-47f2-a205-2346d7090925",
  "object_id" : "ae42418e-f077-41a0-9d3b-5b2f5ad9102b"
}
```

Example Responses

Status code: 200

Return value for adding a domain names.

```
{
  "data" : {
    "id" : "78719348-6d79-477e-acec-676a29842ab2",
    "name" : "test26"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

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Java

Add domain names **www.bnm.com** and **www.vbc.com** to the domain name group of project 14181c1245cf4fd786824efe1e2b9388. The firewall ID is 546af3f8-88e9-47f2-a205-2346d7090925, protected object ID is ae42418e-f077-41a0-9d3b-5b2f5ad9102b, and domain name group ID is 78719348-6d79-477e-acec-676a29842ab2.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class AddDomainsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        AddDomainsRequest request = new AddDomainsRequest();
        request.withSetId("{set_id}");
        AddDomainListDto body = new AddDomainListDto();
        List<DomainSetInfoDto> listbodyDomainNames = new ArrayList<>();
        listbodyDomainNames.add(
            new DomainSetInfoDto()
                .withDomainName("www.bnm.com")
                .withDescription("")
        );
        listbodyDomainNames.add(
            new DomainSetInfoDto()
                .withDomainName("www.vbc.com")
                .withDescription("")
        );
        body.withDomainNames(listbodyDomainNames);
        body.withObjectId("ae42418e-f077-41a0-9d3b-5b2f5ad9102b");
        body.withFwInstanceId("546af3f8-88e9-47f2-a205-2346d7090925");
        request.withBody(body);
        try {
            AddDomainsResponse response = client.addDomains(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
```

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```
        } 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

Add domain names **www.bnm.com** and **www.vbc.com** to the domain name group of project 14181c1245cf4fd786824efe1e2b9388. The firewall ID is 546af3f8-88e9-47f2-a205-2346d7090925, protected object ID is ae42418e-f077-41a0-9d3b-5b2f5ad9102b, and domain name group ID is 78719348-6d79-477e-acec-676a29842ab2.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = AddDomainsRequest()
        request.set_id = "{set_id}"
        listDomainNamesbody = [
            DomainSetInfoDto(
                domain_name="www.bnm.com",
                description=""
            ),
            DomainSetInfoDto(
                domain_name="www.vbc.com",
                description=""
            )
        ]
        request.body = AddDomainListDto(
            domain_names=listDomainNamesbody,
            object_id="ae42418e-f077-41a0-9d3b-5b2f5ad9102b",
            fw_instance_id="546af3f8-88e9-47f2-a205-2346d7090925"
        )
        response = client.add_domains(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

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Go

Add domain names **www.bnm.com** and **www.vbc.com** to the domain name group of project 14181c1245cf4fd786824efe1e2b9388. The firewall ID is 546af3f8-88e9-47f2-a205-2346d7090925, protected object ID is ae42418e-f077-41a0-9d3b-5b2f5ad9102b, and domain name group ID is 78719348-6d79-477e-acec-676a29842ab2.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.AddDomainsRequest{}
    request.SetId = "{set_id}"
    descriptionDomainNames:= ""
    descriptionDomainNames1:= ""
    var listDomainNamesbody = []model.DomainSetInfoDto{
        {
            DomainName: "www.bnm.com",
            Description: &descriptionDomainNames,
        },
        {
            DomainName: "www.vbc.com",
            Description: &descriptionDomainNames1,
        },
    }
    request.Body = &model.AddDomainListDto{
        DomainNames: listDomainNamesbody,
        ObjectId: "ae42418e-f077-41a0-9d3b-5b2f5ad9102b",
        FwInstanceId: "546af3f8-88e9-47f2-a205-2346d7090925",
    }
    response, err := client.AddDomains(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

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More

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

Status Codes

Status Code	Description
200	Return value for adding a domain names.

Error Codes

See **Error Codes**.

4.7.10 Deleting a Domain Name List

Function

This API is used to delete a domain name list.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v1/{project_id}/domain-set/domains/{set_id}

Table 4-427 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.
set_id	Yes	String	Domain name group ID, which can be obtained by calling the **API for querying the domain name group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

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Table 4-428 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-429 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Table 4-430 Request body parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, **object_id** is the protected object ID on the Internet border. If the value of **type** is **1**, **object_id** is the protected object ID on the VPC border. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
domain_address_ids	Yes	Array of strings	Domain name ID list. Domain name IDs can be obtained by calling the **API for querying the domain name list under a domain name group**. Find the value in **data.records.domain_address_id** (The period [.] is used to separate different levels of objects).

Response Parameters

Status code: 200

Table 4-431 Response body parameters

Parameter	Type	Description
data	**DomainSetResponseData** object	Returned data for deleting a domain name list.

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Table 4-432 DomainSetResponseData

Parameter	Type	Description
id	String	Domain name group ID.
name	String	Domain name group name.

Example Requests

In project 14181c1245cf4fd786824efe1e2b9388, delete domain names from a domain name group. The firewall ID is 546af3f8-88e9-47f2-a205-2346d7090925, the protected object ID is ae42418e-f077-41a0-9d3b-5b2f5ad9102b, the domain name group ID is 78719348-6d79-477e-acec-676a29842ab2, and the domain list is "b9c23ad8-16d2-4f14-894f-29250c5d27e5", "c36f9462-467b-4303-9734-f9abc38ddb95".

```
https://{Endpoint}/v1/14181c1245cf4fd786824efe1e2b9388/domain-set/domains/78719348-6d79-477e-acec-676a29842ab2?fw_instance_id=546af3f8-88e9-47f2-a205-2346d7090925&enterprise_project_id=default

{
  "domain_address_ids" : [ "b9c23ad8-16d2-4f14-894f-29250c5d27e5", "c36f9462-467b-4303-9734-f9abc38ddb95" ],
  "object_id" : "ae42418e-f077-41a0-9d3b-5b2f5ad9102b"
}
```

Example Responses

Status code: 200

Return value for deleting a domain name list.

```
{
  "data" : {
    "id" : "78719348-6d79-477e-acec-676a29842ab2",
    "name" : "test26"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

In project 14181c1245cf4fd786824efe1e2b9388, delete domain names from a domain name group. The firewall ID is 546af3f8-88e9-47f2-a205-2346d7090925, the protected object ID is ae42418e-f077-41a0-9d3b-5b2f5ad9102b, the domain name group ID is 78719348-6d79-477e-acec-676a29842ab2, and the domain list is "b9c23ad8-16d2-4f14-894f-29250c5d27e5", "c36f9462-467b-4303-9734-f9abc38ddb95".

```
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;
```

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```
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class DeleteDomainsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteDomainsRequest request = new DeleteDomainsRequest();
        request.withSetId("{set_id}");
        DeleteDomainDto body = new DeleteDomainDto();
        List<String> listbodyDomainAddressIds = new ArrayList<>();
        listbodyDomainAddressIds.add("b9c23ad8-16d2-4f14-894f-29250c5d27e5");
        listbodyDomainAddressIds.add("c36f9462-467b-4303-9734-f9abc38ddb95");
        body.withDomainAddressIds(listbodyDomainAddressIds);
        body.withObjectId("ae42418e-f077-41a0-9d3b-5b2f5ad9102b");
        request.withBody(body);
        try {
            DeleteDomainsResponse response = client.deleteDomains(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

In project 14181c1245cf4fd786824efe1e2b9388, delete domain names from a domain name group. The firewall ID is 546af3f8-88e9-47f2-a205-2346d7090925, the protected object ID is ae42418e-f077-41a0-9d3b-5b2f5ad9102b, the domain name group ID is 78719348-6d79-477e-acec-676a29842ab2, and the domain list is "b9c23ad8-16d2-4f14-894f-29250c5d27e5", "c36f9462-467b-4303-9734-f9abc38ddb95".

```
# coding: utf-8

import os
```

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```
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = DeleteDomainsRequest()
        request.set_id = "{set_id}"
        listDomainAddressIdsbody = [
            "b9c23ad8-16d2-4f14-894f-29250c5d27e5",
            "c36f9462-467b-4303-9734-f9abc38ddb95"
        ]
        request.body = DeleteDomainDto(
            domain_address_ids=listDomainAddressIdsbody,
            object_id="ae42418e-f077-41a0-9d3b-5b2f5ad9102b"
        )
        response = client.delete_domains(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

In project 14181c1245cf4fd786824efe1e2b9388, delete domain names from a domain name group. The firewall ID is 546af3f8-88e9-47f2-a205-2346d7090925, the protected object ID is ae42418e-f077-41a0-9d3b-5b2f5ad9102b, the domain name group ID is 78719348-6d79-477e-acec-676a29842ab2, and the domain list is "b9c23ad8-16d2-4f14-894f-29250c5d27e5", "c36f9462-467b-4303-9734-f9abc38ddb95".

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/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")
```

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```
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteDomainsRequest{}
    request.SetId = "{set_id}"
    var listDomainAddressIdsbody = []string{
        "b9c23ad8-16d2-4f14-894f-29250c5d27e5",
        "c36f9462-467b-4303-9734-f9abc38ddb95",
    }
    request.Body = &model.DeleteDomainDto{
        DomainAddressIds: listDomainAddressIdsbody,
        ObjectId: "ae42418e-f077-41a0-9d3b-5b2f5ad9102b",
    }
    response, err := client.DeleteDomains(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for deleting a domain name list.

Error Codes

See **Error Codes**.

4.7.11 Viewing Domain Group Details

Function

This API is used to view the details about a domain name group.

Calling Method

For details, see **Calling APIs**.

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URI

GET /v1/{project_id}/domain-set/{domain_set_id}

Table 4-433 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.
domain_set_id	Yes	String	Domain name group ID, which can be obtained by calling the **API for querying the domain name group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). A URL domain name group cannot be resolved.

Table 4-434 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

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Request Parameters

Table 4-435 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-436 Response body parameters

Parameter	Type	Description
data	**DomainSetVo** object	Domain name details.

Table 4-437 DomainSetVo

Parameter	Type	Description
set_id	String	Domain name group ID.
name	String	Domain name group name.
description	String	Domain name group description.
ref_count	Integer	Number of times a domain name group is referenced by rules.
domain_set_type	Integer	Domain name group typ: **0** (application domain name group), **1** (network domain name group).
config_status	Integer	Configuration status: **-1** (unconfigured), **0** (configuration failed), **1** (configuration succeeded), **2** (configuring), **3** (normal), or **4** (abnormal).
rules	Array of **UseRuleVO** objects	Used rule ID list.

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Table 4-438 UseRuleVO

Parameter	Type	Description
id	String	Rule ID
name	String	Rule name.

Example Requests

Query the details about the domain name group whose ID is 7891eb51-009a-4e4e-ab15-e4290d9360b2, firewall ID is fced7179-64a4-4438-bc6d-b510a2da2f64, and project ID is 408972e72dcd4c1a9b033e955802a36b.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/domain-set/7891eb51-009a-4e4e-ab15-e4290d9360b2?fw_instance_id=fced7179-64a4-4438-bc6d-b510a2da2f64
```

Example Responses

Status code: 200

Response value of domain name group details.

```
{
  "data" : {
    "config_status" : 3,
    "domain_set_type" : 0,
    "name" : "Application group 2",
    "set_id" : "7891eb51-009a-4e4e-ab15-e4290d9360b2"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ShowDomainSetDetailSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowDomainSetDetailRequest request = new ShowDomainSetDetailRequest();
        request.withDomainSetId("{domain_set_id}");
        try {
            ShowDomainSetDetailResponse response = client.showDomainSetDetail(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ShowDomainSetDetailRequest()
        request.domain_set_id = "{domain_set_id}"
        response = client.show_domain_set_detail(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

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Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Response value of domain name group details.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

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Error Codes

See **Error Codes**.

4.7.12 Obtaining the DNS Resolution Result of a Domain Name

Function

This API is used to obtain the DNS resolution result of a domain name.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/domain/parse-ip-list/{domain_address_id}

Table 4-439 Path Parameters

Parameter	Mandatory	Type	Description
domain_address_id	Yes	String	Domain name ID. It can be obtained by calling the **API for querying the domain name list under a domain name group**. Find the value in **data.records.domain_address_id** (The period [.] is used to separate different levels of objects). This parameter is mandatory only for network domain name groups.
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-440 Query Parameters

Parameter	Mandatory	Type	Description
address_type	No	Integer	Address type: **0** (IPv4), **1** (IPv6).

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Parameter	Mandatory	Type	Description
domain_set_id	Yes	String	Domain name group ID, which can be obtained by calling the **API for querying the domain name group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects). This parameter is mandatory only for network domain name groups.
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-441 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-442 Response body parameters

Parameter	Type	Description
data	Array of strings	Domain name resolution data, including the domain name IP address list.

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Example Requests

Query the IP address list of the domain whose ID is a43a844e-26cf-4319-87c4-5c714888dbc5, firewall ID is fced7179-64a4-4438-bc6d-b510a2da2f64, domain name group ID is 2cd83033-67d0-4515-9d72-c40caa11e8c6, and project ID is 408972e72dcd4c1a9b033e955802a36b.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/domain/parse-ip-list/
a43a844e-26cf-4319-87c4-5c714888dbc5?fw_instance_id=fced7179-64a4-4438-bc6d-
b510a2da2f64&domain_set_id=2cd83033-67d0-4515-9d72-
c40caa11e8c6&domain_address_id=a43a844e-26cf-4319-87c4-5c714888dbc5
```

Example Responses

Status code: 200

IP address resolution data of a domain name.

```
{ }
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListDomainParseIpSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListDomainParseIpRequest request = new ListDomainParseIpRequest();
        request.withDomainAddressId("{domain_address_id}");
        try {
            ListDomainParseIpResponse response = client.listDomainParseIp(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
```

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```
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListDomainParseIpRequest()
        request.domain_address_id = "{domain_address_id}"
        response = client.list_domain_parse_ip(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/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
```

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```
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	IP address resolution data of a domain name.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.7.13 Deleting Domain Groups in Batches

Function

This API is used to delete domain name groups in batches.

Calling Method

For details, see **Calling APIs**.

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URI

POST /v1/{project_id}/domain-sets/batch-delete

Table 4-443 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-444 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-445 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

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Table 4-446 Request body parameters

Parameter	Mandatory	Type	Description
object_id	No	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, **object_id** is the protected object ID on the Internet border. If the value of **type** is **1**, **object_id** is the protected object ID on the VPC border. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
set_ids	No	Array of strings	Domain name group ID list. A domain name ID can be obtained by calling the **API for querying the domain name group list**. Find the value in **data.records.set_id** (The period [.] is used to separate different levels of objects).

Response Parameters

Status code: 200

Table 4-447 Response body parameters

Parameter	Type	Description
data	**HttpBatchDeleteDomainSetResponseDatas** object	

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Table 4-448 HttpBatchDeleteDomainSetResponseDatas

Parameter	Type	Description
responseDatas	Array of **DomainSetId** objects	Return value for deleting domain name groups in batches.

Table 4-449 DomainSetId

Parameter	Type	Description
name	String	Domain group name.
id	String	Domain name group ID.

Example Requests

Delete domain groups in batches. The firewall ID is fced7179-64a4-4438-bc6d-b510a2da2f64, the target protected object ID is b71922fd-3539-421c-9317-c54ebc1bc4ea, the IDs of the domain groups to be deleted are 7d772766-6c44-4fa3-a140-8ddc7eac0fc5 and e17e24d2-bd7d-4e25-993c-38559d44a571, and the project ID is 408972e72dcd4c1a9b033e955802a36b.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/domain-sets/batch-delete

{
  "object_id" : "b71922fd-3539-421c-9317-c54ebc1bc4ea",
  "set_ids" : [ "7d772766-6c44-4fa3-a140-8ddc7eac0fc5", "e17e24d2-bd7d-4e25-993c-38559d44a571" ]
}
```

Example Responses

Status code: 200

Response to the request for deleting domain groups in batches.

```
{
  "data" : {
    "responseDatas" : [ {
      "name" : "9",
      "id" : "7d772766-6c44-4fa3-a140-8ddc7eac0fc5"
    }, {
      "name" : "8",
      "id" : "e17e24d2-bd7d-4e25-993c-38559d44a571"
    } ]
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

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Java

Delete domain groups in batches. The firewall ID is fced7179-64a4-4438-bc6d-b510a2da2f64, the target protected object ID is b71922fd-3539-421c-9317-c54ebc1bc4ea, the IDs of the domain groups to be deleted are 7d772766-6c44-4fa3-a140-8ddc7eac0fc5 and e17e24d2-bd7d-4e25-993c-38559d44a571, and the project ID is 408972e72dcd4c1a9b033e955802a36b.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class BatchDeleteDomainSetSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        BatchDeleteDomainSetRequest request = new BatchDeleteDomainSetRequest();
        BatchDeleteDomainSetsDto body = new BatchDeleteDomainSetsDto();
        List<String> listbodySetIds = new ArrayList<>();
        listbodySetIds.add("7d772766-6c44-4fa3-a140-8ddc7eac0fc5");
        listbodySetIds.add("e17e24d2-bd7d-4e25-993c-38559d44a571");
        body.withSetIds(listbodySetIds);
        body.withObjectId("b71922fd-3539-421c-9317-c54ebc1bc4ea");
        request.withBody(body);
        try {
            BatchDeleteDomainSetResponse response = client.batchDeleteDomainSet(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());
        }
    }
}
```

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Python

Delete domain groups in batches. The firewall ID is fced7179-64a4-4438-bc6d-b510a2da2f64, the target protected object ID is b71922fd-3539-421c-9317-c54ebc1bc4ea, the IDs of the domain groups to be deleted are 7d772766-6c44-4fa3-a140-8ddc7eac0fc5 and e17e24d2-bd7d-4e25-993c-38559d44a571, and the project ID is 408972e72dcd4c1a9b033e955802a36b.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = BatchDeleteDomainSetRequest()
        listSetIdsbody = [
            "7d772766-6c44-4fa3-a140-8ddc7eac0fc5",
            "e17e24d2-bd7d-4e25-993c-38559d44a571"
        ]
        request.body = BatchDeleteDomainSetsDto(
            set_ids=listSetIdsbody,
            object_id="b71922fd-3539-421c-9317-c54ebc1bc4ea"
        )
        response = client.batch_delete_domain_set(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

Delete domain groups in batches. The firewall ID is fced7179-64a4-4438-bc6d-b510a2da2f64, the target protected object ID is b71922fd-3539-421c-9317-c54ebc1bc4ea, the IDs of the domain groups to be deleted are 7d772766-6c44-4fa3-a140-8ddc7eac0fc5 and e17e24d2-bd7d-4e25-993c-38559d44a571, and the project ID is 408972e72dcd4c1a9b033e955802a36b.

```
package main

import (
    "fmt"
```

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```
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.BatchDeleteDomainSetRequest{}
    var listSetIdsbody = []string{
        "7d772766-6c44-4fa3-a140-8ddc7eac0fc5",
        "e17e24d2-bd7d-4e25-993c-38559d44a571",
    }
    objectIdBatchDeleteDomainSetsDto:= "b71922fd-3539-421c-9317-c54ebc1bc4ea"
    request.Body = &model.BatchDeleteDomainSetsDto{
        SetIds: &listSetIdsbody,
        ObjectId: &objectIdBatchDeleteDomainSetsDto,
    }
    response, err := client.BatchDeleteDomainSet(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Response to the request for deleting domain groups in batches.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

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Error Codes

See **Error Codes**.

4.8 IPS Management

4.8.1 Querying the Status of the IPS Feature

Function

This API is used to query the status of the IPS feature.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/ips/switch

Table 4-450 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-451 Query Parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border. Here, a protected object ID whose **type** is **0** is used. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

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Request Parameters

Table 4-452 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-453 Response body parameters

Parameter	Type	Description
data	**IpsSwitchResponseDTO** object	Returned value for querying the IPS switch.

Table 4-454 IpsSwitchResponseDTO

Parameter	Type	Description
id	String	IPS switch ID. The value is the ID of the protected object at the Internet border, which can be obtained by calling the **API for querying a firewall instance**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects).
basic_defense_status	Integer	Basic defense status: **0** (disabled), **1** (enabled).
virtual_patches_status	Integer	Virtual patch status: **0** (disabled), **1** (enabled).

Example Requests

Query the patch status of the current user based on the user ID 14181c1245cf4fd786824efe1e2b9388 and load the virtual patch status on the intrusion prevention page.

```
https://{Endpoint}/v1/14181c1245cf4fd786824efe1e2b9388/ips/switch?fw_instance_id=546af3f8-88e9-47f2-a205-2346d7090925&enterprise_project_id=default&object_id=cfebd347-b655-4b84-b938-3c54317599b2
```

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Example Responses

Status code: 200

Return value for querying the IPS switch.

```
{
  "data" : {
    "basic_defense_status" : 1,
    "id" : "cefe80aa-83e4-4308-99aa-f9b6c816de00",
    "virtual_patches_status" : 0
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListIpsSwitchStatusSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListIpsSwitchStatusRequest request = new ListIpsSwitchStatusRequest();
        try {
            ListIpsSwitchStatusResponse response = client.listIpsSwitchStatus(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());
```

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```
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListIpsSwitchStatusRequest()
        response = client.list_ips_switch_status(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

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```
    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value for querying the IPS switch.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.8.2 Changing the IPS Feature Status

Function

This API is used to enable or disable the feature.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/ips/switch

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Table 4-455 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-456 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-457 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Table 4-458 Request body parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border. Here, a protected object ID whose **type** is **0** is used. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
ips_type	Yes	Integer	Patch type. Its value can only be **2** (virtual patch).
status	Yes	Integer	IPS feature status: **0** (disabled), **1** (enabled).

Response Parameters

Status code: 200

Table 4-459 Response body parameters

Parameter	Type	Description
data	**data** object	Return value for modifying the IPS protection mode.

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Table 4-460 data

Parameter	Type	Description
id	String	Protected object ID.

Example Requests

Enable or disable the basic patch and virtual patch of the engine on the user side. The following example shows how to enable the basic patch function for protected object 1530de8a-522d-4771-9067-9fa4e2f53b48 whose project ID is 14181c1245cf4fd786824efe1e2b9388.

```
https://{Endpoint}/v1/14181c1245cf4fd786824efe1e2b9388/ips/switch?fw_instance_id=546af3f8-88e9-47f2-a205-2346d7090925&enterprise_project_id=default

{
  "ips_type" : 1,
  "object_id" : "1530de8a-522d-4771-9067-9fa4e2f53b48",
  "status" : 1
}
```

Example Responses

Status code: 200

Return value for changing the IPS feature status.

```
{
  "data" : {
    "id" : "1530de8a-522d-4771-9067-9fa4e2f53b48"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Enable or disable the basic patch and virtual patch of the engine on the user side. The following example shows how to enable the basic patch function for protected object 1530de8a-522d-4771-9067-9fa4e2f53b48 whose project ID is 14181c1245cf4fd786824efe1e2b9388.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ChangeIpsSwitchStatusSolution {

    public static void main(String[] args) {
```

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ChangeIpsSwitchStatusRequest request = new ChangeIpsSwitchStatusRequest();
        IpsSwitchDTO body = new IpsSwitchDTO();
        body.withStatus(1);
        body.withIpsType(IpsSwitchDTO.IpsTypeEnum.NUMBER_1);
        body.withObjectId("1530de8a-522d-4771-9067-9fa4e2f53b48");
        request.withBody(body);
        try {
            ChangeIpsSwitchStatusResponse response = client.changeIpsSwitchStatus(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

Enable or disable the basic patch and virtual patch of the engine on the user side. The following example shows how to enable the basic patch function for protected object 1530de8a-522d-4771-9067-9fa4e2f53b48 whose project ID is 14181c1245cf4fd786824efe1e2b9388.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

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

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

    try:
        request = ChangeIpsSwitchStatusRequest()
        request.body = IpsSwitchDTO(
            status=1,
            ips_type=1,
            object_id="1530de8a-522d-4771-9067-9fa4e2f53b48"
        )
        response = client.change_ips_switch_status(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

Enable or disable the basic patch and virtual patch of the engine on the user side. The following example shows how to enable the basic patch function for protected object 1530de8a-522d-4771-9067-9fa4e2f53b48 whose project ID is 14181c1245cf4fd786824efe1e2b9388.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ChangeIpsSwitchStatusRequest{}
    request.Body = &model.IpsSwitchDto{
        Status: int32(1),
        IpsType: model.GetIpsSwitchDtoIpsTypeEnum().E_1,
        ObjectId: "1530de8a-522d-4771-9067-9fa4e2f53b48",
    }
    response, err := client.ChangeIpsSwitchStatus(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
```

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```
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for changing the IPS feature status.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.8.3 Querying a Protection Mode

Function

This API is used to query a protection mode.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/ips/protect

Table 4-461 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-462 Query Parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border. Here, a protected object ID whose **type** is **0** is used. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

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Request Parameters

Table 4-463 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-464 Response body parameters

Parameter	Type	Description
data	**IpsProtectModeObject** object	Returned value for querying the IPS protection mode.

Table 4-465 IpsProtectModeObject

Parameter	Type	Description
id	String	IPS protection mode ID. The value is the ID of the protected object, which can be obtained by calling the **API for querying a firewall instance**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects).
mode	Integer	IPS protection mode: **0** (observation mode), **1** (strict mode), 2 (medium mode), or 3 (loose mode).

Status code: 400

Table 4-466 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

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Example Requests

Query the IPS protection mode of project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/ips/protect?
fw_instance_id=546af3f8-88e9-47f2-
a205-2346d7090925&enterprise_project_id=default&object_id=cfebd347-b655-4b84-b938-3c54317599b2
```

Example Responses

Status code: 200

Return value for a protection mode query

```
{
  "data" : {
    "id" : "d5b75aba-dfca-40e4-99dd-ed56578e8e48",
    "mode" : 0
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.0020016",
  "error_msg" : "Incorrect instance status."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListIpsProtectModeSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
```

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```
            .withCredential(auth)
            .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
            .build();
        ListIpsProtectModeRequest request = new ListIpsProtectModeRequest();
        try {
            ListIpsProtectModeResponse response = client.listIpsProtectMode(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListIpsProtectModeRequest()
        response = client.list_ips_protect_mode(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)
```

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value for a protection mode query
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

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4.8.4 Changing the Protection Mode

Function

This API is used to change the protection mode.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/ips/protect

Table 4-467 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-468 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

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Request Parameters

Table 4-469 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-470 Request body parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish Internet border protection from VPC border protection after a CFW instance is created. You can obtain the ID by calling the **API for querying a firewall instance**. If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border.
mode	Yes	Integer	IPS protection mode: **0** (observation mode), **1** (strict mode), 2 (medium mode), or 3 (loose mode).

Response Parameters

Status code: 200

Table 4-471 Response body parameters

Parameter	Type	Description
data	**data** object	Return value for modifying the IPS protection mode.

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Table 4-472 data

Parameter	Type	Description
id	String	Protected object ID.

Status code: 400

Table 4-473 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Set the protection mode to **Interception mode - strict** for the protected object whose ID is cfebd347-b655-4b84-b938-3c54317599b2 in the project 9d80d070b6d44942af73c9c3d38e0429.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/ips/protect

{
  "object_id" : "cfebd347-b655-4b84-b938-3c54317599b2",
  "mode" : 1
}
```

Example Responses

Status code: 200

Request body for modifying the IPS protection mode.

```
{
  "data" : {
    "id" : "cfebd347-b655-4b84-b938-3c54317599b2"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.0020016",
  "error_msg" : "Incorrect instance status."
}
```

SDK Sample Code

The SDK sample code is as follows.

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Java

Set the protection mode to **Interception mode - strict** for the protected object whose ID is cfebd347-b655-4b84-b938-3c54317599b2 in the project 9d80d070b6d44942af73c9c3d38e0429.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ChangeIpsProtectModeSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ChangeIpsProtectModeRequest request = new ChangeIpsProtectModeRequest();
        IpsProtectDTO body = new IpsProtectDTO();
        body.withMode(1);
        body.withObjectId("cfebd347-b655-4b84-b938-3c54317599b2");
        request.withBody(body);
        try {
            ChangeIpsProtectModeResponse response = client.changeIpsProtectMode(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

Set the protection mode to **Interception mode - strict** for the protected object whose ID is cfebd347-b655-4b84-b938-3c54317599b2 in the project 9d80d070b6d44942af73c9c3d38e0429.

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```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ChangeIpsProtectModeRequest()
        request.body = IpsProtectDTO(
            mode=1,
            object_id="cfebd347-b655-4b84-b938-3c54317599b2"
        )
        response = client.change_ips_protect_mode(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

Set the protection mode to **Interception mode - strict** for the protected object whose ID is cfebd347-b655-4b84-b938-3c54317599b2 in the project 9d80d070b6d44942af73c9c3d38e0429.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

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```
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ChangeIpsProtectModeRequest{}
    request.Body = &model.IpsProtectDto{
        Mode: int32(1),
        ObjectId: "cfebd347-b655-4b84-b938-3c54317599b2",
    }
    response, err := client.ChangeIpsProtectMode(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Request body for modifying the IPS protection mode.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.8.5 Changing the IPS Rule Mode

Function

This API is used to change the IPS rule mode.

Calling Method

For details, see **Calling APIs**.

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URI

POST /v1/{project_id}/ips-rule/mode

Table 4-474 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-475 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-476 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Table 4-477 Request body parameters

Parameter	Mandatory	Type	Description
ips_ids	Yes	Array of strings	IPS rule ID list. To obtain an IPS rule ID, **query the IPS rule list** and check the value of **data.records.ips_id** (The period [.] is used to separate different levels of objects).

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Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID.
status	Yes	String	IPS rule status. It can be **OBSERVE** (observation), **ENABLE** (interception), **CLOSE** (disabled), **DEFAULT** (restored to default), or **ALL_DEFAULT** (globally restored to default).

Response Parameters

Status code: 200

Table 4-478 Response body parameters

Parameter	Type	Description
data	**IpsRuleChangeRespBody** object	

Table 4-479 IpsRuleChangeRespBody

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error information.
group_id	String	Group ID.
id	String	Firewall ID.
ips_ids	Array of strings	IPS ID list.
result	Boolean	Modification result.

Status code: 201

Created

Example Requests

Change the IPS rule mode to **OBSERVE**.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/ips-rule/mode?
fw_instance_id=e743cfaf-8164-4807-aa13-
d893d83313cf&enterprise_project_id=fb55459c-41b3-47fc-885d-540946fddda4

{
  "object_id" : "1b90f031-0c7b-4f25-95e2-b6d9940d269e",
```

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```
  "status" : "OBSERVE",
  "ips_ids" : [ "340724" ]
}
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "group_id" : "e743cfaf-8164-4807-aa13-d893d83313cf",
    "id" : "e743cfaf-8164-4807-aa13-d893d83313cf",
    "ips_ids" : [ "340724" ],
    "result" : true
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Change the IPS rule mode to **OBSERVE**.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class ChangeIpsRuleModeSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ChangeIpsRuleModeRequest request = new ChangeIpsRuleModeRequest();
        IpsRuleChangeDto body = new IpsRuleChangeDto();
        List<String> listbodyIpsIds = new ArrayList<>();
        listbodyIpsIds.add("340724");
```

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```
        body.withStatus(IpsRuleChangeDto.StatusEnum.fromValue("OBSERVE"));
        body.withObjectId("1b90f031-0c7b-4f25-95e2-b6d9940d269e");
        body.withIpsIds(listbodyIpsIds);
        request.withBody(body);
        try {
            ChangeIpsRuleModeResponse response = client.changeIpsRuleMode(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

Change the IPS rule mode to **OBSERVE**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ChangeIpsRuleModeRequest()
        listIpsIdsbody = [
            "340724"
        ]
        request.body = IpsRuleChangeDto(
            status="OBSERVE",
            object_id="1b90f031-0c7b-4f25-95e2-b6d9940d269e",
            ips_ids=listIpsIdsbody
        )
        response = client.change_ips_rule_mode(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

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Go

Change the IPS rule mode to **OBSERVE**.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ChangeIpsRuleModeRequest{}
    var listIpsIdsbody = []string{
        "340724",
    }
    statusIpsRuleChangeDto:= model.GetIpsRuleChangeDtoStatusEnum().OBSERVE
    objectIdIpsRuleChangeDto:= "1b90f031-0c7b-4f25-95e2-b6d9940d269e"
    request.Body = &model.IpsRuleChangeDto{
        Status: &statusIpsRuleChangeDto,
        ObjectId: &objectIdIpsRuleChangeDto,
        IpsIds: &listIpsIdsbody,
    }
    response, err := client.ChangeIpsRuleMode(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

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Status Codes

Status Code	Description
200	OK
201	Created
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.8.6 Updating a Frequency IPS Rule

Function

This API is used to update a frequency IPS rule.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/advanced-ips-rule

Table 4-480 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-481 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

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Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-482 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Table 4-483 Request body parameters

Parameter	Mandatory	Type	Description
action	Yes	Integer	Action: **0** (only record logs), **1** (block sessions), **2** (block IP addresses).
ips_rule_id	Yes	String	Advanced IPS rule ID.
ips_rule_type	Yes	Integer	IPS rule type: **0** (sensitive directory scan), or **1** (reverse Xshell).
object_id	Yes	String	Protected object ID.
param	Yes	String	JSON string containing special parameters.
status	Yes	Integer	Frequency-based IPS rule status: **0** (disabled), **1** (enabled).

Response Parameters

Status code: 200

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Table 4-484 Response body parameters

Parameter	Type	Description
data	**ResponseData** object	Common response body.

Table 4-485 ResponseData

Parameter	Type	Description
id	String	Data ID.

Status code: 201

Created

Example Requests

Change the reverse shell detection configuration to **Observe | Conservative**.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/advanced-ips-rule?
fw_instance_id=e743cfaf-8164-4807-aa13-
d893d83313cf&enterprise_project_id=fb55459c-41b3-47fc-885d-540946fddda4

{
  "ips_rule_id" : "7d453586-524f-4a1d-a827-34d80389378f",
  "ips_rule_type" : 0,
  "action" : 0,
  "param" : "{\"mode\":0}",
  "status" : 1,
  "object_id" : "1b90f031-0c7b-4f25-95e2-b6d9940d269e"
}
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "id" : "7d453586-524f-4a1d-a827-34d80389378f"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Change the reverse shell detection configuration to **Observe | Conservative**.

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

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```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class UpdateAdvancedIpsRuleSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateAdvancedIpsRuleRequest request = new UpdateAdvancedIpsRuleRequest();
        AdvancedIpsRuleDto body = new AdvancedIpsRuleDto();
        body.withStatus(1);
        body.withParam("{"mode":0}");
        body.withObjectId("1b90f031-0c7b-4f25-95e2-b6d9940d269e");
        body.withIpsRuleType(0);
        body.withIpsRuleId("7d453586-524f-4a1d-a827-34d80389378f");
        body.withAction(0);
        request.withBody(body);
        try {
            UpdateAdvancedIpsRuleResponse response = client.updateAdvancedIpsRule(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

Change the reverse shell detection configuration to **Observe | Conservative**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *
```

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = UpdateAdvancedIpsRuleRequest()
        request.body = AdvancedIpsRuleDto(
            status=1,
            param="{"mode":0}",
            object_id="1b90f031-0c7b-4f25-95e2-b6d9940d269e",
            ips_rule_type=0,
            ips_rule_id="7d453586-524f-4a1d-a827-34d80389378f",
            action=0
        )
        response = client.update_advanced_ips_rule(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

Change the reverse shell detection configuration to **Observe | Conservative**.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
```

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```
        Build())

    request := &model.UpdateAdvancedIpsRuleRequest{}
    statusAdvancedIpsRuleDto:= int32(1)
    paramAdvancedIpsRuleDto:= "{"mode":0}"
    objectIdAdvancedIpsRuleDto:= "1b90f031-0c7b-4f25-95e2-b6d9940d269e"
    ipsRuleTypeAdvancedIpsRuleDto:= int32(0)
    ipsRuleIdAdvancedIpsRuleDto:= "7d453586-524f-4a1d-a827-34d80389378f"
    actionAdvancedIpsRuleDto:= int32(0)
    request.Body = &model.AdvancedIpsRuleDto{
        Status: &statusAdvancedIpsRuleDto,
        Param: &paramAdvancedIpsRuleDto,
        ObjectId: &objectIdAdvancedIpsRuleDto,
        IpsRuleType: &ipsRuleTypeAdvancedIpsRuleDto,
        IpsRuleId: &ipsRuleIdAdvancedIpsRuleDto,
        Action: &actionAdvancedIpsRuleDto,
    }
    response, err := client.UpdateAdvancedIpsRule(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	OK
201	Created
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.8.7 Querying Frequency IPS Rule Information

Function

This API is used to query frequency IPS rule information.

Calling Method

For details, see **Calling APIs**.

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URI

GET /v1/{project_id}/advanced-ips-rules

Table 4-486 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-487 Query Parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border. Here, a protected object ID whose **type** is **1** is used. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).

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Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-488 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-489 Response body parameters

Parameter	Type	Description
data	**AdvancedIpsRuleListVo** object	Return value for querying the frequency-based IPS rule list.

Table 4-490 AdvancedIpsRuleListVo

Parameter	Type	Description
advanced_ips_rules	Array of **AdvancedIpsRuleVo** objects	Frequency-based IPS rule list.
total	Integer	Total number of frequency-based IPS rules.

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Table 4-491 AdvancedIpsRuleVo

Parameter	Type	Description
action	Integer	Action: **0** (only record logs), **1** (block sessions), or **2** (block IP addresses).
ips_rule_id	String	Frequency-based IPS rule ID.
ips_rule_type	Integer	IPS rule type: **0** (sensitive directory scan), or **1** (reverse shell).
param	String	JSON string used to define a frequency-based IPS rule.
status	Integer	Frequency-based IPS rule status: **0** (disabled), **1** (enabled).

Example Requests

Query the frequency IPS rule information of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, the enterprise project ID is fb55459c-41b3-47fc-885d-540946fddda4, and the target object ID is 1b90f031-0c7b-4f25-95e2-b6d9940d269e.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/advanced-ips-rules?
fw_instance_id=e743cfaf-8164-4807-aa13-
d893d83313cf&enterprise_project_id=fb55459c-41b3-47fc-885d-540946fddda4&object_id=1b90f031-0c7b-4f
25-95e2-b6d9940d269e
```

Example Responses

Status code: 200

Return value for querying a frequency-based IPS rule.

```
{
  "data" : {
    "advanced_ips_rules" : [ {
      "action" : 0,
      "ips_rule_id" : "7d453586-524f-4a1d-a827-34d80389378f",
      "ips_rule_type" : 0,
      "param" : "{\"mode\":0}",
      "status" : 1
    }, {
      "action" : 0,
      "ips_rule_id" : "ed184f33-b4e2-4c42-9562-313563e60b7c",
      "ips_rule_type" : 1,
      "param" : "{\"threshold\":10}",
      "status" : 1
    } ],
    "total" : 2
  }
}
```

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Status Codes

Status Code	Description
200	Return value for querying a frequency-based IPS rule.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.8.8 Obtaining the IPS Rule List

Function

This API is used to obtain the IPS rule list.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/ips-rule

Table 4-492 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-493 Query Parameters

Parameter	Mandatory	Type	Description
affected_application_like	No	Integer	Keywords for querying affected objects, including **Others**, **Sun**, **Apache**, **IBM**, **VMware**, **WordPress**, **Adobe**, **Oracle**, and **Google Chrome**.

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Parameter	Mandatory	Type	Description
create_time	No	Integer	Year when an IPS rule was created.
fw_instance_id	No	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
ips_cve_like	No	Integer	Keyword for querying the CVE ID. A CVE ID is the vulnerability ID stored in the CVE vulnerability database.
ips_group	No	Integer	IPS group, which is distinguished by the IPS interception mode. It can be **0** (observation), **1** (strict), **2** (medium), or **3** (loose).
ips_id	No	String	IPS rule ID.
ips_level	No	Integer	IPS severity. It can be **CRITICAL**, **HIGH**, **MEDIUM**, or **LOW**.
ips_name_like	No	String	Keyword for querying an IPS rule name.
ips_rules_type_like	No	Integer	IPS rule type. The types include vulnerability scan, hacker tool detection, and Trojan detection.
ips_status	No	String	IPS rule status. It can be **OBSERVE** (observation), **ENABLE** (interception), **CLOSE** (disabled), **DEFAULT** (restored to default), or **ALL_DEFAULT** (globally restored to default).
is_updated_ips_rule_queried	No	Boolean	Whether to query the updated IPS rule library. **true**: Query updated rules (rules in the virtual patch rule library). **false**: Query the rules in the basic defense rule library.
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.

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Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border. Here, a protected object ID whose **type** is **0** is used. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

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Request Parameters

Table 4-494 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-495 Response body parameters

Parameter	Type	Description
data	**IpsRuleListVO** object	Return value for querying the rule list.

Table 4-496 IpsRuleListVO

Parameter	Type	Description
fw_instance_id	String	Firewall ID.
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
object_id	String	Protected object ID.
offset	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
records	Array of **IpsRuleVO** objects	Query the IPS rule list.
total	Integer	Query the total number of IPS rules.

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Table 4-497 IpsRuleVO

Parameter	Type	Description
affected_application	String	Affected objects, including **Others**, **Sun**, **Apache**, **IBM**, **VMware**, **WordPress**, **Adobe**, **Oracle**, and **Google Chrome**.
create_time	String	Year when an IPS rule was created.
default_status	String	Default status.
ips_cve	String	cve id
ips_group	String	IPS group, which is distinguished by the IPS interception mode. It can be **0** (observation), **1** (strict), **2** (medium), and **3** (loose).
ips_id	String	IPS rule ID.
ips_level	String	IPS severity. It can be **CRITICAL**, **HIGH**, **MEDIUM**, or **LOW**.
ips_name	String	IPS rule name.
ips_rules_type	String	IPS rule type, including vulnerability scan, hacker tool detection, and Trojan detection.
ips_status	String	IPS rule status. It can be **OBSERVE** (observation), **ENABLE** (interception), **CLOSE** (disabled), **DEFAULT** (restored to default), or **ALL_DEFAULT** (globally restored to default).

Example Requests

Obtain the IPS rule list of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, the enterprise project ID is fb55459c-41b3-47fc-885d-540946fddda4, and the target object ID is 1b90f031-0c7b-4f25-95e2-b6d9940d269e. The maximum number of query results is 1,000, and the offset is 0.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/ips-rule?fw_instance_id=e743cfaf-8164-4807-aa13-
d893d83313cf&enterprise_project_id=fb55459c-41b3-47fc-885d-540946fddda4&project_id=408972e72dcd4c1
a9b033e955802a36b&object_id=1b90f031-0c7b-4f25-95e2-b6d9940d269e&limit=1000&offset=0
```

Example Responses

Status code: 200

Return value for querying the rule list.

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```
{
  "data" : {
    "fw_instance_id" : "e743cfaf-8164-4807-aa13-d893d83313cf",
    "limit" : 1000,
    "offset" : 1,
    "records" : [ {
      "affected_application" : "Others",
      "create_time" : "2015",
      "default_status" : "CLOSE",
      "ips_group" : "STRICTLY",
      "ips_id" : "340710",
      "ips_level" : "MEDIUM",
      "ips_name" : "WEBC2-QBP login response 1 - related to embedded CnC APT1",
      "ips_rules_type" : "Trojan.",
      "ips_status" : "CLOSE"
    }, {
      "affected_application" : "Others",
      "create_time" : "2015",
      "default_status" : "CLOSE",
      "ips_group" : "STRICTLY",
      "ips_id" : "340922",
      "ips_level" : "MEDIUM",
      "ips_name" : "Win32/Fujacks activities.",
      "ips_rules_type" : "Trojan.",
      "ips_status" : "CLOSE"
    } ],
    "total" : 2
  }
}
```


SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListIpsRulesSolution {

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

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

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

```
                .build();
        ListIpsRulesRequest request = new ListIpsRulesRequest();
        try {
            ListIpsRulesResponse response = client.listIpsRules(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListIpsRulesRequest()
        response = client.list_ips_rules(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

func main() {
```

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value for querying the rule list.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.8.9 Obtaining the IPS Rule Update Time

Function

This API is used to obtain the IPS rule update time.

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Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/ips-rule/detail

Table 4-498 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-499 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-500 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

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Table 4-501 Response body parameters

Parameter	Type	Description
data	Array of **IpsRuleUpdateTimeVO** objects	Time when IPS rule details were queried.

Table 4-502 IpsRuleUpdateTimeVO

Parameter	Type	Description
ips_type	Integer	IPS type. Its value can be **0** (basic defense) or **1** (virtual patch).
ips_version	String	IPS rule version.
update_time	Long	IPS update timestamp.

Example Requests

Obtain the IPS rule details of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, and the enterprise project ID is fb55459c-41b3-47fc-885d-540946fddda4.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/ips-rule/detail?
fw_instance_id=e743cfaf-8164-4807-aa13-
d893d83313cf&enterprise_project_id=fb55459c-41b3-47fc-885d-540946fddda4
```

Example Responses

Status code: 200

Return value for querying the IPS rule details.

```
{
  "data" : [ {
    "ips_type" : 0,
    "ips_version" : "3.0.235",
    "update_time" : 1733816977000
  }, {
    "ips_type" : 1,
    "ips_version" : "3.0.220",
    "update_time" : 1733816960000
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

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```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ShowIpsUpdateTimeSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowIpsUpdateTimeRequest request = new ShowIpsUpdateTimeRequest();
        try {
            ShowIpsUpdateTimeResponse response = client.showIpsUpdateTime(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

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

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

    try:
        request = ShowIpsUpdateTimeRequest()
        response = client.show_ips_update_time(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

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Status Codes

Status Code	Description
200	Return value for querying the IPS rule details.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.8.10 Viewing the Custom IPS Rule List

Function

This API is used to view the custom IPS rule list.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/ips/custom-rule

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Table 4-503 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Table 4-504 Query Parameters

Parameter	Mandatory	Type	Description
action_type	No	Integer	**Definition** Action. **Constraints** N/A **Range** **0**: Record logs only. **1**: Block sessions. **2**: Block IP addresses. **Default Value** N/A

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Parameter	Mandatory	Type	Description
affected_os	No	Integer	**Definition** Affected OS. **Constraints** N/A **Range** **0** (any), **1** (Windows), **2** (Linux), **3** (FreeBSD), **4** (Solaris), **5** (other Unix), **6** (network devices), **7** (macOS), **8** (iOS), **9** (Android), or **10** (other) **Default Value** N/A
attack_type	No	Integer	**Definition** Attack type. **Constraints** N/A **Range** **1** (access control), **2** (vulnerability scan), **3** (email attack), **4** (vulnerability exploit), **5** (web attack), **6** (password attack), **7** (hijacking), **8** (protocol anomaly), **9** (Trojan), **10** (worm), **11** (buffer overflow), **12** (hacker tool), **13** (spyware), **14** (DDoS flood), **15** (application-layer DDoS attack), **16** (other suspicious behavior), **17** (suspicious DNS activity), **18** (phishing), **19** (spam), or **20** (other attack) **Default Value** N/A

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Parameter	Mandatory	Type	Description
ips_name	No	String	**Definition** IPS rule name. **Constraints** N/A **Range** N/A **Default Value** N/A
ips_id	No	String	**Definition** IPS rule ID. **Constraints** N/A **Range** N/A **Default Value** N/A
protocol	No	Integer	**Definition** Protocol type. **Constraints** N/A **Range** **1** (FTP), **2** (TELNET), **3** (SMTP), **4** (DNS_TCP), **5** (DNS_UDP), **6** (DHCP), **7** (TFTP), **8** (FINGER), **9** (HTTP), **10** (POP3), **11** (SUNRPC_TCP), **12** (SUNRPC_UDP), **13** (NNTP), **14** (MSRPC_TCP), **15** (MSRPC_UDP), **16** (NETBIOS_NAME_TCP), **17** (NETBIOS_NAME_UDP), **18** (NETBIOS_SMB), **19** (NETBIOS_DATAGRAM), **20** (IMAP4), **21** (SNMP), **22** (LDAP), **23** (MSSQL), or **24** (ORACLE) **Default Value** N/A

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Parameter	Mandatory	Type	Description
severity	No	Integer	**Definition** Severity. **Constraints** N/A **Range** **critical**, **high**, **medium**, or **low** **Default Value** N/A
software	No	Integer	**Definition** Affected software. **Constraints** N/A **Range** **0** (ANY), **1** (ADOBE), **2** (APACHE), **3** (APPLE), **4** (CA), **5** (CISCO), **6** (GOOGLE_CHROME), **7** (HP), **8** (IBM), **9** (IE), **10** (IIS), **11** (MC_AFEE), **12** (MEDIA_PLAYER), **13** (MICROSOFT_NET), **14** (MICROSOFT_EDGE), **15** (MICROSOFT_EXCHANGE), **16** (MICROSOFT_OFFICE), **17** (MICROSOFT_OUTLOOK), **18** (MICROSOFT_SHARE_POINT), **19** (MICROSOFT_WINDOWS), **20** (MOZILLA), **21** (MSSQL), **22** (MYSQL), **23** (NOVELL), **24** (ORACLE), **25** (SAMBA), **26** (SAMSUNG), **27** (SAP), **28** (SCADA), **29** (SQUID), **30** (SUN), **31** (SYMANTEC), **32** (TREND_MICRO), **33** (VMWARE), **34** (WORD_PRESS), or **35** (OTHERS) **Default Value** N/A

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Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
limit	Yes	Integer	**Definition** Maximum number of records that can be returned. **Constraints** N/A **Range** 1-1024 **Default Value** N/A
offset	Yes	Integer	**Definition** Offset. The records after this offset will be queried. **Constraints** N/A **Range** 0 - 1024 **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

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Table 4-505 Response body parameters

Parameter	Type	Description
data	**CustomerIpsPageInfo** object	

Table 4-506 CustomerIpsPageInfo

Parameter	Type	Description
limit	Integer	**Definition** Maximum number of records that can be returned. **Constraints** N/A **Range** 1-1024 **Default Value** N/A
offset	Integer	**Definition** Offset. The records after this offset will be queried. **Constraints** N/A **Range** 0 - 1024 **Default Value** N/A
records	Array of **CustomerIpsList-VO** objects	**Definition** Custom IPS rule list. **Range** N/A
total	Integer	**Definition** Number of custom IPS rules. **Range** N/A

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Table 4-507 CustomerIpsListVO

Parameter	Type	Description
action	Integer	**Definition** Action. **Range** **0** (log only) or **1** (reset/block)
affected_os	Integer	**Definition** Affected OS. **Range** **0** (any), **1** (Windows), **2** (Linux), **3** (FreeBSD), **4** (Solaris), **5** (other Unix), **6** (network devices), **7** (macOS), **8** (iOS), **9** (Android), or **10** (other)
attack_type	Integer	**Definition** Attack type. **Constraints** N/A **Range** **1** (access control), **2** (vulnerability scan), **3** (email attack), **4** (vulnerability exploit), **5** (web attack), **6** (password attack), **7** (hijacking), **8** (protocol anomaly), **9** (Trojan), **10** (worm), **11** (buffer overflow), **12** (hacker tool), **13** (spyware), **14** (DDoS flood), **15** (application-layer DDoS attack), **16** (other suspicious behavior), **17** (suspicious DNS activity), **18** (phishing), **19** (spam), or **20** (other attack) **Default Value** N/A
config_status	Integer	**Definition** Rule status. **Range** **0** (initialized), **1** (configuring), **2** (configuration succeeded), or **3** (configuration failed)
content	String	**Definition** Content that matches an IPS attack. **Range** N/A

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Parameter	Type	Description
dst_port_type	Integer	**Definition** Port type. **Range** -**1** (any), **0** (include), or **1** (exclude)
dst_ports	String	**Definition** Port. **Range** 1 - 65535
ips_cfw_id	String	**Definition** ID of a custom IPS rule in CFW. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
ips_id	String	**Definition** IPS rule ID. **Range** N/A
ips_name	String	**Definition** IPS rule name. **Range** N/A
protocol	Integer	**Definition** Protocol type. **Range** 1** (FTP), **2** (TELNET), **3** (SMTP), **4** (DNS_TCP), **5** (DNS_UDP), **6** (DHCP), **7** (TFTP), **8** (FINGER), **9** (HTTP), **10** (POP3), **11** (SUNRPC_TCP), **12** (SUNRPC_UDP), **13** (NNTP), **14** (MSRPC_TCP), **15** (MSRPC_UDP), **16** (NETBIOS_NAME_TCP), **17** (NETBIOS_NAME_UDP), **18** (NETBIOS_SMB), **19** (NETBIOS_DATAGRAM), **20** (IMAP4), **21** (SNMP), **22** (LDAP), **23** (MSSQL), or **24** (ORACLE)

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Parameter	Type	Description
severity	Integer	**Definition** Severity. **Range** **critical**, **high**, **medium**, or **low**
software	Integer	**Definition** Affected software. **Range** **0** (ANY), **1** (ADOBE), **2** (APACHE), **3** (APPLE), **4** (CA), **5** (CISCO), **6** (GOOGLE_CHROME), **7** (HP), **8** (IBM), **9** (IE), **10** (IIS), **11** (MC_AFEE), **12** (MEDIA_PLAYER), **13** (MICROSOFT_NET), **14** (MICROSOFT_EDGE), **15** (MICROSOFT_EXCHANGE), **16** (MICROSOFT_OFFICE), **17** (MICROSOFT_OUTLOOK), **18** (MICROSOFT_SHARE_POINT), **19** (MICROSOFT_WINDOWS), **20** (MOZILLA), **21** (MSSQL), **22** (MYSQL), **23** (NOVELL), **24** (ORACLE), **25** (SAMBA), **26** (SAMSUNG), **27** (SAP), **28** (SCADA), **29** (SQUID), **30** (SUN), **31** (SYMANTEC), **32** (TREND_MICRO), **33** (VMWARE), **34** (WORD_PRESS), or **35** (OTHERS)
src_port_type	Integer	**Definition** Port type. The value can be **-1** (Any), **0** (include), or **1** (exclude). **Range** N/A
src_ports	String	**Definition** Port. **Range** N/A

Status code: 400

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Table 4-508 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query the custom IPS rule list of the firewall whose project ID is eb7accd78ea845078275b2ad5280a109 and firewall ID is 8a996d43-75bd-48b4-b1b8-de0706b72b8f. The offset is 0, and the maximum number of returned records is 10.

```
https://{Endpoint}/v1/eb7accd78ea845078275b2ad5280a109/ips/custom-rule?
fw_instance_id=8a996d43-75bd-48b4-b1b8-de0706b72b8f&offset=0&limit=10
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "limit" : 1000,
    "offset" : 0,
    "records" : [ {
      "action" : 0,
      "affected_os" : 1,
      "attack_type" : 1,
      "config_status" : 2,
      "content" : "content:\"test\";distance:0;within:65535;nocase;",
      "dst_port_type" : 1,
      "dst_ports" : "2",
      "ips_cfw_id" : "3d42ef53-9b44-4d8c-b83e-b1cce27bd543",
      "ips_id" : "350000",
      "ips_name" : "Custom IPS.",
      "protocol" : 9,
      "severity" : 0,
      "software" : 1,
      "src_port_type" : 0,
      "src_ports" : "1"
    } ],
    "total" : 1
  }
}
```

Status code: 400

Bad Request

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```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListCustomerIpsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListCustomerIpsRequest request = new ListCustomerIpsRequest();
        try {
            ListCustomerIpsResponse response = client.listCustomerIps(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
```

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```
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListCustomerIpsRequest()
        response = client.list_customer_ips(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListCustomerIpsRequest{}
    response, err := client.ListCustomerIps(request)
    if err == nil {
```

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```
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.8.11 Querying Custom IPS Rule Details

Function

Function: Query custom IPS rule details. Feature: Query custom IPS rule details based on the IPS ID entered in the path.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/ips/custom-rule/{ips_cfw_id}

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Table 4-509 Path Parameters

Parameter	Mandatory	Type	Description
ips_cfw_id	Yes	String	**Definition** ID of a custom IPS rule in CFW. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Table 4-510 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-511 Response body parameters

Parameter	Type	Description
data	**CustomerIpsVO** object	**Definition** Returned data of a custom IPS rule. **Range** N/A

Table 4-512 CustomerIpsVO

Parameter	Type	Description
action	Integer	**Definition** Action. **Range** **0** (log only) or **1** (reset/block)

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Parameter	Type	Description
affected_os	Integer	**Definition** Affected OS. **Range** **0** (any), **1** (Windows), **2** (Linux), **3** (FreeBSD), **4** (Solaris), **5** (other Unix), **6** (network devices), **7** (macOS), **8** (iOS), **9** (Android), or **10** (other)
attack_type	Integer	**Definition** Attack type. **Range** **1** (access control), **2** (vulnerability scan), **3** (email attack), **4** (vulnerability exploit), **5** (web attack), **6** (password attack), **7** (hijacking), **8** (protocol anomaly), **9** (Trojan), **10** (worm), **11** (buffer overflow), **12** (hacker tool), **13** (spyware), **14** (DDoS flood), **15** (application-layer DDoS attack), **16** (other suspicious behavior), **17** (suspicious DNS activity), **18** (phishing), **19** (spam), or **20** (other attack)
config_status	Integer	**Definition** Rule status. **Range** **0** (initialized), **1** (configuring), **2** (configuration succeeded), or **3** (configuration failed)
contents	Array of **IpsContent** objects	**Definition** Content that matches an IPS attack. **Range**
direction	Integer	**Definition** Default value: **null**. **0**: from the client to the server; **1**: from the server to the client. **Range** N/A
dst_port	**Port** object	

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Parameter	Type	Description
ips_cfw_id	String	**Definition** ID of a custom IPS rule in CFW. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
ips_id	String	**Definition** IPS rule ID. **Range** N/A
ips_name	String	**Definition** IPS rule name. **Range** N/A
protocol	Integer	**Definition** Protocol type. **Range** 1** (FTP), **2** (TELNET), **3** (SMTP), **4** (DNS_TCP), **5** (DNS_UDP), **6** (DHCP), **7** (TFTP), **8** (FINGER), **9** (HTTP), **10** (POP3), **11** (SUNRPC_TCP), **12** (SUNRPC_UDP), **13** (NNTP), **14** (MSRPC_TCP), **15** (MSRPC_UDP), **16** (NETBIOS_NAME_TCP), **17** (NETBIOS_NAME_UDP), **18** (NETBIOS_SMB), **19** (NETBIOS_DATAGRAM), **20** (IMAP4), **21** (SNMP), **22** (LDAP), **23** (MSSQL), or **24** (ORACLE)
severity	Integer	**Definition** Severity. **Range** **critical**, **high**, **medium**, or **low**

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Parameter	Type	Description
software	Integer	**Definition** Affected software. **Range** **0** (ANY), **1** (ADOBE), **2** (APACHE), **3** (APPLE), **4** (CA), **5** (CISCO), **6** (GOOGLE_CHROME), **7** (HP), **8** (IBM), **9** (IE), **10** (IIS), **11** (MC_AFEE), **12** (MEDIA_PLAYER), **13** (MICROSOFT_NET), **14** (MICROSOFT_EDGE), **15** (MICROSOFT_EXCHANGE), **16** (MICROSOFT_OFFICE), **17** (MICROSOFT_OUTLOOK), **18** (MICROSOFT_SHARE_POINT), **19** (MICROSOFT_WINDOWS), **20** (MOZILLA), **21** (MSSQL), **22** (MYSQL), **23** (NOVELL), **24** (ORACLE), **25** (SAMBA), **26** (SAMSUNG), **27** (SAP), **28** (SCADA), **29** (SQUID), **30** (SUN), **31** (SYMANTEC), **32** (TREND_MICRO), **33** (VMWARE), **34** (WORD_PRESS), or **35** (OTHERS)
src_port	**Port** object	

Table 4-513 IpsContent

Parameter	Type	Description
content	String	**Definition** Content. **Range** N/A
depth	Integer	**Definition** Depth. **Range** N/A
is_hex	Boolean	**Definition** Whether the packet content is in hexadecimal format. **Range** N/A

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Parameter	Type	Description
is_ignore	Boolean	**Definition** Case insensitive or not. **Range** N/A
is_uri	Boolean	**Definition** Whether to intercept packets in a URI. **Range** N/A
offset	Integer	**Definition** Offset. **Range** N/A
relative_position	Integer	**Definition** Relative position. **Range** N/A

Table 4-514 Port

Parameter	Type	Description
port_type	Integer	**Definition** Port type. **Range** -**1** (any), **0** (include), or **1** (exclude)
ports	String	**Definition** Port. **Range** N/A

Status code: 400

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Table 4-515 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query details about the IPS rule whose project ID is 3d84b4755b39476997c9f7b5a95c25ed, firewall ID is d6e0a4d0-8b16-47fe-98b6-e1b0a7a14788, protected object ID is 64b8978e-20c0-4b43-b178-885e3cbb380d, and custom IPS rule ID is c059d198-5996-46dd-9ed8-83167e6babe8.

```
https://{Endpoint}/v1/3d84b4755b39476997c9f7b5a95c25ed/ips/custom-rule/
c059d198-5996-46dd-9ed8-83167e6babe8?fw_instance_id=d6e0a4d0-8b16-47fe-98b6-
e1b0a7a14788&object_id=64b8978e-20c0-4b43-b178-885e3cbb380d
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "action" : 1,
    "affected_os" : 0,
    "attack_type" : 1,
    "config_status" : 2,
    "contents" : [ {
      "content" : "apitest",
      "depth" : 65535,
      "is_hex" : false,
      "is_ignore" : true,
      "is_uri" : false,
      "offset" : 0,
      "relative_position" : 0
    } ],
    "direction" : -1,
    "dst_port" : {
      "port_type" : -1
    },
    "ips_cfw_id" : "c059d198-5996-46dd-9ed8-83167e6babe8",
    "ips_id" : "350020",
    "ips_name" : "Deletable_editable_API_verification",
    "protocol" : 9,
    "severity" : 0,
    "software" : 0,
    "src_port" : {
      "port_type" : -1
    }
```

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```
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ShowCustomerIpsInfoSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowCustomerIpsInfoRequest request = new ShowCustomerIpsInfoRequest();
        request.withIpsCfwId("{ips_cfw_id}");
        try {
            ShowCustomerIpsInfoResponse response = client.showCustomerIpsInfo(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());
        }
```

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```
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ShowCustomerIpsInfoRequest()
        request.ips_cfw_id = "{ips_cfw_id}"
        response = client.show_customer_ips_info(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

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```
    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.8.12 Updating a Custom IPS Rule

Function

This API is used to update a custom IPS rule.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/ips/custom-rule/{ips_cfw_id}

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Table 4-516 Path Parameters

Parameter	Mandatory	Type	Description
ips_cfw_id	Yes	String	**Definition** ID of a custom IPS rule in CFW. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Request Parameters

Table 4-517 Request body parameters

Parameter	Mandatory	Type	Description
action_type	Yes	Integer	**Definition** Action. **Range** **0** (log only) or **1** (reset/block)

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Parameter	Mandatory	Type	Description
affected_os	Yes	Integer	**Definition** Affected OS. **Range** **0** (any), **1** (Windows), **2** (Linux), **3** (FreeBSD), **4** (Solaris), **5** (other Unix), **6** (network devices), **7** (macOS), **8** (iOS), **9** (Android), or **10** (other)
attack_type	Yes	Integer	**Definition** Attack type. **Constraints** N/A **Range** **1** (access control), **2** (vulnerability scan), **3** (email attack), **4** (vulnerability exploit), **5** (web attack), **6** (password attack), **7** (hijacking), **8** (protocol anomaly), **9** (Trojan), **10** (worm), **11** (buffer overflow), **12** (hacker tool), **13** (spyware), **14** (DDoS flood), **15** (application-layer DDoS attack), **16** (other suspicious behavior), **17** (suspicious DNS activity), **18** (phishing), **19** (spam), or **20** (other attack) **Default Value** N/A
contents	Yes	Array of **IpsContent** objects	**Definition** Content that matches an IPS attack. **Range**
direction	Yes	Integer	**Definition** Default value: **null**. **0**: from the client to the server; **1**: from the server to the client. **Range** N/A
dst_port	Yes	**Port** object	

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Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
ips_name	Yes	String	**Definition** IPS rule name. **Range** N/A
protocol	Yes	Integer	**Definition** Protocol type. **Range** 1** (FTP), **2** (TELNET), **3** (SMTP), **4** (DNS_TCP), **5** (DNS_UDP), **6** (DHCP), **7** (TFTP), **8** (FINGER), **9** (HTTP), **10** (POP3), **11** (SUNRPC_TCP), **12** (SUNRPC_UDP), **13** (NNTP), **14** (MSRPC_TCP), **15** (MSRPC_UDP), **16** (NETBIOS_NAME_TCP), **17** (NETBIOS_NAME_UDP), **18** (NETBIOS_SMB), **19** (NETBIOS_DATAGRAM), **20** (IMAP4), **21** (SNMP), **22** (LDAP), **23** (MSSQL), or **24** (ORACLE)
severity	Yes	Integer	**Definition** Severity. **Range** **critical**, **high**, **medium**, or **low**

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Parameter	Mandatory	Type	Description
software	Yes	Integer	**Definition** Affected software. **Range** **0** (ANY), **1** (ADOBE), **2** (APACHE), **3** (APPLE), **4** (CA), **5** (CISCO), **6** (GOOGLE_CHROME), **7** (HP), **8** (IBM), **9** (IE), **10** (IIS), **11** (MC_AFEE), **12** (MEDIA_PLAYER), **13** (MICROSOFT_NET), **14** (MICROSOFT_EDGE), **15** (MICROSOFT_EXCHANGE), **16** (MICROSOFT_OFFICE), **17** (MICROSOFT_OUTLOOK), **18** (MICROSOFT_SHARE_POINT), **19** (MICROSOFT_WINDOWS), **20** (MOZILLA), **21** (MSSQL), **22** (MYSQL), **23** (NOVELL), **24** (ORACLE), **25** (SAMBA), **26** (SAMSUNG), **27** (SAP), **28** (SCADA), **29** (SQUID), **30** (SUN), **31** (SYMANTEC), **32** (TREND_MICRO), **33** (VMWARE), **34** (WORD_PRESS), or **35** (OTHERS)
src_port	Yes	**Port** object	

Table 4-518 IpsContent

Parameter	Mandatory	Type	Description
content	No	String	**Definition** Content. **Range** N/A
depth	No	Integer	**Definition** Depth. **Range** N/A

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Parameter	Mandatory	Type	Description
is_hex	No	Boolean	**Definition** Whether the packet content is in hexadecimal format. **Range** N/A
is_ignore	No	Boolean	**Definition** Case insensitive or not. **Range** N/A
is_uri	No	Boolean	**Definition** Whether to intercept packets in a URI. **Range** N/A
offset	No	Integer	**Definition** Offset. **Range** N/A
relative_position	No	Integer	**Definition** Relative position. **Range** N/A

Table 4-519 Port

Parameter	Mandatory	Type	Description
port_type	No	Integer	**Definition** Port type. **Range** -**1** (any), **0** (include), or **1** (exclude)
ports	No	String	**Definition** Port. **Range** N/A

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Response Parameters

Status code: 200

Table 4-520 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition** Response to the request for updating a custom IPS rule. **Range** N/A

Table 4-521 data

Parameter	Type	Description
id	String	**Definition** Firewall ID. **Range** N/A

Status code: 400

Table 4-522 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Update the custom IPS rule whose project ID is 3d84b4755b39476997c9f7b5a95c25ed and IPS firewall ID is cd74e74a-310f-4558-a4bf-da4215c820f8.

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```
https://{Endpoint}/v1/3d84b4755b39476997c9f7b5a95c25ed/ips/custom-rule/cd74e74a-310f-4558-a4bf-da4215c820f8

{
  "fw_instance_id" : "d6e0a4d0-8b16-47fe-98b6-e1b0a7a14788",
  "ips_name" : "test_OS_Linux",
  "direction" : -1,
  "src_port" : {
    "port_type" : -1
  },
  "dst_port" : {
    "port_type" : -1
  },
  "contents" : [ {
    "content" : "ab",
    "is_hex" : false,
    "is_ignore" : false,
    "is_uri" : false,
    "relative_position" : 0,
    "offset" : 0,
    "depth" : 65535
  } ],
  "action_type" : 1,
  "severity" : 0,
  "attack_type" : 1,
  "software" : 0,
  "affected_os" : 1,
  "protocol" : 9
}
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "id" : "64b8978e-20c0-4b43-b178-885e3cbb380d"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Update the custom IPS rule whose project ID is 3d84b4755b39476997c9f7b5a95c25ed and IPS firewall ID is cd74e74a-310f-4558-a4bf-da4215c820f8.

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

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

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```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class UpdateCustomerIpsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateCustomerIpsRequest request = new UpdateCustomerIpsRequest();
        request.withIpsCfwId("{ips_cfw_id}");
        CustomerIpsSaveDto body = new CustomerIpsSaveDto();
        Port srcPortbody = new Port();
        srcPortbody.withPortType(-1);
        Port dstPortbody = new Port();
        dstPortbody.withPortType(-1);
        List<IpsContent> listbodyContents = new ArrayList<>();
        listbodyContents.add(
            new IpsContent()
                .withContent("ab")
                .withDepth(65535)
                .withIsHex(false)
                .withIsIgnore(false)
                .withIsUri(false)
                .withOffset(0)
                .withRelativePosition(0)
        );
        body.withSrcPort(srcPortbody);
        body.withSoftware(0);
        body.withSeverity(0);
        body.withProtocol(9);
        body.withIpsName("test_OS_Linux");
        body.withFwInstanceId("d6e0a4d0-8b16-47fe-98b6-e1b0a7a14788");
        body.withDstPort(dstPortbody);
        body.withDirection(-1);
        body.withContents(listbodyContents);
        body.withAttackType(1);
        body.withAffectedOs(CustomerIpsSaveDto.AffectedOsEnum.NUMBER_1);
        body.withActionType(CustomerIpsSaveDto.ActionTypeEnum.NUMBER_1);
        request.withBody(body);
        try {
            UpdateCustomerIpsResponse response = client.updateCustomerIps(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
```

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```
        } 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

Update the custom IPS rule whose project ID is 3d84b4755b39476997c9f7b5a95c25ed and IPS firewall ID is cd74e74a-310f-4558-a4bf-da4215c820f8.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = UpdateCustomerIpsRequest()
        request.ips_cfw_id = "{ips_cfw_id}"
        srcPortbody = Port(
            port_type=-1
        )
        dstPortbody = Port(
            port_type=-1
        )
        listContentsbody = [
            IpsContent(
                content="ab",
                depth=65535,
                is_hex=False,
                is_ignore=False,
                is_uri=False,
                offset=0,
                relative_position=0
            )
        ]
        request.body = CustomerIpsSaveDto(
            src_port=srcPortbody,
            software=0,
            severity=0,
            protocol=9,
            ips_name="test_OS_Linux",
            fw_instance_id="d6e0a4d0-8b16-47fe-98b6-e1b0a7a14788",
```

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```
            dst_port=dstPortbody,
            direction=-1,
            contents=listContentsbody,
            attack_type=1,
            affected_os=1,
            action_type=1
        )
        response = client.update_customer_ips(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

Update the custom IPS rule whose project ID is 3d84b4755b39476997c9f7b5a95c25ed and IPS firewall ID is cd74e74a-310f-4558-a4bf-da4215c820f8.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateCustomerIpsRequest{}
    request.IpsCfwId = "{ips_cfw_id}"
    portTypeSrcPort:= int32(-1)
    srcPortbody := &model.Port{
        PortType: &portTypeSrcPort,
    }
    portTypeDstPort:= int32(-1)
    dstPortbody := &model.Port{
        PortType: &portTypeDstPort,
    }
    contentContents:= "ab"
    depthContents:= int32(65535)
    isHexContents:= false
    isIgnoreContents:= false
    isUriContents:= false
```

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```
    offsetContents:= int32(0)
    relativePositionContents:= int32(0)
    var listContentsbody = []model.IpsContent{
        {
            Content: &contentContents,
            Depth: &depthContents,
            IsHex: &isHexContents,
            IsIgnore: &isIgnoreContents,
            IsUri: &isUriContents,
            Offset: &offsetContents,
            RelativePosition: &relativePositionContents,
        },
    }
    request.Body = &model.CustomerIpsSaveDto{
        SrcPort: srcPortbody,
        Software: int32(0),
        Severity: int32(0),
        Protocol: int32(9),
        IpsName: "test_OS_Linux",
        FwInstanceId: "d6e0a4d0-8b16-47fe-98b6-e1b0a7a14788",
        DstPort: dstPortbody,
        Direction: int32(-1),
        Contents: listContentsbody,
        AttackType: int32(1),
        AffectedOs: model.GetCustomerIpsSaveDtoAffectedOsEnum().E_1,
        ActionType: model.GetCustomerIpsSaveDtoActionTypeEnum().E_1,
    }
    response, err := client.UpdateCustomerIps(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.9 Log Management

Log Management

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4.9.1 Obtaining Log Configurations

Function

This API is used to obtain log configurations.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/logs/configuration

Table 4-523 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-524 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

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Request Parameters

Table 4-525 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-526 Response body parameters

Parameter	Type	Description
data	**LogConfigDto** object	Log configurations.

Table 4-527 LogConfigDto

Parameter	Type	Description
fw_instance_id	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
lts_enable	Integer	Whether to enable LTS: **1** (yes), **0** (no).
lts_log_group_id	String	Log Tank Service (LTS) log group ID, which can be obtained by calling the API for querying all the log groups of an account in LTS. Find the value in **log_groups.log_group_id** (The period [.] is used to separate different levels of objects).
lts_attack_log_stream_id	String	Attack log stream ID, which can be obtained by calling the API for querying all the log streams in a specified log group in LTS. Find the value in **log_streams.log_stream_id** (The period [.] is used to separate different levels of objects).
lts_attack_log_stream_enable	Integer	Whether to enable the attack log stream: **1** (yes), **0** (no).

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Parameter	Type	Description
lts_access_log_stream_id	String	Access control log stream ID, which can be obtained by calling the API for querying all the log streams in a specified log group in LTS. Find the value in **log_streams.log_stream_id** (The period [.] is used to separate different levels of objects).
lts_access_log_stream_enable	Integer	Whether to enable the access control stream: **1** (yes), **0** (no).
lts_flow_log_stream_id	String	Traffic log ID, which can be obtained by calling the API for querying all the log streams in a specified log group in LTS. Find the value in **log_streams.log_stream_id** (The period [.] is used to separate different levels of objects).
lts_flow_log_stream_enable	Integer	Whether to enable the traffic log function: **1** (yes), **0** (no).

Example Requests

Query the log configuration of the firewall 4e113415-7811-4bb3-bf5e-eb835953f7d4 in project 408972e72dcd4c1a9b033e955802a36b.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/cfw/logs/configuration?
fw_instance_id=4e113415-7811-4bb3-bf5e-eb835953f7d4&enterprise_project_id=default
```

Example Responses

Status code: 200

Return value for querying log configurations.

```
{
  "data" : {
    "fw_instance_id" : "4df2bcd1-6299-4fba-8e71-8d50ea807090",
    "lts_access_log_stream_enable" : 0,
    "lts_attack_log_stream_enable" : 0,
    "lts_enable" : 0,
    "lts_flow_log_stream_enable" : 0,
    "lts_log_group_id" : "d783ce42-7f56-4c2d-9a96-b1043d016f5a"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

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```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListLogConfigSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListLogConfigRequest request = new ListLogConfigRequest();
        try {
            ListLogConfigResponse response = client.listLogConfig(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

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

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

    try:
        request = ListLogConfigRequest()
        response = client.list_log_config(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

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Status Codes

Status Code	Description
200	Return value for querying log configurations.

Error Codes

See **Error Codes**.

4.9.2 Adding Log Configurations

Function

This API is used to add log configurations.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/cfw/logs/configuration

Table 4-528 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-529 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

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Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-530 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-531 Request body parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
lts_enable	Yes	Integer	Whether to enable LTS: **1** (yes), **0** (no).
lts_log_group_id	Yes	String	Log Tank Service (LTS) log group ID, which can be obtained by calling the API for querying all the log groups of an account in LTS. Find the value in **log_groups.log_group_id** (The period [.] is used to separate different levels of objects).

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Parameter	Mandatory	Type	Description
lts_attack_log_stream_id	No	String	Attack log stream ID, which can be obtained by calling the API for querying all the log streams in a specified log group in LTS. Find the value in **log_streams.log_stream_id** (The period [.] is used to separate different levels of objects).
lts_attack_log_stream_enable	No	Integer	Whether to enable the attack log stream: **1** (yes), **0** (no).
lts_access_log_stream_id	No	String	Access control log stream ID, which can be obtained by calling the API for querying all the log streams in a specified log group in LTS. Find the value in **log_streams.log_stream_id** (The period [.] is used to separate different levels of objects).
lts_access_log_stream_enable	No	Integer	Whether to enable the access control stream: **1** (yes), **0** (no).
lts_flow_log_stream_id	No	String	Traffic log ID, which can be obtained by calling the API for querying all the log streams in a specified log group in LTS. Find the value in **log_streams.log_stream_id** (The period [.] is used to separate different levels of objects).
lts_flow_log_stream_enable	No	Integer	Whether to enable the traffic log function: **1** (yes), **0** (no).

Response Parameters

Status code: 200

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Table 4-532 Response body parameters

Parameter	Type	Description
data	String	Return value for adding log configurations. Its value is a firewall ID.

Example Requests

Add log stream configurations for firewall 4d6c860a-0338-49e8-ac64-fcaeb4182ba5 in project 408972e72dcd4c1a9b033e955802a36b. The LTS group ID is 20282428-a8f9-4e75-8246-165e64cf8ba8. The access control log stream, traffic log stream, attack log stream, and LTS are disabled.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/cfw/logs/configuration?
fw_instance_id=4d6c860a-0338-49e8-ac64-fcaeb4182ba5&enterprise_project_id=default

{
  "fw_instance_id" : "4d6c860a-0338-49e8-ac64-fcaeb4182ba5",
  "lts_enable" : 0,
  "lts_log_group_id" : "20282428-a8f9-4e75-8246-165e64cf8ba8",
  "lts_attack_log_stream_enable" : 0,
  "lts_access_log_stream_enable" : 0,
  "lts_flow_log_stream_enable" : 0
}
```

Example Responses

Status code: 200

Return value for adding log configurations.

```
{
  "data" : "4d6c860a-0338-49e8-ac64-fcaeb4182ba5"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add log stream configurations for firewall 4d6c860a-0338-49e8-ac64-fcaeb4182ba5 in project 408972e72dcd4c1a9b033e955802a36b. The LTS group ID is 20282428-a8f9-4e75-8246-165e64cf8ba8. The access control log stream, traffic log stream, attack log stream, and LTS are disabled.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;
```

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```
public class AddLogConfigSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        AddLogConfigRequest request = new AddLogConfigRequest();
        LogConfigDto body = new LogConfigDto();
        body.withLtsFlowLogStreamEnable(0);
        body.withLtsAccessLogStreamEnable(0);
        body.withLtsAttackLogStreamEnable(0);
        body.withLtsLogGroupId("20282428-a8f9-4e75-8246-165e64cf8ba8");
        body.withLtsEnable(0);
        body.withFwInstanceId("4d6c860a-0338-49e8-ac64-fcaeb4182ba5");
        request.withBody(body);
        try {
            AddLogConfigResponse response = client.addLogConfig(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

Add log stream configurations for firewall 4d6c860a-0338-49e8-ac64-fcaeb4182ba5 in project 408972e72dcd4c1a9b033e955802a36b. The LTS group ID is 20282428-a8f9-4e75-8246-165e64cf8ba8. The access control log stream, traffic log stream, attack log stream, and LTS are disabled.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 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
```

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```
example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = AddLogConfigRequest()
        request.body = LogConfigDto(
            lts_flow_log_stream_enable=0,
            lts_access_log_stream_enable=0,
            lts_attack_log_stream_enable=0,
            lts_log_group_id="20282428-a8f9-4e75-8246-165e64cf8ba8",
            lts_enable=0,
            fw_instance_id="4d6c860a-0338-49e8-ac64-fcaeb4182ba5"
        )
        response = client.add_log_config(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

Add log stream configurations for firewall 4d6c860a-0338-49e8-ac64-fcaeb4182ba5 in project 408972e72dcd4c1a9b033e955802a36b. The LTS group ID is 20282428-a8f9-4e75-8246-165e64cf8ba8. The access control log stream, traffic log stream, attack log stream, and LTS are disabled.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())
```

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```
    request := &model.AddLogConfigRequest{}
    ltsFlowLogStreamEnableLogConfigDto:= int32(0)
    ltsAccessLogStreamEnableLogConfigDto:= int32(0)
    ltsAttackLogStreamEnableLogConfigDto:= int32(0)
    request.Body = &model.LogConfigDto{
        LtsFlowLogStreamEnable: &ltsFlowLogStreamEnableLogConfigDto,
        LtsAccessLogStreamEnable: &ltsAccessLogStreamEnableLogConfigDto,
        LtsAttackLogStreamEnable: &ltsAttackLogStreamEnableLogConfigDto,
        LtsLogGroupId: "20282428-a8f9-4e75-8246-165e64cf8ba8",
        LtsEnable: int32(0),
        FwInstanceId: "4d6c860a-0338-49e8-ac64-fcaeb4182ba5",
    }
    response, err := client.AddLogConfig(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for adding log configurations.

Error Codes

See **Error Codes**.

4.9.3 Updating Log Configurations

Function

This API is used to update log configurations.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/cfw/logs/configuration

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Table 4-533 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-534 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-535 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-536 Request body parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
lts_enable	Yes	Integer	Whether to enable LTS: **1** (yes), **0** (no).

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Parameter	Mandatory	Type	Description
lts_log_group_id	Yes	String	Log Tank Service (LTS) log group ID, which can be obtained by calling the API for querying all the log groups of an account in LTS. Find the value in **log_groups.log_group_id** (The period [.] is used to separate different levels of objects).
lts_attack_log_stream_id	No	String	Attack log stream ID, which can be obtained by calling the API for querying all the log streams in a specified log group in LTS. Find the value in **log_streams.log_stream_id** (The period [.] is used to separate different levels of objects).
lts_attack_log_stream_enable	No	Integer	Whether to enable the attack log stream: **1** (yes), **0** (no).
lts_access_log_stream_id	No	String	Access control log stream ID, which can be obtained by calling the API for querying all the log streams in a specified log group in LTS. Find the value in **log_streams.log_stream_id** (The period [.] is used to separate different levels of objects).
lts_access_log_stream_enable	No	Integer	Whether to enable the access control stream: **1** (yes), **0** (no).
lts_flow_log_stream_id	No	String	Traffic log ID, which can be obtained by calling the API for querying all the log streams in a specified log group in LTS. Find the value in **log_streams.log_stream_id** (The period [.] is used to separate different levels of objects).
lts_flow_log_stream_enable	No	Integer	Whether to enable the traffic log function: **1** (yes), **0** (no).

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Response Parameters

Status code: 200

Table 4-537 Response body parameters

Parameter	Type	Description
data	String	Return value for updating log configurations. Its value is a firewall ID.

Example Requests

Update the log configurations of firewall 22c4a5db-504c-471f-8187-5192bc11de0b in project 408972e72dcd4c1a9b033e955802a36b. The LTS log, flow log, access control log, and attack log functions are disabled.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/cfw/logs/configuration?
fw_instance_id=22c4a5db-504c-471f-8187-5192bc11de0b&enterprise_project_id=default

{
  "fw_instance_id" : "22c4a5db-504c-471f-8187-5192bc11de0b",
  "lts_enable" : 0,
  "lts_log_group_id" : "20282428-a8f9-4e75-8246-165e64cf8ba8",
  "lts_attack_log_stream_enable" : 0,
  "lts_access_log_stream_enable" : 0,
  "lts_flow_log_stream_enable" : 0
}
```

Example Responses

Status code: 200

Return value for updating log configurations.

```
{
  "data" : "4e113415-7811-4bb3-bf5e-eb835953f7d4"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Update the log configurations of firewall 22c4a5db-504c-471f-8187-5192bc11de0b in project 408972e72dcd4c1a9b033e955802a36b. The LTS log, flow log, access control log, and attack log functions are disabled.

```
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;
```

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```
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class UpdateLogConfigSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateLogConfigRequest request = new UpdateLogConfigRequest();
        LogConfigDto body = new LogConfigDto();
        body.withLtsFlowLogStreamEnable(0);
        body.withLtsAccessLogStreamEnable(0);
        body.withLtsAttackLogStreamEnable(0);
        body.withLtsLogGroupId("20282428-a8f9-4e75-8246-165e64cf8ba8");
        body.withLtsEnable(0);
        body.withFwInstanceId("22c4a5db-504c-471f-8187-5192bc11de0b");
        request.withBody(body);
        try {
            UpdateLogConfigResponse response = client.updateLogConfig(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

Update the log configurations of firewall 22c4a5db-504c-471f-8187-5192bc11de0b in project 408972e72dcd4c1a9b033e955802a36b. The LTS log, flow log, access control log, and attack log functions are disabled.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *
```

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = UpdateLogConfigRequest()
        request.body = LogConfigDto(
            lts_flow_log_stream_enable=0,
            lts_access_log_stream_enable=0,
            lts_attack_log_stream_enable=0,
            lts_log_group_id="20282428-a8f9-4e75-8246-165e64cf8ba8",
            lts_enable=0,
            fw_instance_id="22c4a5db-504c-471f-8187-5192bc11de0b"
        )
        response = client.update_log_config(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

Update the log configurations of firewall 22c4a5db-504c-471f-8187-5192bc11de0b in project 408972e72dcd4c1a9b033e955802a36b. The LTS log, flow log, access control log, and attack log functions are disabled.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

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```
    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateLogConfigRequest{}
    ltsFlowLogStreamEnableLogConfigDto:= int32(0)
    ltsAccessLogStreamEnableLogConfigDto:= int32(0)
    ltsAttackLogStreamEnableLogConfigDto:= int32(0)
    request.Body = &model.LogConfigDto{
        LtsFlowLogStreamEnable: &ltsFlowLogStreamEnableLogConfigDto,
        LtsAccessLogStreamEnable: &ltsAccessLogStreamEnableLogConfigDto,
        LtsAttackLogStreamEnable: &ltsAttackLogStreamEnableLogConfigDto,
        LtsLogGroupId: "20282428-a8f9-4e75-8246-165e64cf8ba8",
        LtsEnable: int32(0),
        FwInstanceId: "22c4a5db-504c-471f-8187-5192bc11de0b",
    }
    response, err := client.UpdateLogConfig(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for updating log configurations.

Error Codes

See **Error Codes**.

4.9.4 Querying Firewall Logs

Function

This API is used to query firewall logs.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/cfw/{fw_instance_id}/logs

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Table 4-538 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Request Parameters

Table 4-539 Request body parameters

Parameter	Mandatory	Type	Description
filters	No	Array of **Filter** objects	**Definition** Filter criteria. **Constraints** N/A **Range** 1-1024 **Default Value** N/A
limit	Yes	Integer	**Definition** Number of records displayed on each page. **Constraints** N/A **Range** 1-1024 **Default Value** N/A
offset	No	Integer	**Definition** Offset. **Constraints** The first page is empty, and other pages are not empty. **Range** Offset relative to the previous page. **Default Value** N/A

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Parameter	Mandatory	Type	Description
log_id	No	String	**Definition** Document ID. **Constraints** The first page is empty, and other pages are not empty. **Range** log_id of the last record obtained in the last query. **Default Value** N/A
next_date	No	Long	**Definition** Next date. **Constraints** The first page is empty, and other pages are not empty. **Range** For a traffic log query, it indicates the **end_time** of the last record obtained in the last query. **Default Value** N/A
start_time	Yes	Long	**Definition** Start time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
end_time	Yes	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A

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Parameter	Mandatory	Type	Description
log_type	Yes	String	**Definition** Log type. **Constraints** N/A **Range** **internet** (north-south logs), **nat** (NAT logs), **vpc** (east-west logs), or **vgw** (VGW logs) **Default Value** N/A
type	Yes	String	**Definition** Log type. **Constraints** N/A **Range** **attack** (attack logs), **acl** (access control logs), **flow** (traffic logs), or **url** (URL logs) **Default Value** N/A

Table 4-540 Filter

Parameter	Mandatory	Type	Description
field	Yes	String	**Definition** Log field, for example, **src_ip**. **Constraints** N/A **Range** N/A **Default Value** N/A

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Parameter	Mandatory	Type	Description
values	No	Array of strings	**Definition** Value. **Constraints** N/A **Range** N/A **Default Value** N/A
operator	Yes	String	**Definition** Operator. **Constraints** N/A **Range** **equal** **not_equal** **contain** **starts_with** **Default Value** N/A

Response Parameters

Status code: 200

Table 4-541 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition** Log. **Range** N/A

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Table 4-542 data

Parameter	Type	Description
limit	Integer	**Definition** Number of records. **Range** N/A
records	Array of **LogVO** objects	**Definition** Log. **Range** N/A
total	Long	**Definition** Total number of records. **Range** N/A

Table 4-543 LogVO

Parameter	Type	Description
app	String	**Definition** Application. **Range** N/A
bytes	Double	**Definition** Number of bytes in a stream. It is a traffic log field. **Range** N/A
direction	String	**Definition** Session direction. **Range** **out2in**: inbound access **in2out**: outbound access
dst_host	String	**Definition** Number of bytes in a stream. It can be found in access control logs and traffic logs. **Range** Destination website.

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Parameter	Type	Description
dst_ip	String	**Definition** Destination IP address. **Range** N/A
dst_port	Integer	**Definition** Destination port. **Range** N/A
end_time	Long	**Definition** Session end time. It is a traffic log field. **Range** N/A
log_id	String	**Definition** Log ID, which is used for pagination query. **Range** N/A
packets	Double	**Definition** Number of packets in a stream. It is a traffic log field. **Range** N/A
protocol	String	**Definition** Protocol. **Range** N/A
src_ip	String	**Definition** Source IP address. **Range** N/A
src_port	Integer	**Definition** Source port. **Range** N/A

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Parameter	Type	Description
start_time	Long	**Definition** Session start time. It is a traffic log field. **Range** N/A
dst_region_id	AnyType	**Definition** Destination region ID. **Range** N/A
dst_region_name	String	**Definition** Destination region name. **Range** N/A
dst_province_id	String	**Definition** Destination province ID. **Range** N/A
dst_province_name	String	**Definition** Destination province name. **Range** N/A
dst_city_id	String	**Definition** Destination city ID. **Range** N/A
dst_city_name	String	**Definition** Destination city name. **Range** N/A
src_region_id	String	**Definition** Source region ID. **Range** N/A

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Parameter	Type	Description
src_region_name	String	**Definition** Source region name. **Range** N/A
src_province_id	String	**Definition** Source province ID. **Range** N/A
src_province_name	String	**Definition** Source province name. **Range** N/A
src_city_id	String	**Definition** Source city ID. **Range** N/A
src_city_name	String	**Definition** Source city name. **Range** N/A
vgw_id	String	**Definition** Virtual gateway ID. **Range** N/A
sctp_verification_tag	Long	**Definition** SCTP verification tag. It is a traffic log field. **Range** N/A
sctp_is_handshake_flow	String	**Definition** SCTP handshake flow. It is a traffic log field. **Range** N/A

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Parameter	Type	Description
qos_rule_id	String	**Definition** QoS rule ID. It can be found in traffic logs and access control logs. **Range** N/A
qos_rule_name	String	**Definition** QoS rule name. It can be found in traffic logs and access control logs. **Range** N/A
qos_channel_id	String	**Definition** QoS channel ID. It is a traffic log field. **Range** N/A
qos_channel_name	String	**Definition** QoS channel name. It is a traffic log field. **Range** N/A
qos_drop_packets	Double	**Definition** Number of discarded QoS packets. It is a traffic log field. **Range** N/A
qos_drop_bytes	Double	**Definition** Number of discarded QoS bytes. It is a traffic log field. **Range** N/A
qos_rule_type	Integer	**Definition** QoS rule type. It can be found in traffic logs and access control logs. **Range** N/A

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Parameter	Type	Description
qos_channel_type	Integer	**Definition** QoS channel type. It is a traffic log field. **Range** N/A
action	String	**Definition** Action. It can be found in traffic logs, access control logs, and URL logs. **Range** N/A
url	String	**Definition** URL. It is a URL log field. **Range** N/A
hit_time	Long	**Definition** Hit time. It can be found in traffic logs and URL logs. **Range** N/A
rule_id	String	**Definition** Rule ID. It can be found in traffic logs and URL logs. **Range** N/A
rule_name	String	**Definition** Rule name. It can be found in traffic logs and URL logs. **Range** N/A
rule_type	Integer	**Definition** Rule type. It can be found in traffic logs and URL logs. **Range** N/A
attack_rule	String	**Definition** Rule type. It is an attack log field. **Range** N/A

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Parameter	Type	Description
attack_rule_id	String	**Definition** Attack rule ID. It is an attack log field. **Range** N/A
attack_type	String	**Definition** Attack type. It is an attack log field. **Range** N/A
event_time	Long	**Definition** Event time. It is an attack log field. **Range** N/A
level	String	**Definition** Attack level. It is an attack log field. **Range** N/A
packet	String	**Definition** Rule payload. It is an attack log field. **Range** N/A
source	String	**Definition** Attack source. It is an attack log field. **Range** N/A
real_ip	String	**Definition** Real IP address. It is an attack log field. **Range** N/A
tag	Integer	**Definition** Tag type. It is an attack log field. **Range** **1**: WAF back-to-source IP address

Status code: 400

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Table 4-544 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

The project ID is a16df7cf1d094befa6bbc72cbf51e93a, the firewall ID is fcd04edd-428a-4631-bef5-46a924293cca, the time range is from 1751952647737 to 1751963447737, and the number of queries is 1000. Filter the records by the destination IP address 100.85.219.117. Query traffic logs at the Internet border.

```
https://{Endpoint}//v1/a16df7cf1d094befa6bbc72cbf51e93a/cfw/fcd04edd-428a-4631-bef5-46a924293cca/logs

{
  "limit" : 1000,
  "filters" : [ {
    "field" : "dst_ip",
    "operator" : "equal",
    "values" : [ "100.85.219.117" ]
  } ],
  "start_time" : 1751952647737,
  "end_time" : 1751963447737,
  "log_type" : "internet",
  "type" : "flow"
}
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "limit" : 1000,
    "records" : [ {
      "app" : "DNS",
      "bytes" : 87,
      "direction" : "in2out",
      "dst_ip" : "100.85.219.117",
      "dst_port" : 53,
      "end_time" : 1751963431000,
      "log_id" : "73861",
      "packets" : 1,
      "protocol" : "UDP",
      "src_ip" : "100.93.2.30",
      "src_port" : 55637,
      "start_time" : 1751963369000
```

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```
    } ],
    "total" : 1
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.9.5 Exporting Firewall Logs

Function

This API is used to export firewall logs.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/cfw/{fw_instance_id}/logs/export

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Table 4-545 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Request Parameters

Table 4-546 Request body parameters

Parameter	Mandatory	Type	Description
filters	No	Array of **Filter** objects	**Definition** Filter criteria. **Constraints** N/A **Range** 1-1024 **Default Value** N/A
start_time	Yes	Long	**Definition** Start time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
end_time	Yes	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
log_type	Yes	String	**Definition** Log type. **Constraints** N/A **Range** **internet** (north-south logs), **nat** (NAT logs), **vpc** (east-west logs), or **vgw** (VGW logs) **Default Value** N/A

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Parameter	Mandatory	Type	Description
type	Yes	String	**Definition** Log type. **Constraints** N/A **Range** **attack** (attack logs), **acl** (access control logs), **flow** (traffic logs), or **url** (URL logs) **Default Value** N/A
time_zone	No	String	**Definition** Time zone. **Constraints** N/A **Range** "GMT+08:00" **Default Value** N/A

Table 4-547 Filter

Parameter	Mandatory	Type	Description
field	Yes	String	**Definition** Log field, for example, **src_ip**. **Constraints** N/A **Range** N/A **Default Value** N/A
values	No	Array of strings	**Definition** Value. **Constraints** N/A **Range** N/A **Default Value** N/A

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Parameter	Mandatory	Type	Description
operator	Yes	String	**Definition** Operator. **Constraints** N/A **Range** **equal** **not_equal** **contain** **starts_with** **Default Value** N/A

Response Parameters

Status code: 200

OK

Status code: 400

Table 4-548 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

The project ID is a16df7cf1d094befa6bbc72cbf51e93a, the firewall ID is fcd04edd-428a-4631-bef5-46a924293cca, and the time range is from 1751958412875 to 1751969212875. Set the destination IP address to 100.85.219.117 and destination port to 55637. Export Internet border traffic logs.

```
https://{Endpoint}/v1/a16df7cf1d094befa6bbc72cbf51e93a/cfw/fcd04edd-428a-4631-bef5-46a924293cca/logs/export

{
```

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```
 "filters" : [ {
   "field" : "dst_ip",
   "operator" : "equal",
   "values" : [ "100.85.219.117" ]
 }, {
   "field" : "src_port",
   "operator" : "equal",
   "values" : [ "55637" ]
 } ],
 "start_time" : 1751958412875,
 "end_time" : 1751969212875,
 "type" : "flow",
 "log_type" : "internet",
 "time_zone" : "GMT%2B08:00"
}
```

Example Responses

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.9.6 Querying Flow Logs

Function

This API is used to query flow logs.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/logs/flow

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Table 4-549 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-550 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
direction	No	String	Direction. Its value can be **in2out** or **out2in**.
log_type	No	String	Log type. Its value can be **internet**, **vpc**, or **nat**.
start_time	Yes	Long	Start time, in milliseconds. The value is a timestamp, for example, 1718936272648.
end_time	Yes	Long	End time, in milliseconds. The value is a timestamp, for example, 1718936272648.
src_ip	No	String	Source IP address.
src_port	No	Integer	Source port.
dst_ip	No	String	Destination IP address.
dst_port	No	Integer	Destination port.
protocol	No	String	Protocol type. Its value can be **TCP**, **UDP**, **ICMP**, or **ICMPv6**.
app	No	String	Rule application type. Its value can be **HTTP**, **HTTPS**, **TLS1**, **DNS**, **SSH**, **MYSQL**, **SMTP**, **RDP**, **RDPS**, **VNC**, **POP3**, **IMAP4**, **SMTPS**, **POP3S**, **FTPS**, **ANY**, or **BGP**.
log_id	No	String	Document ID. For the first page, its value is null. For other pages, its value can be the **log_id** of the last record in the last query.

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Parameter	Mandatory	Type	Description
next_date	No	Long	Next date. For the first page, its value is null. For other pages, its value can be the **start_time** of the last record in the last query.
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number greater than 0. For the first page, its value is null. For other pages, its value is not null.
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
dst_host	No	String	Destination host.
src_region_name	No	String	Source region name.
dst_region_name	No	String	Destination region name.
src_province_name	No	String	Source province name.
dst_province_name	No	String	Destination province name.
src_city_name	No	String	Source city name.
dst_city_name	No	String	Destination city name.

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Request Parameters

Table 4-551 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-552 Response body parameters

Parameter	Type	Description
data	**data** object	Return value for querying flow logs.

Table 4-553 data

Parameter	Type	Description
total	Integer	Total number of returned records for querying flow logs.
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
records	Array of **records** objects	Record.

Table 4-554 records

Parameter	Type	Description
bytes	Double	Byte.
direction	String	Direction: **in2out** (outbound) or **out2in** (inbound).
packets	Integer	Number of packets.
start_time	Long	Start time, in milliseconds. The value is a timestamp, for example, 1718936272648.

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Parameter	Type	Description
end_time	Long	End time, in milliseconds. The value is a timestamp, for example, 1718936272648.
log_id	String	Document ID.
src_ip	String	Source IP address.
src_port	Integer	Source port.
dst_ip	String	Destination IP address.
app	String	Rule application type. Its value can be **HTTP**, **HTTPS**, **TLS1**, **DNS**, **SSH**, **MYSQL**, **SMTP**, **RDP**, **RDPS**, **VNC**, **POP3**, **IMAP4**, **SMTPS**, **POP3S**, **FTPS**, **ANY**, or **BGP**.
dst_port	Integer	Destination port.
protocol	String	Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (any). It cannot be left blank when **type** is set to **0** (manual), and can be left blank when **type** is set to **1** (automatic).
dst_host	String	Destination host.
dst_region_id	String	Destination region ID.
dst_region_name	String	Destination region name.
src_region_id	String	Source region ID.
src_region_name	String	Source region name.
dst_province_id	String	Destination province ID.
dst_province_name	String	Destination province name.
dst_city_id	String	Destination city ID.
dst_city_name	String	Destination city name.
src_province_id	String	Source province ID.
src_province_name	String	Source province name.
src_city_id	String	Source city ID.
src_city_name	String	Source city name.

Status code: 400

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Table 4-555 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Query the flow logs on the first page of the firewall with the ID 2af58b7c-893c-4453-a984-bdd9b1bd6318 in the project 9d80d070b6d44942af73c9c3d38e0429. The query time range is 1663555012000 to 1664159798000.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/cfw/logs/flow?
fw_instance_id=2af58b7c-893c-4453-a984-
bdd9b1bd6318&start_time=1663555012000&end_time=1664159798000&limit=10
```

Example Responses

Status code: 200

Value returned for flow log query.

```
{
  "data" : {
    "limit" : 10,
    "records" : [ {
      "app" : "SSH",
      "bytes" : 34.5,
      "direction" : "out2in",
      "dst_ip" : "100.95.148.49",
      "dst_port" : 22,
      "end_time" : 1664155493000,
      "log_id" : "76354",
      "packets" : 25,
      "protocol" : "TCP",
      "src_ip" : "100.93.27.17",
      "src_port" : 49634,
      "start_time" : 1664155428000,
      "src_province_id" : "source province id",
      "src_province_name" : "source province name",
      "src_city_id" : "source city id",
      "src_city_name" : "source city name",
      "dst_province_id" : "dst province id",
      "dst_province_name" : "dst province name",
      "dst_city_id" : "dst city id",
      "dst_city_name" : "dst city name"
    } ],
    "total" : 1
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00500002",
  "error_msg" : "Invalid interval."
}
```

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SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


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");
        String projectId = "{project_id}";

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListFlowLogsRequest request = new ListFlowLogsRequest();
        try {
            ListFlowLogsResponse response = client.listFlowLogs(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
```

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListFlowLogsRequest()
        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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

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More

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

Status Codes

Status Code	Description
200	Value returned for flow log query.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.9.7 Querying Access Control Logs

Function

This API is used to query access control logs.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/logs/access-control

Table 4-556 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-557 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
rule_id	No	String	Rule ID, which can be obtained by calling the **API for querying protection rules**. Find the value in **data.records.rule_id** (The period [.] is used to separate different levels of objects).
start_time	Yes	Long	Start time, in milliseconds. The value is a timestamp, for example, 1718936272648.
end_time	Yes	Long	End time, in milliseconds. The value is a timestamp, for example, 1718936272648.
src_ip	No	String	Source IP address.
src_port	No	Integer	Source port.
dst_ip	No	String	Destination IP address.
dst_port	No	Integer	Destination port.
protocol	No	String	Protocol type. Its value can be **TCP**, **UDP**, **ICMP**, or **ICMPv6**.
app	No	String	Rule application type. Its value can be **HTTP**, **HTTPS**, **TLS1**, **DNS**, **SSH**, **MYSQL**, **SMTP**, **RDP**, **RDPS**, **VNC**, **POP3**, **IMAP4**, **SMTPS**, **POP3S**, **FTPS**, **ANY**, or **BGP**.
log_id	No	String	Document ID. For the first page, its value is null. For other pages, its value can be the **log_id** of the last record in the last query.
next_date	No	Integer	Next date. For the first page, its value is null. For other pages, its value can be the **start_time** of the last record in the last query.

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Parameter	Mandatory	Type	Description
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number greater than 0. For the first page, its value is null. For other pages, its value is not null.
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
log_type	No	String	Log type. Its value can be **internet**, **vpc**, or **nat**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
dst_host	No	String	Destination host.
rule_name	No	String	Rule name.
action	No	String	Action. Its value can be **permit** or **deny**.
src_region_name	No	String	Source region name.
dst_region_name	No	String	Destination region name.
src_province_name	No	String	Source province name.
dst_province_name	No	String	Destination province name.
src_city_name	No	String	Source city name.
dst_city_name	No	String	Destination city name.

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Request Parameters

Table 4-558 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-559 Response body parameters

Parameter	Type	Description
data	**data** object	Returned data for querying access control logs.

Table 4-560 data

Parameter	Type	Description
total	Integer	Query the total number of access control logs.
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
records	Array of **records** objects	Query access control logs.

Table 4-561 records

Parameter	Type	Description
action	String	Action: **0** (allow), **1** (deny).
rule_name	String	Rule name.
rule_id	String	Rule ID
hit_time	Long	Hit time, in milliseconds. The value is a timestamp, for example, 1718936272648.

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Parameter	Type	Description
src_region_id	String	Source region ID.
src_region_name	String	Source region name.
dst_region_id	String	Destination region ID.
dst_region_name	String	Destination region name.
log_id	String	Document ID.
src_ip	String	Source IP address.
src_port	Integer	Source port.
dst_ip	String	Destination IP address.
dst_port	Integer	Destination port.
protocol	String	Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (any). It cannot be left blank when **type** is set to **0** (manual), and can be left blank when **type** is set to **1** (automatic).
app	String	Rule application type. Its value can be **HTTP**, **HTTPS**, **TLS1**, **DNS**, **SSH**, **MYSQL**, **SMTP**, **RDP**, **RDPS**, **VNC**, **POP3**, **IMAP4**, **SMTPS**, **POP3S**, **FTPS**, **ANY**, or **BGP**.
dst_host	String	Destination host.
src_province_id	String	Source province ID.
src_province_name	String	Source province name.
src_city_id	String	Source city ID.
src_city_name	String	Source city name.
dst_province_id	String	Destination province ID.
dst_province_name	String	Destination province name.
dst_city_id	String	Destination city ID.
dst_city_name	String	Destination city name.

Status code: 400

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Table 4-562 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Query the records whose initial position is 0 on the first page of the firewall with the ID 2af58b7c-893c-4453-a984-bdd9b1bd6318 in the project 9d80d070b6d44942af73c9c3d38e0429. The query time range is 1664159069544 to 1664162669544.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/cfw/logs/access-control?
fw_instance_id=2af58b7c-893c-4453-a984-
bdd9b1bd6318&start_time=1664159069544&end_time=1664162669544&limit=10
```

Example Responses

Status code: 200

Return value for querying access control logs.

```
{
  "data" : {
    "limit" : 10,
    "records" : [ {
      "action" : "deny",
      "app" : "PING",
      "dst_ip" : "100.85.216.211",
      "dst_port" : 59,
      "hit_time" : 1664164255000,
      "log_id" : "46032",
      "protocol" : "ICMP: ECHO_REQUEST",
      "rule_id" : "c755be1c-4b92-4ae7-a15e-c2d02b152538",
      "rule_name" : "eip_ipv4_w_n_default_deny",
      "src_ip" : "100.95.148.49",
      "src_port" : 24954,
      "src_province_id" : "source province id",
      "src_province_name" : "source province name",
      "src_city_id" : "source city id",
      "src_city_name" : "source city name",
      "dst_province_id" : "dst province id",
      "dst_province_name" : "dst province name",
      "dst_city_id" : "dst city id",
      "dst_city_name" : "dst city name"
    } ],
    "total" : 1
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00500002",
  "error_msg" : "Invalid interval."
}
```

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SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListAccessControlLogsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAccessControlLogsRequest request = new ListAccessControlLogsRequest();
        try {
            ListAccessControlLogsResponse response = client.listAccessControlLogs(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
```

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListAccessControlLogsRequest()
        response = client.list_access_control_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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

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More

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

Status Codes

Status Code	Description
200	Return value for querying access control logs.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.9.8 Querying Attack Logs

Function

This API is used to query attack logs.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/logs/attack

Table 4-563 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-564 Query Parameters

Parameter	Mandatory	Type	Description
start_time	Yes	Long	Start time, in milliseconds. The value is a timestamp, for example, 1718936272648.
end_time	Yes	Long	End time, in milliseconds. The value is a timestamp, for example, 1718936272648.
src_ip	No	String	Source IP address.
src_port	No	Integer	Source port.
dst_ip	No	String	Destination IP address.
dst_port	No	Integer	Destination port.
protocol	No	String	Protocol type. Its value can be **TCP**, **UDP**, **ICMP**, or **ICMPv6**.
app	No	String	Rule application type. Its value can be **HTTP**, **HTTPS**, **TLS1**, **DNS**, **SSH**, **MYSQL**, **SMTP**, **RDP**, **RDPS**, **VNC**, **POP3**, **IMAP4**, **SMTPS**, **POP3S**, **FTPS**, **ANY**, or **BGP**.
log_id	No	String	Document ID. For the first page, its value is null. For other pages, its value can be the **log_id** of the last record in the last query.
next_date	No	Long	Next date. For the first page, its value is null. For other pages, its value can be the **event_time** of the last record in the last query.
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number greater than 0. For the first page, its value is null. For other pages, its value is not null.
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

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Parameter	Mandatory	Type	Description
action	No	String	Action. Its value can be **permit** or **deny**.
direction	No	String	Direction. Its value can be **in2out** or **out2in**.
attack_type	No	String	Intrusion event type.
attack_rule	No	String	Intrusion event rule.
level	No	String	Threat level. Its value can be **CRITICAL**, **HIGH**, **MEDIUM**, or **LOW**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
dst_host	No	String	Destination host.
log_type	No	String	Log type. Its value can be **internet**, **vpc**, or **nat**.
attack_rule_id	No	String	Intrusion event ID.
src_region_name	No	String	Source region name.
dst_region_name	No	String	Destination region name.
src_province_name	No	String	Source province name.
dst_province_name	No	String	Destination province name.
src_city_name	No	String	Source city name.
dst_city_name	No	String	Destination city name.

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Request Parameters

Table 4-565 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-566 Response body parameters

Parameter	Type	Description
data	**data** object	Return value for querying attack logs.

Table 4-567 data

Parameter	Type	Description
total	Integer	Total number of returned attack data records.
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
records	Array of **records** objects	Attack log list.

Table 4-568 records

Parameter	Type	Description
direction	String	Direction. Its value can be **in2out** or **out2in**.
action	String	Action. Its value can be **permit** or **deny**.
event_time	Long	Event time, in milliseconds. The value is a timestamp, for example, 1718936272648.
attack_type	String	Attack type.

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Parameter	Type	Description
attack_rule	String	Attack rule.
level	String	Threat level. Its value can be **CRITICAL**, **HIGH**, **MEDIUM**, or **LOW**.
source	String	Source.
packet_length	Long	Packet length.
attack_rule_id	String	Attack rule ID.
hit_time	Long	Hit time, in milliseconds. The value is a timestamp, for example, 1718936272648.
log_id	String	Log ID.
src_ip	String	Source IP address.
src_port	Integer	Source port.
dst_ip	String	Destination IP address.
dst_port	Integer	Destination port.
protocol	String	Protocol type. Its value can be **TCP**, **UDP**, **ICMP**, or **ICMPv6**.
packet	String	Attack log packet.
app	String	Rule application type. Its value can be **HTTP**, **HTTPS**, **TLS1**, **DNS**, **SSH**, **MYSQL**, **SMTP**, **RDP**, **RDPS**, **VNC**, **POP3**, **IMAP4**, **SMTPS**, **POP3S**, **FTPS**, **ANY**, or **BGP**.
packetMessages	Array of **PacketMessage** objects	Attack packet information.
src_region_id	String	Source region ID.
src_region_name	String	Source region name.
dst_region_id	String	Destination region ID.
dst_region_name	String	Destination region name.
src_province_id	String	Source province ID.
src_province_name	String	Source province name.
src_city_id	String	Source city ID.
src_city_name	String	Source city name.

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Parameter	Type	Description
dst_province_id	String	Destination province ID.
dst_province_name	String	Destination province name.
dst_city_id	String	Destination city ID.
dst_city_name	String	Destination city name.

Table 4-569 PacketMessage

Parameter	Type	Description
hex_index	String	Hexadecimal index.
hexs	Array of strings	Hexadecimal number sequence.
utf8_String	String	UTF-8 string.

Status code: 400

Table 4-570 Response body parameters

Parameter	Type	Description
error_code	String	Error code.
error_msg	String	Error description.

Example Requests

Query 10 records on the first page of the firewall with the ID 2af58b7c-893c-4453-a984-bdd9b1bd6318 in the project 9d80d070b6d44942af73c9c3d38e0429. The query time range is 1663567058000 to 1664171765000.

```
https://{Endpoint}/v1/9d80d070b6d44942af73c9c3d38e0429/cfw/logs/attack?
fw_instance_id=2af58b7c-893c-4453-a984-
bdd9b1bd6318&start_time=1663567058000&end_time=1664171765000&limit=10
```

Example Responses

Status code: 200

Return value for querying attack logs.

```
{
  "data" : {
    "limit" : 10,
    "records" : [ {
      "action" : "deny",
      "app" : "HTTP",
```

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```
    "attack_rule" : "Tool Nmap Web Server Probe Detected",
    "attack_rule_id" : "336154",
    "attack_type" : "Web Attack",
    "direction" : "out2in",
    "dst_ip" : "100.95.148.49",
    "dst_port" : 8080,
    "event_time" : 1664146216000,
    "level" : "MEDIUM",
    "log_id" : "15591",
    "packet" : "+hZUZMhV+hY/AaHMCABFKABpXPNAADAGof1kVe6QZF
+UMcTQH5B0wdaz888+uoAYAOVyNQAAAQElCjrmikVb9JLCR0VUIC9uaWNlJTIwcG9ydHMlMkMvVHJpJTZFaX
R5LnR4dCUyZWJhayBIVFRQLzEuMA0KDQo=",
    "packetMessages" : [ {
      "hex_index" : "00000000",
      "hexs" : [ "fa", "16", "54", "64", "c8", "55", "fa", "16", "3f", "01", "a1", "cc", "08", "00", "45", "28" ],
      "utf8_String" : ".\u0016Td.U.\u0016?.....E("
    }, {
      "hex_index" : "00000010",
      "hexs" : [ "00", "69", "5c", "f3", "40", "00", "30", "06", "a1", "fd", "64", "55", "ee", "90", "64", "5f" ],
      "utf8_String" : ".i\\.@.0...dU.d_"
    }, {
      "hex_index" : "00000020",
      "hexs" : [ "94", "31", "c4", "d0", "1f", "90", "74", "c1", "d6", "b3", "f3", "cf", "3e", "ba", "80", "18" ],
      "utf8_String" : ".1..?.t..,>...."
    }, {
      "hex_index" : "00000030",
      "hexs" : [ "00", "e5", "72", "35", "00", "00", "01", "01", "08", "0a", "3a", "e6", "8a", "45", "5b", "f4" ],
      "utf8_String" : "..r5.....:.E[."
    }, {
      "hex_index" : "00000040",
      "hexs" : [ "92", "c2", "47", "45", "54", "20", "2f", "6e", "69", "63", "65", "25", "32", "30", "70", "6f" ],
      "utf8_String" : "..GET /nice%20po"
    }, {
      "hex_index" : "00000050",
      "hexs" : [ "72", "74", "73", "25", "32", "43", "2f", "54", "72", "69", "25", "36", "45", "69", "74", "79" ],
      "utf8_String" : "rts%2C/Tri%6Eity"
    }, {
      "hex_index" : "00000060",
      "hexs" : [ "2e", "74", "78", "74", "25", "32", "65", "62", "61", "6b", "20", "48", "54", "54", "50", "2f" ],
      "utf8_String" : ".txt%2ebak HTTP/"
    }, {
      "hex_index" : "00000070",
      "hexs" : [ "31", "2e", "30", "0d", "0a", "0d", "0a" ],
      "utf8_String" : "1.0\r.\r."
    } ],
    "packet_length" : 119,
    "protocol" : "TCP",
    "source" : "0",
    "src_ip" : "100.85.238.144",
    "src_port" : 50384,
    "src_province_id" : "source province id",
    "src_province_name" : "source province name",
    "src_city_id" : "source city id",
    "src_city_name" : "source city name",
    "dst_province_id" : "dst province id",
    "dst_province_name" : "dst province name",
    "dst_city_id" : "dst city id",
    "dst_city_name" : "dst city name"
   } ],
   "total" : 1
  }
}
```


Status code: 400

Bad Request


```
{
  "error_code" : "00500002",
```


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```
  "error_msg" : "Invalid interval."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListAttackLogsSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAttackLogsRequest request = new ListAttackLogsRequest();
        try {
            ListAttackLogsResponse response = client.listAttackLogs(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
```

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```
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListAttackLogsRequest()
        response = client.list_attack_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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

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```
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for querying attack logs.
400	Bad Request
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.
500	Internal Server Error

Error Codes

See **Error Codes**.

4.10 Packet Capture Management

4.10.1 Querying a Packet Capture Task

Function

This API is used to query a packet capture task.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/capture-task

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Table 4-571 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-572 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.

Request Parameters

Table 4-573 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

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Table 4-574 Response body parameters

Parameter	Type	Description
data	**HttpQueryCaptureTaskResponseData** object	Returned data for querying a packet capture task.

Table 4-575 HttpQueryCaptureTaskResponseData

Parameter	Type	Description
limit	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
total	Long	Total number of packet capture tasks.
records	Array of **CaptureTaskVO** objects	Packet capture task list.

Table 4-576 CaptureTaskVO

Parameter	Type	Description
capture_size	String	Packet size, for example, **500kb** or **500mb**.
created_date	String	Packet capture task creation time, for example, 2024/08/31 10:17:30.
dest_address	String	Destination address.
dest_address_type	Integer	Destination address type: **0** (IPv4), **1** (IPv6).
dest_port	String	Destination port.
duration	Integer	Packet capture duration, in minutes.
is_deleted	Integer	Deleted or not: **0** (no), **1** (yes).
max_packets	Integer	Maximum number of captured packets.
modified_date	String	Modification time, for example, 2024/08/31 10:17:30.

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Parameter	Type	Description
name	String	Packet capture task name.
protocol	Integer	Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (any). It cannot be left blank when **type** is set to **0** (manual), and can be left blank when **type** is set to **1** (automatic).
remaining_days	Integer	Remaining retention period (days).
source_address	String	Source IP address.
source_address_type	Integer	Source address type: **0** (IPv4), **1** (IPv6).
source_port	String	Source port.
status	Integer	Packet capture task status: **1** (successful), **2** (running), **4** (stopped), or **5** (ending).
task_id	String	Packet capture task ID.

Example Requests

Query 50 packet capture tasks of firewall ebf891cd-2163-48a0-9963-6309f99dd3c4 in project 09bb24e6fe80d23d2fa2c010b53b418c.

```
https://{Endpoint}/v1/09bb24e6fe80d23d2fa2c010b53b418c/capture-task?
fw_instance_id=ebf891cd-2163-48a0-9963-6309f99dd3c4&enterprise_project_id=default&limit=50&offset=0
```

Example Responses

Status code: 200

Return value for querying the packet capture task list.


```
{
  "data" : {
    "limit" : 50,
    "offset" : 0,
    "records" : [ {
      "capture_size" : "--",
      "created_date" : "2024/06/04 11:23:50",
      "dest_address" : "2.2.2.2",
      "dest_address_type" : 0,
      "dest_port" : "",
      "duration" : 3,
      "is_deleted" : 0,
      "max_packets" : 100000,
      "modified_date" : "2024/06/04 11:23:50",
      "name" : "zhuabaotest",
      "protocol" : -1,
      "remaining_days" : 7,
      "source_address" : "1.1.1.1",
      "source_address_type" : 0,
      "source_port" : "",
```


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```
    "status" : 2,
    "task_id" : "24e6bb6d-d335-48fd-b9c7-bbaaa851d209"
  } ],
  "total" : 1
 }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListCaptureTaskSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListCaptureTaskRequest request = new ListCaptureTaskRequest();
        try {
            ListCaptureTaskResponse response = client.listCaptureTask(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
```

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```
import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListCaptureTaskRequest()
        response = client.list_capture_task(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListCaptureTaskRequest{}
    response, err := client.ListCaptureTask(request)
```

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

More

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

Status Codes

Status Code	Description
200	Return value for querying the packet capture task list.

Error Codes

See **Error Codes**.

4.10.2 Creating a Packet Capture Task

Function

Create a packet capture task. Each task can be executed only once.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/capture-task

Table 4-577 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-578 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-579 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-580 Request body parameters

Parameter	Mandatory	Type	Description
destination	Yes	**CaptureRuleAddressDto** object	Request body of the destination address in a packet capture rule.
duration	Yes	Integer	Packet capture duration, in minutes.
max_packets	Yes	Integer	Maximum number of captured packets.
name	Yes	String	Packet capture task name.
service	Yes	**CaptureServiceDto** object	Request body of a packet capture task.
source	Yes	**CaptureRuleAddressDto** object	Request body of the source address in a packet capture rule.

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Table 4-581 CaptureServiceDto

Parameter	Mandatory	Type	Description
dest_port	No	String	Destination port.
protocol	Yes	Integer	Protocol type: **6** (TCP), **17** (UDP), **1** (ICMP), **58** (ICMPv6), or **-1** (any). It cannot be left blank when **type** is set to **0** (manual), and can be left blank when **type** is set to **1** (automatic).
source_port	No	String	Source port.

Table 4-582 CaptureRuleAddressDto

Parameter	Mandatory	Type	Description
address	Yes	String	Address.
address_type	Yes	Integer	Destination address type: **0** (IPv4), **1** (IPv6).
type	Yes	Integer	Input address type. Currently, its value can only be **0** (manual).

Response Parameters

Status code: 200

Table 4-583 Response body parameters

Parameter	Type	Description
data	**CaptureTaskId** object	ID of a created packet capture task.

Table 4-584 CaptureTaskId

Parameter	Type	Description
id	String	Firewall ID.
name	String	Firewall name.

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Example Requests

Add a packet capture task to firewall ebf891cd-2163-48a0-9963-6309f99dd3c4 in project 09bb24e6fe80d23d2fa2c010b53b418c. Set the task name to **zhuabaotest**, maximum number of captured packets to 100000, packet capture duration to 3 minutes, and remaining retention days to 7 days. Source address protocol: TCP; address type: IPv4; address: 1.1.1.1; port number: 1-65535; destination address protocol: TCP; address type: IPv4; address: 2.2.2.2; port number: 1-65535.

```
https://{Endpoint}/v1/09bb24e6fe80d23d2fa2c010b53b418c/capture-task?
fw_instance_id=ebf891cd-2163-48a0-9963-6309f99dd3c4&enterprise_project_id=default

{
  "name" : "zhuabaotest",
  "max_packets" : 100000,
  "duration" : 3,
  "source" : {
    "type" : 0,
    "address_type" : 0,
    "address" : "1.1.1.1"
  },
  "destination" : {
    "type" : 0,
    "address_type" : 0,
    "address" : "2.2.2.2"
  },
  "service" : {
    "protocol" : -1,
    "source_port" : "",
    "dest_port" : ""
  }
}
```

Example Responses

Status code: 200

Return value for creating a packet capture task.

```
{
  "data" : {
    "id" : "ebf891cd-2163-48a0-9963-6309f99dd3c4",
    "name" : "test"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Add a packet capture task to firewall ebf891cd-2163-48a0-9963-6309f99dd3c4 in project 09bb24e6fe80d23d2fa2c010b53b418c. Set the task name to **zhuabaotest**, maximum number of captured packets to 100000, packet capture duration to 3 minutes, and remaining retention days to 7 days. Source address protocol: TCP; address type: IPv4; address: 1.1.1.1; port number: 1-65535; destination address protocol: TCP; address type: IPv4; address: 2.2.2.2; port number: 1-65535.

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

import com.huaweicloud.sdk.core.auth.ICredential;
```

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```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class CreateCaptureTaskSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateCaptureTaskRequest request = new CreateCaptureTaskRequest();
        CaptureTaskDto body = new CaptureTaskDto();
        CaptureRuleAddressDto sourcebody = new CaptureRuleAddressDto();
        sourcebody.withAddress("1.1.1.1")
            .withAddressType(0)
            .withType(0);
        CaptureServiceDto servicebody = new CaptureServiceDto();
        servicebody.withDestPort("")
            .withProtocol(-1)
            .withSourcePort("");
        CaptureRuleAddressDto destinationbody = new CaptureRuleAddressDto();
        destinationbody.withAddress("2.2.2.2")
            .withAddressType(0)
            .withType(0);
        body.withSource(sourcebody);
        body.withService(servicebody);
        body.withName("zhuabaotest");
        body.withMaxPackets(100000);
        body.withDuration(3);
        body.withDestination(destinationbody);
        request.withBody(body);
        try {
            CreateCaptureTaskResponse response = client.createCaptureTask(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());
        }
    }
}
```

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Python

Add a packet capture task to firewall ebf891cd-2163-48a0-9963-6309f99dd3c4 in project 09bb24e6fe80d23d2fa2c010b53b418c. Set the task name to **zhuabaotest**, maximum number of captured packets to 100000, packet capture duration to 3 minutes, and remaining retention days to 7 days. Source address protocol: TCP; address type: IPv4; address: 1.1.1.1; port number: 1-65535; destination address protocol: TCP; address type: IPv4; address: 2.2.2.2; port number: 1-65535.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = CreateCaptureTaskRequest()
        sourcebody = CaptureRuleAddressDto(
            address="1.1.1.1",
            address_type=0,
            type=0
        )
        servicebody = CaptureServiceDto(
            dest_port="",
            protocol=-1,
            source_port=""
        )
        destinationbody = CaptureRuleAddressDto(
            address="2.2.2.2",
            address_type=0,
            type=0
        )
        request.body = CaptureTaskDto(
            source=sourcebody,
            service=servicebody,
            name="zhuabaotest",
            max_packets=100000,
            duration=3,
            destination=destinationbody
        )
        response = client.create_capture_task(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

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Go

Add a packet capture task to firewall ebf891cd-2163-48a0-9963-6309f99dd3c4 in project 09bb24e6fe80d23d2fa2c010b53b418c. Set the task name to **zhuabaotest**, maximum number of captured packets to 100000, packet capture duration to 3 minutes, and remaining retention days to 7 days. Source address protocol: TCP; address type: IPv4; address: 1.1.1.1; port number: 1-65535; destination address protocol: TCP; address type: IPv4; address: 2.2.2.2; port number: 1-65535.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateCaptureTaskRequest{}
    sourcebody := &model.CaptureRuleAddressDto{
        Address: "1.1.1.1",
        AddressType: int32(0),
        Type: int32(0),
    }
    destPortService:= ""
    sourcePortService:= ""
    servicebody := &model.CaptureServiceDto{
        DestPort: &destPortService,
        Protocol: int32(-1),
        SourcePort: &sourcePortService,
    }
    destinationbody := &model.CaptureRuleAddressDto{
        Address: "2.2.2.2",
        AddressType: int32(0),
        Type: int32(0),
    }
    request.Body = &model.CaptureTaskDto{
        Source: sourcebody,
        Service: servicebody,
        Name: "zhuabaotest",
        MaxPackets: int32(100000),
        Duration: int32(3),
        Destination: destinationbody,
    }
    response, err := client.CreateCaptureTask(request)
```

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

More

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

Status Codes

Status Code	Description
200	Return value for creating a packet capture task.

Error Codes

See **Error Codes**.

4.10.3 Deleting Packet Capture Tasks in Batches

Function

This API is used to delete packet capture tasks in batches.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/capture-task/batch-delete

Table 4-585 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-586 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-587 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-588 Request body parameters

Parameter	Mandatory	Type	Description
task_ids	Yes	Array of strings	List of packet capture task IDs. The packet capture task IDs can be obtained by calling the **API for querying packet capture tasks**. Find the value in **data.records.task_id** (The period [.] is used to separate different levels of objects).

Response Parameters

Status code: 200

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Table 4-589 Response body parameters

Parameter	Type	Description
data	CaptureTaskId object	Returned data for deleting a packet capture task.

Table 4-590 CaptureTaskId

Parameter	Type	Description
id	String	Firewall ID.
name	String	Firewall name.

Example Requests

Delete the packet capture task 24e6bb6d-d335-48fd-b9c7-bbaaa851d209 from firewall ebf891cd-2163-48a0-9963-6309f99dd3c4 in project 09bb24e6fe80d23d2fa2c010b53b418c.

```
https://{Endpoint}/v1/09bb24e6fe80d23d2fa2c010b53b418c/capture-task/batch-delete?
fw_instance_id=ebf891cd-2163-48a0-9963-6309f99dd3c4&enterprise_project_id=default

{
  "task_ids" : [ "24e6bb6d-d335-48fd-b9c7-bbaaa851d209" ]
}
```

Example Responses

Status code: 200

Return value for deleting packet capture tasks.

```
{
  "data" : {
    "id" : "ebf891cd-2163-48a0-9963-6309f99dd3c4",
    "name" : "test"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Delete the packet capture task 24e6bb6d-d335-48fd-b9c7-bbaaa851d209 from firewall ebf891cd-2163-48a0-9963-6309f99dd3c4 in project 09bb24e6fe80d23d2fa2c010b53b418c.

```
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;
```

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```
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class DeleteCaptureTaskSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteCaptureTaskRequest request = new DeleteCaptureTaskRequest();
        DeleteCaptureTaskDto body = new DeleteCaptureTaskDto();
        List<String> listbodyTaskIds = new ArrayList<>();
        listbodyTaskIds.add("24e6bb6d-d335-48fd-b9c7-bbaaa851d209");
        body.withTaskIds(listbodyTaskIds);
        request.withBody(body);
        try {
            DeleteCaptureTaskResponse response = client.deleteCaptureTask(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

Delete the packet capture task 24e6bb6d-d335-48fd-b9c7-bbaaa851d209 from firewall ebf891cd-2163-48a0-9963-6309f99dd3c4 in project 09bb24e6fe80d23d2fa2c010b53b418c.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
```

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = DeleteCaptureTaskRequest()
        listTaskIdsbody = [
            "24e6bb6d-d335-48fd-b9c7-bbaaa851d209"
        ]
        request.body = DeleteCaptureTaskDto(
            task_ids=listTaskIdsbody
        )
        response = client.delete_capture_task(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

Delete the packet capture task 24e6bb6d-d335-48fd-b9c7-bbaaa851d209 from firewall ebf891cd-2163-48a0-9963-6309f99dd3c4 in project 09bb24e6fe80d23d2fa2c010b53b418c.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
```

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```
        Build())

    request := &model.DeleteCaptureTaskRequest{}
    var listTaskIdsbody = []string{
        "24e6bb6d-d335-48fd-b9c7-bbaaa851d209",
    }
    request.Body = &model.DeleteCaptureTaskDto{
        TaskIds: listTaskIdsbody,
    }
    response, err := client.DeleteCaptureTask(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for deleting packet capture tasks.

Error Codes

See **Error Codes**.

4.10.4 Obtaining Packet Capture Task Results

Function

This API is used to obtain packet capture task results.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/capture-task/capture-result

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Table 4-591 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-592 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
task_id	Yes	String	Packet capture task ID, which can be obtained by calling the **API for querying packet capture tasks**. Find the value in **data.records.task_id** (The period [.] is used to separate different levels of objects).
type	No	Integer	Whether to download from a specified EIP: **0** (no), **1** (yes).
ip	No	Array of strings	Specified EIP.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-593 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

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Response Parameters

Status code: 200

Table 4-594 Response body parameters

Parameter	Type	Description
data	**CaptureResultUrlVO** object	Packet capture result URL.

Table 4-595 CaptureResultUrlVO

Parameter	Type	Description
captcha	String	Access code used to open the download link.
expires	Long	Download link expiration time.
file_list	Array of **CaptureFile** objects	List of packet capture files, which is used when OBS folder sharing is not supported. If this field is specified, no **captch**, **expires**, or **url** value is returned.
request_header	**HostHeaderInfo** object	Server request header, which is used when OBS folder sharing is not supported.
url	String	Download link.

Table 4-596 CaptureFile

Parameter	Type	Description
file_name	String	File name.
url	String	Download link.
file_path	String	File path.

Table 4-597 HostHeaderInfo

Parameter	Type	Description
Host	String	Server.

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Example Requests

Query the packet capture results firewall ebf891cd-2163-48a0-9963-6309f99dd3c4 in project 09bb24e6fe80d23d2fa2c010b53b418c.

```
https://{Endpoint}/v1/09bb24e6fe80d23d2fa2c010b53b418c/capture-task/capture-result?
fw_instance_id=14f99b45-47df-4e40-aa5d-
cf3700ce9c8b&enterprise_project_id=default&task_id=ea47d7f9-8b93-45de-978d-b4bf0613cfed&type=0
```

Example Responses

Status code: 200

Obtain packet capture results.

```
{
  "data" : {
    "captcha" : "696821",
    "expires" : 30,
    "url" : "testurl"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListCaptureResultSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListCaptureResultRequest request = new ListCaptureResultRequest();
        try {
            ListCaptureResultResponse response = client.listCaptureResult(request);
            System.out.println(response.toString());
```

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```
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ListCaptureResultRequest()
        response = client.list_capture_result(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/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
```

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```
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Obtain packet capture results.

Error Codes

See **Error Codes**.

4.10.5 Canceling a Packet Capture Task

Function

This API is used to cancel a packet capture task.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/capture-task/stop

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Table 4-598 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-599 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-600 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain the token by referring to **Obtaining a User Token**.

Table 4-601 Request body parameters

Parameter	Mandatory	Type	Description
task_id	Yes	String	Packet capture task ID, which can be obtained by calling the **API for querying packet capture tasks**. Find the value in **data.records.task_id** (The period [.] is used to separate different levels of objects).

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Response Parameters

Status code: 200

Table 4-602 Response body parameters

Parameter	Type	Description
data	CaptureTaskId object	ID of a packet capture task to be stopped.

Table 4-603 CaptureTaskId

Parameter	Type	Description
id	String	Firewall ID.
name	String	Firewall name.

Example Requests

Stop the packet capture task 1dcddab3-7d79-4a56-9e67-4aa0962b98ad of firewall ebf891cd-2163-48a0-9963-6309f99dd3c4 in project 09bb24e6fe80d23d2fa2c010b53b418c.

```
https://{Endpoint}/v1/09bb24e6fe80d23d2fa2c010b53b418c/capture-task/stop?
fw_instance_id=ebf891cd-2163-48a0-9963-6309f99dd3c4&enterprise_project_id=default

{
  "task_id" : "1dcddab3-7d79-4a56-9e67-4aa0962b98ad"
}
```

Example Responses

Status code: 200

Return value for stopping a packet capture task.

```
{
  "data" : {
    "id" : "ebf891cd-2163-48a0-9963-6309f99dd3c4",
    "name" : "test"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Stop the packet capture task 1dcddab3-7d79-4a56-9e67-4aa0962b98ad of firewall ebf891cd-2163-48a0-9963-6309f99dd3c4 in project 09bb24e6fe80d23d2fa2c010b53b418c.

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```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class CancelCaptureTaskSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        CancelCaptureTaskRequest request = new CancelCaptureTaskRequest();
        CancelCaptureTaskDto body = new CancelCaptureTaskDto();
        body.withTaskId("1dcddab3-7d79-4a56-9e67-4aa0962b98ad");
        request.withBody(body);
        try {
            CancelCaptureTaskResponse response = client.cancelCaptureTask(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

Stop the packet capture task 1dcddab3-7d79-4a56-9e67-4aa0962b98ad of firewall ebf891cd-2163-48a0-9963-6309f99dd3c4 in project 09bb24e6fe80d23d2fa2c010b53b418c.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *
```

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = CancelCaptureTaskRequest()
        request.body = CancelCaptureTaskDto(
            task_id="1dcddab3-7d79-4a56-9e67-4aa0962b98ad"
        )
        response = client.cancel_capture_task(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

Stop the packet capture task 1dcddab3-7d79-4a56-9e67-4aa0962b98ad of firewall ebf891cd-2163-48a0-9963-6309f99dd3c4 in project 09bb24e6fe80d23d2fa2c010b53b418c.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())
```

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```
    request := &model.CancelCaptureTaskRequest{}
    request.Body = &model.CancelCaptureTaskDto{
        TaskId: "1dcddab3-7d79-4a56-9e67-4aa0962b98ad",
    }
    response, err := client.CancelCaptureTask(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for stopping a packet capture task.

Error Codes

See **Error Codes**.

4.11 Antivirus Management

4.11.1 Checking the Antivirus Switch

Function

This API is used to check the antivirus switch.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/anti-virus/switch

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Table 4-604 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-605 Query Parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border. Here, a protected object ID whose **type** is **1** is used. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

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Request Parameters

Table 4-606 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-607 Response body parameters

Parameter	Type	Description
data	**AntiVirusVO** object	Antivirus switch data.

Table 4-608 AntiVirusVO

Parameter	Type	Description
anti_virus_status	Integer	Antivirus switch status: **0** (disabled), **1** (enabled).
id	String	Protected object ID.

Example Requests

Query the antivirus switch of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, the enterprise project ID is fb55459c-41b3-47fc-885d-540946fddda4, the target protected object ID is 1b90f031-0c7b-4f25-95e2-b6d9940d269e, and the engine type is 1.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/anti-virus/switch?fw_instance_id=e743cfaf-8164-4807-aa13-d893d83313cf&enterprise_project_id=fb55459c-41b3-47fc-885d-540946fddda4&object_id=1b90f031-0c7b-4f25-95e2-b6d9940d269e&engine_type=1
```

Example Responses

Status code: 200

Return value for checking the antivirus switch.

```
{
  "data" : {
```

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```
    "anti_virus_status" : 1,
    "id" : "1b90f031-0c7b-4f25-95e2-b6d9940d269e"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ShowAntiVirusSwitchSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowAntiVirusSwitchRequest request = new ShowAntiVirusSwitchRequest();
        try {
            ShowAntiVirusSwitchResponse response = client.showAntiVirusSwitch(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
```

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```
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ShowAntiVirusSwitchRequest()
        response = client.show_anti_virus_switch(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowAntiVirusSwitchRequest{}
    response, err := client.ShowAntiVirusSwitch(request)
    if err == nil {
```

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```
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for checking the antivirus switch.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.11.2 Modifying the Antivirus Switch

Function

This API is used to modify the antivirus switch.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/anti-virus/switch

Table 4-609 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

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Table 4-610 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-611 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Table 4-612 Request body parameters

Parameter	Mandatory	Type	Description
anti_virus_status	Yes	Integer	Antivirus switch status.
object_id	Yes	String	Protected object ID.

Response Parameters

Status code: 200

Table 4-613 Response body parameters

Parameter	Type	Description
data	**ResponseData** object	Return value for updating the antivirus switch.

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Table 4-614 ResponseData

Parameter	Type	Description
id	String	Data ID.

Example Requests

Enable antivirus.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/anti-virus/switch?
fw_instance_id=e743cfaf-8164-4807-aa13-
d893d83313cf&enterprise_project_id=fb55459c-41b3-47fc-885d-540946fddda4

{
  "object_id" : "1b90f031-0c7b-4f25-95e2-b6d9940d269e",
  "anti_virus_status" : 1
}
```

Example Responses

Status code: 200

Return value for updating the antivirus switch.

```
{
  "data" : {
    "id" : "1b90f031-0c7b-4f25-95e2-b6d9940d269e"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Enable antivirus.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class UpdateAntiVirusSwitchSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateAntiVirusSwitchRequest request = new UpdateAntiVirusSwitchRequest();
        AntiVirusSwitchDto body = new AntiVirusSwitchDto();
        body.withObjectId("1b90f031-0c7b-4f25-95e2-b6d9940d269e");
        body.withAntiVirusStatus(1);
        request.withBody(body);
        try {
            UpdateAntiVirusSwitchResponse response = client.updateAntiVirusSwitch(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

Enable antivirus.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = UpdateAntiVirusSwitchRequest()
        request.body = AntiVirusSwitchDto(
            object_id="1b90f031-0c7b-4f25-95e2-b6d9940d269e",
            anti_virus_status=1
        )
        response = client.update_anti_virus_switch(request)
        print(response)
```

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```
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

Enable antivirus.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateAntiVirusSwitchRequest{}
    objectIdAntiVirusSwitchDto:= "1b90f031-0c7b-4f25-95e2-b6d9940d269e"
    antiVirusStatusAntiVirusSwitchDto:= int32(1)
    request.Body = &model.AntiVirusSwitchDto{
        ObjectId: &objectIdAntiVirusSwitchDto,
        AntiVirusStatus: &antiVirusStatusAntiVirusSwitchDto,
    }
    response, err := client.UpdateAntiVirusSwitch(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

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Status Codes

Status Code	Description
200	Return value for updating the antivirus switch.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.11.3 Obtaining Firewall Antivirus Rule Information

Function

This API is used to obtain information about antivirus rules.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/anti-virus/rule

Table 4-615 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

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Table 4-616 Query Parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If **type** is **0**, **object_id** is the ID of a protected object on the Internet border. If **type** is **1**, **object_id** is the ID of a protected object on the VPC border. Here, a protected object ID whose **type** is **1** is used. You can obtain the value of **type** from **data.records.protect_objects.type** (The period [.] is used to separate different levels of objects).
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number greater than 0. For the first page, its value is null. For other pages, its value is not null.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

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Parameter	Mandatory	Type	Description
engine_type	Yes	Integer	Engine type, divided into four types: 0, 1, 2, and 3

Request Parameters

Table 4-617 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-618 Response body parameters

Parameter	Type	Description
data	**AntiVirusRuleVO** object	Return value for querying the antivirus rule.

Table 4-619 AntiVirusRuleVO

Parameter	Type	Description
id	String	Antivirus rule ID.
scan_protocol_configs	Array of **ScanProtocolConfig** objects	Antivirus scan protocol list.
total	Integer	Total number of items in the antivirus scan protocol list.

Table 4-620 ScanProtocolConfig

Parameter	Type	Description
action	Integer	Antivirus action: **0** (observe), **1** (block), or **2** (disable).

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Parameter	Type	Description
protocol_type	Integer	Protocol type. The value can be 0** (HTTP), **1** (SMTP), **2** (POP3), **3** (IMAP4), **4** (FTP), **5** (SMB), **6** (malicious access), or **7** (IM).

Example Requests

Query the antivirus rule of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, the enterprise project ID is fb55459c-41b3-47fc-885d-540946fddda4, the target object ID is 1b90f031-0c7b-4f25-95e2-b6d9940d269e, and the engine type is 1. The maximum number of query results is 50, and the offset is 0.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/anti-virus/rule?
fw_instance_id=e743cfaf-8164-4807-aa13-
d893d83313cf&enterprise_project_id=fb55459c-41b3-47fc-885d-540946fddda4&limit=50&offset=0&object_id
=1b90f031-0c7b-4f25-95e2-b6d9940d269e&engine_type=1
```

Example Responses

Status code: 200

Return value for checking the antivirus rule.

```
{
  "data" : {
    "scan_protocol_configs" : [ {
      "action" : 0,
      "protocol_type" : 0
    }, {
      "action" : 1,
      "protocol_type" : 1
    }, {
      "action" : 2,
      "protocol_type" : 2
    }, {
      "action" : 2,
      "protocol_type" : 4
    }, {
      "action" : 2,
      "protocol_type" : 3
    }, {
      "action" : 2,
      "protocol_type" : 6
    }, {
      "action" : 2,
      "protocol_type" : 5
    } ],
    "total" : 7
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

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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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ShowAntiVirusRuleSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowAntiVirusRuleRequest request = new ShowAntiVirusRuleRequest();
        try {
            ShowAntiVirusRuleResponse response = client.showAntiVirusRule(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 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
```

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```
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = ShowAntiVirusRuleRequest()
        response = client.show_anti_virus_rule(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

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Status Codes

Status Code	Description
200	Return value for checking the antivirus rule.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.11.4 Modifying an Antivirus Rule

Function

This API is used to modify an antivirus rule.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/anti-virus/rule

Table 4-621 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

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Table 4-622 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-623 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Table 4-624 Request body parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	Protected object ID.
scan_protocol_configs	Yes	Array of **ScanProtocolConfig** objects	Scan the protocol configuration list.

Table 4-625 ScanProtocolConfig

Parameter	Mandatory	Type	Description
action	Yes	Integer	Antivirus action: **0** (observe), **1** (block), or **2** (disable).
protocol_type	Yes	Integer	Protocol type. The value can be 0** (HTTP), **1** (SMTP), **2** (POP3), **3** (IMAP4), **4** (FTP), **5** (SMB), **6** (malicious access), or **7** (IM).

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Response Parameters

Status code: 200

Table 4-626 Response body parameters

Parameter	Type	Description
data	ResponseData object	Return value for updating the antivirus rule list.

Table 4-627 ResponseData

Parameter	Type	Description
id	String	Data ID.

Example Requests

Change the antivirus rule to **Observe** for the project whose ID is 408972e72dcd4c1a9b033e955802a36b, firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, and enterprise project ID is fb55459c-41b3-47fc-885d-540946fddda4.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/anti-virus/rule?
fw_instance_id=e743cfaf-8164-4807-aa13-
d893d83313cf&enterprise_project_id=fb55459c-41b3-47fc-885d-540946fddda4

{
  "object_id" : "1b90f031-0c7b-4f25-95e2-b6d9940d269e",
  "scan_protocol_configs" : [ {
    "protocol_type" : 2,
    "action" : 0
  } ]
}
```

Example Responses

Status code: 200

Return value for updating the antivirus rule.

```
{
  "data" : {
    "id" : "1b90f031-0c7b-4f25-95e2-b6d9940d269e"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Change the antivirus rule to **Observe** for the project whose ID is 408972e72dcd4c1a9b033e955802a36b, firewall ID is e743cfaf-8164-4807-aa13-

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d893d83313cf, and enterprise project ID is fb55459c-41b3-47fc-885d-540946fddda4.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

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

public class UpdateAntiVirusRuleSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateAntiVirusRuleRequest request = new UpdateAntiVirusRuleRequest();
        AntiVirusRuleDto body = new AntiVirusRuleDto();
        List<ScanProtocolConfig> listbodyScanProtocolConfigs = new ArrayList<>();
        listbodyScanProtocolConfigs.add(
            new ScanProtocolConfig()
                .withAction(0)
                .withProtocolType(2)
        );
        body.withScanProtocolConfigs(listbodyScanProtocolConfigs);
        body.withObjectId("1b90f031-0c7b-4f25-95e2-b6d9940d269e");
        request.withBody(body);
        try {
            UpdateAntiVirusRuleResponse response = client.updateAntiVirusRule(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());
        }
    }
}
```

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Python

Change the antivirus rule to **Observe** for the project whose ID is 408972e72dcd4c1a9b033e955802a36b, firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, and enterprise project ID is fb55459c-41b3-47fc-885d-540946fddda4.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = UpdateAntiVirusRuleRequest()
        listScanProtocolConfigsbody = [
            ScanProtocolConfig(
                action=0,
                protocol_type=2
            )
        ]
        request.body = AntiVirusRuleDto(
            scan_protocol_configs=listScanProtocolConfigsbody,
            object_id="1b90f031-0c7b-4f25-95e2-b6d9940d269e"
        )
        response = client.update_anti_virus_rule(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

Change the antivirus rule to **Observe** for the project whose ID is 408972e72dcd4c1a9b033e955802a36b, firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, and enterprise project ID is fb55459c-41b3-47fc-885d-540946fddda4.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
```

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```
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateAntiVirusRuleRequest{}
    actionScanProtocolConfigs:= int32(0)
    protocolTypeScanProtocolConfigs:= int32(2)
    var listScanProtocolConfigsbody = []model.ScanProtocolConfig{
        {
            Action: &actionScanProtocolConfigs,
            ProtocolType: &protocolTypeScanProtocolConfigs,
        },
    }
    objectIdAntiVirusRuleDto:= "1b90f031-0c7b-4f25-95e2-b6d9940d269e"
    request.Body = &model.AntiVirusRuleDto{
        ScanProtocolConfigs: &listScanProtocolConfigsbody,
        ObjectId: &objectIdAntiVirusRuleDto,
    }
    response, err := client.UpdateAntiVirusRule(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

Status Codes

Status Code	Description
200	Return value for updating the antivirus rule.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

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Error Codes

See **Error Codes**.

4.12 Alarm Configuration Management

4.12.1 Obtaining Alarm Configurations

Function

This API is used to obtain alarm configurations.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/alarm/config

Table 4-628 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-629 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

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Request Parameters

Table 4-630 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-631 Response body parameters

Parameter	Type	Description
alarm_configs	Array of **AlarmConfig** objects	Alarm configuration list.

Table 4-632 AlarmConfig

Parameter	Type	Description
alarm_time_period	Integer	Alarm period: **0** (all day), **1** (8:00 to 22:00).
alarm_type	Integer	Alarm type: **0** (attack), **1** (traffic threshold crossing), **2** (EIP unprotected), **3** (threat intelligence)
enable_status	Integer	Alarm status: **0** (invalid), **1** (valid).
frequency_count	Integer	Alarm triggering frequency.
frequency_time	Integer	Alarm frequency time range, in minutes.
language	String	Alarm language: **zh-cn** (Chinese), **en-us** (English).
name	String	Notification group name.
severity	String	Alarm severity. If the value of **type** is **0** or **4**, the value of **severity** can be one or more values of **CRITICAL**, **HIGH**, **MEDIUM**, and **LOW** combined. If the value of **type** is **2**, **severity** can only be **3**.

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Parameter	Type	Description
topic_urn	String	URN of an alarm topic.
username	String	Username. Its value is **cfw**.

Example Requests

Query the firewall alarm configuration of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is 8de37729-026d-412f-ba82-80c46f388d14.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/cfw/alarm/config?
fw_instance_id=8de37729-026d-412f-ba82-80c46f388d14
```

Example Responses

Status code: 200

Return value for querying the alarm configuration list.

```
{
  "alarm_configs" : [ {
    "alarm_time_period" : 0,
    "alarm_type" : 1,
    "enable_status" : 0,
    "severity" : "1"
  }, {
    "alarm_time_period" : 0,
    "alarm_type" : 2,
    "enable_status" : 0,
    "severity" : "3"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ShowAlarmConfigSolution {

    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
```

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```
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowAlarmConfigRequest request = new ShowAlarmConfigRequest();
        try {
            ShowAlarmConfigResponse response = client.showAlarmConfig(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

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

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Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

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

More

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

Status Codes

Status Code	Description
200	Return value for querying the alarm configuration list.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

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Error Codes

See **Error Codes**.

4.12.2 Modifying Alarm Configurations

Function

This API is used to modify alarm configurations.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/cfw/alarm/config

Table 4-633 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-634 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

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Request Parameters

Table 4-635 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Table 4-636 Request body parameters

Parameter	Mandatory	Type	Description
alarm_time_period	Yes	Integer	Alarm period: **0** (all day), **1** (8:00 to 22:00).
alarm_type	Yes	Integer	Alarm type: **0** (attack), **1** (traffic threshold crossing), **2** (EIP unprotected), **3** (suspicious external connection)
enable_status	Yes	Integer	Alarm status: **0** (invalid), **1** (valid).
frequency_count	Yes	Integer	Alarm triggering frequency.
frequency_time	Yes	Integer	Alarm frequency time range, in minutes.
language	No	String	Alarm language: **zh-cn** (Chinese), **en-us** (English).
severity	Yes	String	Alarm severity. If the value of **type** is **0** or **4**, the value of **severity** can be one or more values of **CRITICAL**, **HIGH**, **MEDIUM**, and **LOW** combined. If the value of **type** is **1**, **severity** is **2**. If the value of **type** is **2**, **severity** can only be **3**.
topic_urn	Yes	String	Alarm URN.
username	Yes	String	Username. Its value is **cfw**.

Response Parameters

Status code: 200

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Table 4-637 Response body parameters

Parameter	Type	Description
data	**ResponseData** object	Common response body.

Table 4-638 ResponseData

Parameter	Type	Description
id	String	Data ID.

Example Requests

Configure the firewall alarms of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is 8de37729-026d-412f-ba82-80c46f388d14. The alarm type is **1**, alarm period is **0**, status is **0**, and severity is **0**. The alarm policy is that an alarm is generated once a day when the protection bandwidth usage reaches 80%. The alarm name is **test-wyl**, and the topic URN is **urn:smn:cn-north-7:408972e72dcd4c1a9b033e955802a36b:test-wyl**.

```
https://{Endpoint}/v1/408972e72dcd4c1a9b033e955802a36b/cfw/alarm/config?
fw_instance_id=8de37729-026d-412f-ba82-80c46f388d14

{
  "alarm_time_period" : 0,
  "alarm_type" : 1,
  "enable_status" : 0,
  "severity" : "0",
  "frequency_count" : 1,
  "frequency_time" : 1,
  "topic_urn" : "urn:smn:cn-north-7:408972e72dcd4c1a9b033e955802a36b:test-wyl",
  "username" : "cfw"
}
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "id" : "8de37729-026d-412f-ba82-80c46f388d14"
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Configure the firewall alarms of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is 8de37729-026d-412f-

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ba82-80c46f388d14. The alarm type is **1**, alarm period is **0**, status is **0**, and severity is **0**. The alarm policy is that an alarm is generated once a day when the protection bandwidth usage reaches 80%. The alarm name is **test-wyl**, and the topic URN is **urn:smn:cn-north-7:408972e72dcd4c1a9b033e955802a36b:test-wyl**.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class UpdateAlarmConfigSolution {

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

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

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateAlarmConfigRequest request = new UpdateAlarmConfigRequest();
        UpdateAttackLogAlarmConfigDto body = new UpdateAttackLogAlarmConfigDto();
        body.withUsername("cfw");
        body.withTopicUrn("urn:smn:cn-north-7:408972e72dcd4c1a9b033e955802a36b:test-wyl");
        body.withSeverity("0");
        body.withFrequencyTime(1);
        body.withFrequencyCount(1);
        body.withEnableStatus(0);
        body.withAlarmType(1);
        body.withAlarmTimePeriod(0);
        request.withBody(body);
        try {
            UpdateAlarmConfigResponse response = client.updateAlarmConfig(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());
        }
    }
}
```

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Python

Configure the firewall alarms of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is 8de37729-026d-412f-ba82-80c46f388d14. The alarm type is **1**, alarm period is **0**, status is **0**, and severity is **0**. The alarm policy is that an alarm is generated once a day when the protection bandwidth usage reaches 80%. The alarm name is **test-wyl**, and the topic URN is **urn:smn:cn-north-7:408972e72dcd4c1a9b033e955802a36b:test-wyl**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

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

    credentials = BasicCredentials(ak, sk, projectId)

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

    try:
        request = UpdateAlarmConfigRequest()
        request.body = UpdateAttackLogAlarmConfigDto(
            username="cfw",
            topic_urn="urn:smn:cn-north-7:408972e72dcd4c1a9b033e955802a36b:test-wyl",
            severity="0",
            frequency_time=1,
            frequency_count=1,
            enable_status=0,
            alarm_type=1,
            alarm_time_period=0
        )
        response = client.update_alarm_config(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

Configure the firewall alarms of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is 8de37729-026d-412f-ba82-80c46f388d14. The alarm type is **1**, alarm period is **0**, status is **0**, and severity is **0**. The alarm policy is that an alarm is generated once a day when the protection bandwidth usage reaches 80%. The alarm name is **test-wyl**, and the topic URN is **urn:smn:cn-north-7:408972e72dcd4c1a9b033e955802a36b:test-wyl**.

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```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

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

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

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateAlarmConfigRequest{}
    usernameUpdateAttackLogAlarmConfigDto:= "cfw"
    topicUrnUpdateAttackLogAlarmConfigDto:= "urn:smn:cn-north-7:408972e72dcd4c1a9b033e955802a36b:test-wyl"
    severityUpdateAttackLogAlarmConfigDto:= "0"
    frequencyTimeUpdateAttackLogAlarmConfigDto:= int32(1)
    frequencyCountUpdateAttackLogAlarmConfigDto:= int32(1)
    enableStatusUpdateAttackLogAlarmConfigDto:= int32(0)
    alarmTypeUpdateAttackLogAlarmConfigDto:= int32(1)
    alarmTimePeriodUpdateAttackLogAlarmConfigDto:= int32(0)
    request.Body = &model.UpdateAttackLogAlarmConfigDto{
        Username: &usernameUpdateAttackLogAlarmConfigDto,
        TopicUrn: &topicUrnUpdateAttackLogAlarmConfigDto,
        Severity: &severityUpdateAttackLogAlarmConfigDto,
        FrequencyTime: &frequencyTimeUpdateAttackLogAlarmConfigDto,
        FrequencyCount: &frequencyCountUpdateAttackLogAlarmConfigDto,
        EnableStatus: &enableStatusUpdateAttackLogAlarmConfigDto,
        AlarmType: &alarmTypeUpdateAttackLogAlarmConfigDto,
        AlarmTimePeriod: &alarmTimePeriodUpdateAttackLogAlarmConfigDto,
    }
    response, err := client.UpdateAlarmConfig(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

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

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Status Codes

Status Code	Description
200	OK
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.13 Tag Management

4.13.1 Querying Tag Information

Function

This API is used to query tag information.

Calling Method

For details, see **Calling APIs**.

URI

GET /v2/{project_id}/cfw-cfw/tags

Table 4-639 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

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Table 4-640 Query Parameters

Parameter	Mandatory	Type	Description
limit	Yes	Integer	Number of records displayed on each page. The value ranges from 1 to 1024.
offset	Yes	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number no less than 0. The default value is **0**.
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-641 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-642 Response body parameters

Parameter	Type	Description
tags	Array of **TagValue** objects	Tag List

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Table 4-643 TagValue

Parameter	Type	Description
key	String	Tag key.
value	Array of strings	Tag value.

Example Requests

Query the tag information of the firewall whose ID is e743cfaf-8164-4807-aa13-d893d83313cf.

```
https://{Endpoint}/v2/408972e72dcd4c1a9b033e955802a36b/cfw-cfw/tags?
fw_instance_id=e743cfaf-8164-4807-aa13-
d893d83313cf&enterprise_project_id=fb55459c-41b3-47fc-885d-540946fddda4
```

Example Responses

Status code: 200

Return value for querying a tag.

```
{
  "tags" : [ {
    "key" : "test",
    "value" : [ "1" ]
  }, {
    "key" : "tag_zjw-1",
    "value" : [ "1" ]
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

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

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.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");
        String projectId = "{project_id}";
```

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```
        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.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

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = CfwClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(CfwRegion.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
```

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```
import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListProjectTagsRequest{}
    response, err := client.ListProjectTags(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	Return value for querying a tag.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

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4.13.2 Querying Resource Tag Information

Function

This API is used to query resource tag information.

Calling Method

For details, see **Calling APIs**.

URI

GET /v2/{project_id}/cfw-cfw/{fw_instance_id}/tags

Table 4-644 Path Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-645 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

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Request Parameters

Table 4-646 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Response Parameters

Status code: 200

Table 4-647 Response body parameters

Parameter	Type	Description
tags	Array of **ResourceTag** objects	Resource tag list.

Table 4-648 ResourceTag

Parameter	Type	Description
key	String	Tag key.
value	String	Tag value.
update_time	String	Tag update time.

Example Requests

Query the firewall resource tags of project whose ID is 408972e72dcd4c1a9b033e955802a36b.

```
https://{Endpoint}/v2/408972e72dcd4c1a9b033e955802a36b/cfw-cfw/e743cfaf-8164-4807-aa13-d893d83313cf/tags?fw_instance_id=e743cfaf-8164-4807-aa13-d893d83313cf&enterprise_project_id=fb55459c-41b3-47fc-885d-540946fddda4
```

Example Responses

Status code: 200

Return value for querying a resource tag.

```
{
  "tags" : [ {
    "key" : "test",
    "value" : "1"
  }, {
```

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```
    "key" : "tag_zjw-1",
    "value" : "1"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListResourceTagsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListResourceTagsRequest request = new ListResourceTagsRequest();
        request.withFwInstanceId("{fw_instance_id}");
        try {
            ListResourceTagsResponse response = client.listResourceTags(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
```

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```
import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = CfwClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(CfwRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListResourceTagsRequest()
        request.fw_instance_id = "{fw_instance_id}"
        response = client.list_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

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListResourceTagsRequest{}
```

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```
    request.FwInstanceId = "{fw_instance_id}"
    response, err := client.ListResourceTags(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	Return value for querying a resource tag.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.13.3 Saving a Resource Tag

Function

This API is used to save a resource tag.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v2/{project_id}/cfw-cfw/{fw_instance_id}/tags/save

Table 4-649 Path Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

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Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-650 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID, which is the ID of a project planned based on organizations. You can obtain the enterprise project ID by referring to **Obtaining an Enterprise Project ID**. If the enterprise project function is not enabled, the value is **0**.

Request Parameters

Table 4-651 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by referring to **Obtaining a User Token**.

Table 4-652 Request body parameters

Parameter	Mandatory	Type	Description
tags	No	Array of **CreateTag** objects	Create a firewall tag list.

Table 4-653 CreateTag

Parameter	Mandatory	Type	Description
key	No	String	Tag key.

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Parameter	Mandatory	Type	Description
value	No	String	Tag value.

Response Parameters

Status code: 200

Table 4-654 Response body parameters

Parameter	Type	Description
data	String	

Status code: 201

Created

Example Requests

Save the firewall resource tag of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, and the enterprise project ID is fb55459c-41b3-47fc-885d-540946fddda4. The request body contains two tags: **key:test, value:1** and **key:tag-1, value:1**.

```
https://{Endpoint}/v2/408972e72dcd4c1a9b033e955802a36b/cfw-cfw/e743cfaf-8164-4807-aa13-d893d83313cf/tags/save?fw_instance_id=e743cfaf-8164-4807-aa13-d893d83313cf&enterprise_project_id=fb55459c-41b3-47fc-885d-540946fddda4

{
  "tags" : [ {
    "key" : "test",
    "value" : "1"
  }, {
    "key" : "tag_zjw-1",
    "value" : "1"
  } ]
}
```

Example Responses

Status code: 200

Return value for saving a tag.

```
{ }
```

SDK Sample Code

The SDK sample code is as follows.

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Java

Save the firewall resource tag of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, and the enterprise project ID is fb55459c-41b3-47fc-885d-540946fddda4. The request body contains two tags: **key:test, value:1** and **key:tag-1, value:1**.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

import java.util.List;
import java.util.ArrayList;

public class SaveTagsSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        SaveTagsRequest request = new SaveTagsRequest();
        request.withFwInstanceId("{fw_instance_id}");
        CreateTagsDto body = new CreateTagsDto();
        List<CreateTag> listbodyTags = new ArrayList<>();
        listbodyTags.add(
            new CreateTag()
                .withKey("test")
                .withValue("1")
        );
        listbodyTags.add(
            new CreateTag()
                .withKey("tag_zjw-1")
                .withValue("1")
        );
        body.withTags(listbodyTags);
        request.withBody(body);
        try {
            SaveTagsResponse response = client.saveTags(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
```

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```
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

Save the firewall resource tag of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, and the enterprise project ID is fb55459c-41b3-47fc-885d-540946fddda4. The request body contains two tags: **key:test, value:1** and **key:tag-1, value:1**.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = CfwClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(CfwRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = SaveTagsRequest()
        request.fw_instance_id = "{fw_instance_id}"
        listTagsbody = [
            CreateTag(
                key="test",
                value="1"
            ),
            CreateTag(
                key="tag_zjw-1",
                value="1"
            )
        ]
        request.body = CreateTagsDto(
            tags=listTagsbody
        )
        response = client.save_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)
```

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Go

Save the firewall resource tag of the project whose ID is 408972e72dcd4c1a9b033e955802a36b. The firewall ID is e743cfaf-8164-4807-aa13-d893d83313cf, and the enterprise project ID is fb55459c-41b3-47fc-885d-540946fddda4. The request body contains two tags: **key:test, value:1** and **key:tag-1, value:1**.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.SaveTagsRequest{}
    request.FwInstanceId = "{fw_instance_id}"
    keyTags:= "test"
    valueTags:= "1"
    keyTags1:= "tag_zjw-1"
    valueTags1:= "1"
    var listTagsbody = []model.CreateTag{
        {
            Key: &keyTags,
            Value: &valueTags,
        },
        {
            Key: &keyTags1,
            Value: &valueTags1,
        },
    }
    request.Body = &model.CreateTagsDto{
        Tags: &listTagsbody,
    }
    response, err := client.SaveTags(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

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More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	Return value for saving a tag.
201	Created
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.
404	Not Found: Web page not found.

Error Codes

See **Error Codes**.

4.14 Inter-VPC Firewall Management

4.14.1 Adding a VPC for East-West Protection in Peering Mode

Function

This API is used to add an east-west protected VPC in peering mode.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/firewall/east-west/protected-vpc

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Table 4-655 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Table 4-656 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Request Parameters

Table 4-657 Request body parameters

Parameter	Mandatory	Type	Description
inspection_vpc_route	Yes	Array of **RouteInfo** objects	**Definition** Firewall route. **Constraints** N/A **Range** N/A **Default Value** N/A
need_config_vpc_route	No	Boolean	**Definition** Whether to configure the VPC route. **Constraints** N/A **Range** false\true **Default Value** false

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Parameter	Mandatory	Type	Description
object_id	Yes	String	**Definition** Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, the protected object ID belongs to the Internet border. If the value of **type** is **1**, the protected object ID belongs to the VPC border. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
vpc_id	Yes	String	**Definition** ID of the VPC to be protected. **Constraints** N/A **Range** N/A **Default Value** N/A

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Parameter	Mandatory	Type	Description
other_project_id	No	String	**Definition** Peer project ID, which is used to protect the VPCs with different project IDs in Huawei Cloud Stack. You do not need to specify it on Huawei Cloud. **Constraints** N/A **Range** N/A **Default Value** N/A
peering_id	No	String	**Definition** Peering connection ID, which is used to protect the VPCs with different project IDs in Huawei Cloud Stack. You do not need to specify it on Huawei Cloud. **Constraints** N/A **Range** N/A **Default Value** N/A

Table 4-658 RouteInfo

Parameter	Mandatory	Type	Description
desc	No	String	**Definition** Description. **Constraints** N/A **Range** N/A **Default Value** N/A

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Parameter	Mandatory	Type	Description
destination	Yes	String	**Definition** Destination IP address. **Constraints** IP address. **Range** IP address. **Default Value** N/A

Response Parameters

Status code: 200

Table 4-659 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition** Response body for adding a protected VPC. **Range** N/A

Table 4-660 data

Parameter	Type	Description
id	String	**Definition** VPC ID **Range** N/A

Status code: 400

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Table 4-661 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

The project ID is a16df7cf1d094befa6bbc72cbf51e93a, the firewall ID is af050cf8-8ad8-4c12-a027-d7a5784e0f64, the protected object ID is 37ccee40-a967-4eb7-bd38-cbe1cddc787b, the VPC ID is 005fe9bf-a70c-4601-ad08-c51b27a165ac, the destination address of the firewall route is 192.168.0.0/20, the VPC route does not need to be configured, and the description is left blank.

```
https://{Endpoint}/v1/a16df7cf1d094befa6bbc72cbf51e93a/firewall/east-west/protected-vpc?
fw_instance_id=af050cf8-8ad8-4c12-a027-d7a5784e0f64

{
  "inspection_vpc_route" : [ {
    "destination" : "192.168.0.0/20",
    "desc" : ""
  } ],
  "need_config_vpc_route" : false,
  "object_id" : "37ccee40-a967-4eb7-bd38-cbe1cddc787b",
  "vpc_id" : "005fe9bf-a70c-4601-ad08-c51b27a165ac"
}
```

Example Responses

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

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Error Codes

See **Error Codes**.

4.14.2 Updating a VPC for East-West Protection in Peering Mode

Function

This API is used to update an east-west protected VPC in peering mode.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/firewall/east-west/protected-vpc

Table 4-662 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Table 4-663 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Request Parameters

Table 4-664 Request body parameters

Parameter	Mandatory	Type	Description
inspection_vpc_route	Yes	Array of **RouteInfo** objects	**Definition** Firewall route. **Constraints** N/A **Range** N/A **Default Value** N/A
need_config_vpc_route	No	Boolean	**Definition** Whether to configure the VPC route. **Constraints** N/A **Range** false\true **Default Value** false

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Parameter	Mandatory	Type	Description
object_id	Yes	String	**Definition** Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, the protected object ID belongs to the Internet border. If the value of **type** is **1**, the protected object ID belongs to the VPC border. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
vpc_id	Yes	String	**Definition** ID of the VPC to be protected. **Constraints** N/A **Range** N/A **Default Value** N/A

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Parameter	Mandatory	Type	Description
other_project_id	No	String	**Definition** Peer project ID, which is used to protect the VPCs with different project IDs in Huawei Cloud Stack. You do not need to specify it on Huawei Cloud. **Constraints** N/A **Range** N/A **Default Value** N/A
peering_id	No	String	**Definition** Peering connection ID, which is used to protect the VPCs with different project IDs in Huawei Cloud Stack. You do not need to specify it on Huawei Cloud. **Constraints** N/A **Range** N/A **Default Value** N/A

Table 4-665 RouteInfo

Parameter	Mandatory	Type	Description
desc	No	String	**Definition** Description. **Constraints** N/A **Range** N/A **Default Value** N/A

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Parameter	Mandatory	Type	Description
destination	Yes	String	**Definition** Destination IP address. **Constraints** IP address. **Range** IP address. **Default Value** N/A

Response Parameters

Status code: 200

Table 4-666 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition** Response body for adding a protected VPC. **Range** N/A

Table 4-667 data

Parameter	Type	Description
id	String	**Definition** VPC ID **Range** N/A
name	String	**Definition** VPC name. **Range** N/A

Status code: 400

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Table 4-668 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

The project ID is a16df7cf1d094befa6bbc72cbf51e93a, the firewall ID is af050cf8-8ad8-4c12-a027-d7a5784e0f64, the protected object ID is 37ccee40-a967-4eb7-bd38-cbe1cddc787b, the protected VPC ID is 005fe9bf-a70c-4601-ad08-c51b27a165ac, the destination address of the firewall route is 192.168.0.0/20, and the destination address of the firewall route for the protected VPC is 0.0.0.0/0.

```
https://{Endpoint}/v1/a16df7cf1d094befa6bbc72cbf51e93a/firewall/east-west/protected-vpc?
fw_instance_id=af050cf8-8ad8-4c12-a027-d7a5784e0f64

{
  "inspection_vpc_route" : [ {
    "destination" : "192.168.0.0/20",
    "desc" : ""
  }, {
    "destination" : "0.0.0.0/0",
    "desc" : ""
  } ],
  "need_config_vpc_route" : false,
  "object_id" : "37ccee40-a967-4eb7-bd38-cbe1cddc787b",
  "vpc_id" : "005fe9bf-a70c-4601-ad08-c51b27a165ac"
}
```

Example Responses

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

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Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.14.3 Updating the VPC Border Firewall Protection Status

Function

This API is used to update the VPC border firewall protection status.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/firewall/east-west/protect

Table 4-669 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Request Parameters

Table 4-670 Request body parameters

Parameter	Mandatory	Type	Description
object_id	Yes	String	**Definition** Protected object ID, which is used to distinguish between Internet border protection and VPC border protection after a cloud firewall is created. You can obtain the ID by calling the **API for querying firewall instances**. In the return value, find the ID in **data.records.protect_objects.object_id** (The period [.] is used to separate different levels of objects). If the value of **type** is **0**, the protected object ID belongs to the Internet border. If the value of **type** is **1**, the protected object ID belongs to the VPC border. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
status	Yes	Integer	**Definition** VPC border protection status. **Constraints** N/A **Range** **0**: enabled; **1**: disabled **Default Value** N/A

Response Parameters

Status code: 200

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Table 4-671 Response body parameters

Parameter	Type	Description
data	**ChangeEastWestFirewallStatusResponseData** object	

Table 4-672 ChangeEastWestFirewallStatusResponseData

Parameter	Type	Description
id	String	**Definition** Protected object ID at the VPC border. **Range** N/A

Status code: 400

Table 4-673 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

The project ID is a16df7cf1d094befa6bbc72cbf51e93a, firewall ID is af050cf8-8ad8-4c12-a027-d7a5784e0f64, protected object ID is 37ccee40-a967-4eb7-bd38-cbe1cddc787b, and the inter-VPC firewall is enabled.

```
https://{Endpoint}/v1/a16df7cf1d094befa6bbc72cbf51e93a/firewall/east-west/protect

{
  "object_id" : "37ccee40-a967-4eb7-bd38-cbe1cddc787b",
  "status" : 0
}
```

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Example Responses

Status code: 200

OK

```
{
  "data" : {
    "id" : "000a598a-9470-4643-9c8b-8a45dadb462e"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

The project ID is a16df7cf1d094befa6bbc72cbf51e93a, firewall ID is af050cf8-8ad8-4c12-a027-d7a5784e0f64, protected object ID is 37ccee40-a967-4eb7-bd38-cbe1cddc787b, and the inter-VPC firewall is enabled.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ChangeEastWestFirewallStatusSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ChangeEastWestFirewallStatusRequest request = new ChangeEastWestFirewallStatusRequest();
        ChangeProtectStatusRequestBody body = new ChangeProtectStatusRequestBody();
```

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```
        body.withStatus(ChangeProtectStatusRequestBody.StatusEnum.NUMBER_0);
        body.withObjectId("37ccee40-a967-4eb7-bd38-cbe1cddc787b");
        request.withBody(body);
        try {
            ChangeEastWestFirewallStatusResponse response = client.changeEastWestFirewallStatus(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

The project ID is a16df7cf1d094befa6bbc72cbf51e93a, firewall ID is af050cf8-8ad8-4c12-a027-d7a5784e0f64, protected object ID is 37ccee40-a967-4eb7-bd38-cbe1cddc787b, and the inter-VPC firewall is enabled.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = CfwClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(CfwRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ChangeEastWestFirewallStatusRequest()
        request.body = ChangeProtectStatusRequestBody(
            status=0,
            object_id="37ccee40-a967-4eb7-bd38-cbe1cddc787b"
        )
        response = client.change_east_west_firewall_status(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

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Go

The project ID is a16df7cf1d094befa6bbc72cbf51e93a, firewall ID is af050cf8-8ad8-4c12-a027-d7a5784e0f64, protected object ID is 37ccee40-a967-4eb7-bd38-cbe1cddc787b, and the inter-VPC firewall is enabled.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ChangeEastWestFirewallStatusRequest{}
    request.Body = &model.ChangeProtectStatusRequestBody{
        Status: model.GetChangeProtectStatusRequestBodyStatusEnum().E_0,
        ObjectId: "37ccee40-a967-4eb7-bd38-cbe1cddc787b",
    }
    response, err := client.ChangeEastWestFirewallStatus(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Bad Request

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Error Codes

See **Error Codes**.

4.14.4 Querying the Inspection VPC Used by a VPC Border Firewall

Function

This API is used to query the inspection VPC used by a VPC border firewall.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/firewall/east-west/inspection-vpc

Table 4-674 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Table 4-675 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-676 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition** Response body for querying the inspection VPC used by the VPC border firewall. **Range** N/A

Table 4-677 data

Parameter	Type	Description
inspection_vpc_list	Array of **InspectionVpcInfo** objects	**Definition** Inspection VPC list. **Range** N/A

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Table 4-678 InspectionVpcInfo

Parameter	Type	Description
inspection_vpc_id	String	**Definition** Inspection VPC. **Range** N/A
name	String	**Definition** Inspection VPC. **Range** N/A

Status code: 400

Table 4-679 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

The project ID is a16df7cf1d094befa6bbc72cbf51e93a, and firewall ID is af050cf8-8ad8-4c12-a027-d7a5784e0f64. Query the information about the inspection VPC used by a VPC border firewall.

```
https://{Endpoint}/v1/a16df7cf1d094befa6bbc72cbf51e93a/firewall/east-west/inspection-vpc?
fw_instance_id=af050cf8-8ad8-4c12-a027-d7a5784e0f64
```

Example Responses

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

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Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.14.5 Querying the Enterprise Router Used by a VPC Border Firewall

Function

This API is used to query the enterprise router used by a VPC border firewall.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/firewall/east-west/enterprise-router

Table 4-680 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Table 4-681 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-682 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition** Response body for querying the enterprise router used by the VPC border firewall. **Range** N/A

Table 4-683 data

Parameter	Type	Description
er_list	Array of **ErInfo** objects	**Definition** Enterprise router list. **Range** N/A

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Table 4-684 ErInfo

Parameter	Type	Description
er_id	String	**Definition** Enterprise router ID. **Range** N/A
name	String	**Definition** Enterprise router name. **Range** N/A

Status code: 400

Table 4-685 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

None

Example Responses

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

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Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.15 Log Analysis

Log Analysis

4.15.1 Querying the Traffic Trend

Function

This API is used to query the traffic trends, including north-south, east-west, and EIP traffic trends.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/logs/traffic-trend

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Table 4-686 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Table 4-687 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Parameter	Mandatory	Type	Description
range	No	Integer	**Definition** Time range. **Constraints** N/A **Range** **0** (last hour), **1** (last day), or **2** (last seven days) **Default Value** N/A
log_type	Yes	String	**Definition** Log type. **Constraints** N/A **Range** **internet** (north-south logs), **nat** (NAT logs), **vpc** (east-west logs), or **vgw** (VGW logs) **Default Value** N/A
start_time	No	Long	**Definition** Start time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
end_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A

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Parameter	Mandatory	Type	Description
vgw_id	No	Array of strings	**Definition** VGW ID **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
agg_type	Yes	String	**Definition** Aggregation type. **Constraints** N/A **Range** **avg** (average) or **max** (maximum value) **Default Value** N/A
ip	No	Array of strings	**Definition** IP address list, which is used to check the traffic trend of IP addresses. **Constraints** N/A **Range** IP address. **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

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Table 4-688 Response body parameters

Parameter	Type	Description
data	Array of **TrafficTrendVO** objects	**Definition** Traffic trend data. **Range** N/A

Table 4-689 TrafficTrendVO

Parameter	Type	Description
agg_time	Long	**Definition** Aggregation time point. **Range** N/A
bps	Double	**Definition** bps **Range** N/A
in_bps	Double	**Definition** Inbound bps. **Range** N/A
out_bps	Double	**Definition** Outbound bps. **Range** N/A

Status code: 400

Table 4-690 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A

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Parameter	Type	Description
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query the inter-VPC traffic trend of the firewall whose ID is c598d612-8112-465c-bffd-863d4ce85a50 in the project whose ID is a16df7cf1d094befa6bbc72cbf51e93a. The time range is the last seven days. The maximum values are aggregated.

```
https://{Endpoint}/v1/a16df7cf1d094befa6bbc72cbf51e93a/cfw/logs/traffic-trend?
fw_instance_id=c598d612-8112-465c-bffd-863d4ce85a50&range=2&log_type=vpc&agg_type=max
```

Example Responses

Status code: 200

OK

```
{
  "data" : [ {
    "agg_time" : 1750299480000,
    "bps" : 0
  } ]
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200007",
  "error_msg" : "Incorrect time range."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ShowTrafficTrendSolution {
```

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```
    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowTrafficTrendRequest request = new ShowTrafficTrendRequest();
        try {
            ShowTrafficTrendResponse response = client.showTrafficTrend(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = CfwClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(CfwRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowTrafficTrendRequest()
        response = client.show_traffic_trend(request)
        print(response)
    except exceptions.ClientRequestException as e:
```

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```
        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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowTrafficTrendRequest{}
    response, err := client.ShowTrafficTrend(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Bad Request

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Error Codes

See **Error Codes**.

4.15.2 Querying Slow Query Log Statistics

Function

This API is used to obtain the top N statistics in access logs, such as the rules with the most hits.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/logs/access-top

Table 4-691 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Table 4-692 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
range	No	Integer	**Definition** Time range. **Constraints** N/A **Range** **0** (last hour), **1** (last day), or **2** (last seven days) **Default Value** N/A
direction	No	String	**Definition** Session direction. **Constraints** N/A **Range** **in2out** (outbound) or **out2in** (inbound) **Default Value** N/A

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Parameter	Mandatory	Type	Description
start_time	No	Long	**Definition** Start time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
end_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
vgw_id	No	Array of strings	**Definition** VGW ID **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
log_type	No	String	**Definition** Log type. **Constraints** N/A **Range** **internet** (north-south logs), **nat** (NAT logs), **vpc** (east-west logs), or **vgw** (VGW logs) **Default Value** N/A

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Parameter	Mandatory	Type	Description
item	Yes	String	**Definition** Aggregation type. **Constraints** N/A **Range** **strategy_hit_info**: policy hit trend **strategy_dashboard**: policy hit overview **top_deny_rule**: blocking rules with the most hits **dst_ip**: top blocked destination IP addresses **src_ip**: top blocked source IP addresses **dst_port**: top blocked ports **dst_region**: top blocked destination regions **src_region**: top blocked source regions **Default Value** N/A
rule_id	No	Array of strings	**Definition** Rule group ID list. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

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Table 4-693 Response body parameters

Parameter	Type	Description
data	**AccessTopVO** object	

Table 4-694 AccessTopVO

Parameter	Type	Description
deny_count	Long	**Definition** Block count. **Range** N/A
deny_top_one_acl_id	String	**Definition** ID of a blocking policy that is frequently hit. **Range** N/A
deny_top_one_acl_name	String	**Definition** ID of a blocking policy that is frequently hit. **Range** N/A
hit_count	Long	**Definition** Number of hits. **Range** N/A
in2out_deny_dst_ip_list	Array of **AccessTopMemberVO** objects	**Definition** List of top blocked destination IP addresses in the outbound direction. **Range** N/A
in2out_deny_dst_port_list	Array of **AccessTopMemberVO** objects	**Definition** List of top blocked ports in the outbound direction. **Range** N/A

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Parameter	Type	Description
in2out_deny_dst_region_list	Array of **AccessTopMemberVO** objects	**Definition** List of top blocked destination regions in the outbound direction. **Range** N/A
in2out_deny_src_ip_list	Array of **AccessTopMemberVO** objects	**Definition** List of top blocked source IP addresses in the outbound direction. **Range** N/A
out2in_deny_dst_ip_list	Array of **AccessTopMemberVO** objects	**Definition** List of top blocked destination IP addresses in the inbound direction. **Range** N/A
out2in_deny_dst_port_list	Array of **AccessTopMemberVO** objects	**Definition** List of top blocked destination ports in the inbound direction. **Range** N/A
out2in_deny_src_ip_list	Array of **AccessTopMemberVO** objects	**Definition** List of top blocked source IP addresses in the inbound direction. **Range** N/A
out2in_deny_src_port_list	Array of **AccessTopMemberVO** objects	**Definition** List of top blocked source ports in the inbound direction. **Range** N/A
out2in_deny_src_region_list	Array of **AccessTopMemberVO** objects	**Definition** List of top blocked source regions in the inbound direction. **Range** N/A

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Parameter	Type	Description
permit_count	Long	**Definition** Allow count. **Range** N/A
permit_top_one_acl_id	String	**Definition** ID of an allow policy that is frequently hit. **Range** N/A
permit_top_one_acl_name	String	**Definition** Name of an allow policy that is frequently hit. **Range** N/A
records	Array of **AccessTopStatisticsVO** objects	**Definition** Hit trend. **Range** N/A
top_deny_rule_list	Array of **AccessTopMemberVO** objects	**Definition** Top blocking rule list. **Range** N/A

Table 4-695 AccessTopStatisticsVO

Parameter	Type	Description
agg_time	Long	**Definition** Aggregation time. **Range** N/A
deny_access_top_counts	Long	**Definition** Number of blocked objects. **Range** N/A

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Parameter	Type	Description
permit_access_top_counts	Long	**Definition** Number of allowed objects. **Range** N/A
total_access_top_counts	Long	**Definition** Number of hits. **Range** N/A

Table 4-696 AccessTopMemberVO

Parameter	Type	Description
count	String	**Definition** Number of times. **Range** N/A
item	String	**Definition** Item. **Range** N/A
name	String	**Definition** Item name. **Range** N/A

Status code: 400

Table 4-697 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A

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Parameter	Type	Description
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query the policy overview of the firewall whose project ID is a16df7cf1d094befa6bbc72cbf51e93a and firewall ID is c598d612-8112-465c-bffd-863d4ce85a50 in the last hour.

```
https://{Endpoint}/v1/a16df7cf1d094befa6bbc72cbf51e93a/cfw/logs/access-top?fw_instance_id=a7df0f6c-da03-4511-ad0b-b17b589ff0ec&item=strategy_dashboard&range=0
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "deny_count" : 27,
    "deny_top_one_acl_id" : "1ceb7988-b11b-4f1e-b7f1-1a807e9e89f3",
    "deny_top_one_acl_name" : "deny",
    "hit_count" : 4404,
    "permit_count" : 4377,
    "permit_top_one_acl_id" : "d1de06f0-dfe1-46e5-a50d-81a423b157a8",
    "permit_top_one_acl_name" : "23333"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200007",
  "error_msg" : "Incorrect time range."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;
```

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```
public class ShowAccessTopSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowAccessTopRequest request = new ShowAccessTopRequest();
        try {
            ShowAccessTopResponse response = client.showAccessTop(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = CfwClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(CfwRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
```

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```
        request = ShowAccessTopRequest()
        response = client.show_access_top(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowAccessTopRequest{}
    response, err := client.ShowAccessTop(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Bad Request

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Error Codes

See **Error Codes**.

4.15.3 Querying Attack Statistics

Function

This API is used to query attack statistics based on firewall attack logs.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/logs/attack-statistic

Table 4-698 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Table 4-699 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
range	No	Integer	**Definition** Time range. **Constraints** N/A **Range** **0** (last hour), **1** (last day), or **2** (last seven days) **Default Value** N/A
log_type	Yes	String	**Definition** Log type. **Constraints** N/A **Range** **internet** (north-south logs), **nat** (NAT logs), **vpc** (east-west logs), or **vgw** (VGW logs) **Default Value** N/A

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Parameter	Mandatory	Type	Description
direction	No	String	**Definition** Session direction. **Constraints** N/A **Range** **in2out** (outbound) or **out2in** (inbound) **Default Value** N/A
start_time	No	Long	**Definition** Start time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
end_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
vgw_id	No	Array of strings	**Definition** VGW ID **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Parameter	Mandatory	Type	Description
item	Yes	String	**Definition** Aggregation type. **Constraints** N/A **Range** **dst**: top attack destination statistics **src**: top attack source statistics **Default Value** N/A
size	Yes	Integer	**Definition** Number of aggregated records. **Constraints** N/A **Range** 0 to 100 **Default Value** 50

Request Parameters

None

Response Parameters

Status code: 200

Table 4-700 Response body parameters

Parameter	Type	Description
data	Array of **AttackStatisticRespBody** objects	**Definition** Attack log statistics. **Range** N/A

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Table 4-701 AttackStatisticRespBody

Parameter	Type	Description
apps	Array of **TopInfo** objects	**Definition** Application list. **Range** N/A
associated_name	String	**Definition** Bound resource name. **Range** N/A
associated_type	String	**Definition** Bound resource type. **Range** N/A
attack_count	Long	**Definition** Number of attacks. **Range** N/A
attack_type	String	**Definition** Attack type. **Range** N/A
deny_count	Long	**Definition** Number of interceptions. **Range** N/A
dst_ports	Array of **TopInfo** objects	**Definition** Destination port list. **Range** N/A
ip	String	**Definition** IP address. **Range** N/A

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Parameter	Type	Description
latest_time	Long	**Definition** Last attack time. **Range** N/A
region_id	String	**Definition** Region ID. **Range** N/A
region_name	String	**Definition** Region name. **Range** N/A
src_type	String	**Definition** Attack source type. **Range** N/A
vgw_id	String	**Definition** vgw Id **Range** N/A

Table 4-702 TopInfo

Parameter	Type	Description
count	Long	**Definition** Number of times. **Range** N/A
item	String	**Definition** Item. **Range** N/A
item_id	String	**Definition** Item ID. **Range** N/A

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Status code: 400

Table 4-703 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query the top attack source statistics of the firewall whose project ID is a16df7cf1d094befa6bbc72cbf51e93a and firewall ID is a7df0f6c-da03-4511-ad0b-b17b589ff0ec in the last hour.

```
https://{Endpoint}/v1/a16df7cf1d094befa6bbc72cbf51e93a/cfw/logs/attack-statistic?
fw_instance_id=a7df0f6c-da03-4511-ad0b-b17b589ff0ec&log_type=internet&item=src&range=0
```

Example Responses

Status code: 200

OK

```
{
  "data" : [ {
    "apps" : [ {
      "count" : 23,
      "item" : "UDP-ANY"
    } ],
    "attack_count" : 23,
    "attack_type" : "Vulnerability Exploit Attack",
    "deny_count" : 0,
    "dst_ports" : [ {
      "count" : 23,
      "item" : "9034"
    } ],
    "ip" : "110.41.54.9",
    "latest_time" : 1750675436000,
    "region_id" : "US",
    "src_type" : "out2in"
  } ]
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200007",
```

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```
  "error_msg" : "Incorrect time range."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListAttackStatisticSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAttackStatisticRequest request = new ListAttackStatisticRequest();
        try {
            ListAttackStatisticResponse response = client.listAttackStatistic(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
```

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```
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = CfwClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(CfwRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListAttackStatisticRequest()
        response = client.list_attack_statistic(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListAttackStatisticRequest{}
    response, err := client.ListAttackStatistic(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
```

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```
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.15.4 Querying the Attack Trend

Function

This API is used to query the attack trend.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/logs/trend-attack

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Table 4-704 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Table 4-705 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Parameter	Mandatory	Type	Description
range	No	Integer	**Definition** Time range. **Constraints** N/A **Range** **0** (last hour), **1** (last day), or **2** (last seven days) **Default Value** N/A
log_type	Yes	String	**Definition** Log type. **Constraints** N/A **Range** **internet** (north-south logs), **nat** (NAT logs), **vpc** (east-west logs), or **vgw** (VGW logs) **Default Value** N/A
start_time	No	Long	**Definition** Start time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
end_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A

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Parameter	Mandatory	Type	Description
vgw_id	No	Array of strings	**Definition** VGW ID **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-706 Response body parameters

Parameter	Type	Description
data	Array of **AttackTrendRespBody** objects	**Definition** Attack trend. **Range** N/A

Table 4-707 AttackTrendRespBody

Parameter	Type	Description
deny_count	Long	**Definition** Block count. **Range** N/A
permit_count	Long	**Definition** Allow count. **Range** N/A

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Parameter	Type	Description
time	Long	**Definition** Aggregation time. **Range** N/A

Status code: 400

Table 4-708 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query the Internet border attack trend of the firewall whose project ID is a16df7cf1d094befa6bbc72cbf51e93a and firewall ID is a7df0f6c-da03-4511-ad0b-b17b589ff0ec in the last hour.

```
https://{Endpoint}/v1/a16df7cf1d094befa6bbc72cbf51e93a/cfw/logs/trend-attack?fw_instance_id=a7df0f6c-da03-4511-ad0b-b17b589ff0ec&log_type=internet&range=0
```

Example Responses

Status code: 200

OK

```
{
  "data" : [ {
    "deny_count" : 0,
    "permit_count" : 0,
    "time" : 1750680060000
  } ]
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200007",
```

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```
  "error_msg" : "Incorrect time range."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ShowAttackTrendSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowAttackTrendRequest request = new ShowAttackTrendRequest();
        try {
            ShowAttackTrendResponse response = client.showAttackTrend(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
```

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```
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = CfwClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(CfwRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowAttackTrendRequest()
        response = client.show_attack_trend(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowAttackTrendRequest{}
    response, err := client.ShowAttackTrend(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
```

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```
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.15.5 Querying the Attack Overview

Function

This API is used to query the attack overview.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/logs/total-attack

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Table 4-709 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Table 4-710 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Parameter	Mandatory	Type	Description
range	No	Integer	**Definition** Time range. **Constraints** N/A **Range** **0** (last hour), **1** (last day), or **2** (last seven days) **Default Value** N/A
log_type	Yes	String	**Definition** Log type. **Constraints** N/A **Range** **internet** (north-south logs), **nat** (NAT logs), **vpc** (east-west logs), or **vgw** (VGW logs) **Default Value** N/A
start_time	No	Long	**Definition** Start time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
end_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A

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Parameter	Mandatory	Type	Description
vgw_id	No	Array of strings	**Definition** VGW ID **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-711 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition** Attack statistics. **Range** N/A

Table 4-712 data

Parameter	Type	Description
attack_count	Long	**Definition** Number of attacks. **Range** N/A
deny_count	Long	**Definition** Block count. **Range** N/A

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Parameter	Type	Description
permit_count	Long	**Definition** Allow count. **Range** N/A
risk_ports	Long	**Definition** High-risk port. **Range** N/A

Status code: 400

Table 4-713 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query the Internet border security overview of the firewall whose project ID is a16df7cf1d094befa6bbc72cbf51e93a and firewall ID is a7df0f6c-da03-4511-ad0b-b17b589ff0ec in the last hour.

```
https://{Endpoint}/v1/a16df7cf1d094befa6bbc72cbf51e93a/cfw/logs/total-attack?fw_instance_id=a7df0f6c-da03-4511-ad0b-b17b589ff0ec&range=0&log_type=internet
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "attack_count" : 0,
    "deny_count" : 0,
    "permit_count" : 0,
    "risk_ports" : 0
```

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```
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200007",
  "error_msg" : "Incorrect time range."
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ShowAttackTotalSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowAttackTotalRequest request = new ShowAttackTotalRequest();
        try {
            ShowAttackTotalResponse response = client.showAttackTotal(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());
        }
    }
}
```

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Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = CfwClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(CfwRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ShowAttackTotalRequest()
        response = client.show_attack_total(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
```

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```
        Build())

    request := &model.ShowAttackTotalRequest{}
    response, err := client.ShowAttackTotal(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.15.6 Querying the Number of Logs

Function

Collect statistics on the number of logs, for example, the number of unsafe IP addresses.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/logs/count

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Table 4-714 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Table 4-715 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Parameter	Mandatory	Type	Description
range	No	Integer	**Definition** Time range. **Constraints** N/A **Range** **0** (last hour), **1** (last day), or **2** (last seven days) **Default Value** N/A
start_time	No	Long	**Definition** Start time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
end_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
vgw_id	No	Array of strings	**Definition** VGW ID **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Parameter	Mandatory	Type	Description
item	Yes	String	**Definition** Aggregation type. **Constraints** N/A **Range** **risk_ip**: number of accessed unsafe IP addresses **risk_host**: number of accessed unsafe domain names **open_port**: number of open ports **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-716 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition** Aggregation time point. **Range** N/A

Table 4-717 data

Parameter	Type	Description
count	Long	**Definition** Aggregation time point. **Range** N/A

Status code: 400

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Table 4-718 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query the number of unsafe IP addresses whose project ID is a16df7cf1d094befa6bbc72cbf51e93a, firewall ID is dc3f5b8e-efed-4e31-9ed0-785f342c51fc, and time range is 1751450695602 to 17514542956027.

```
https://{Endpoint}/v1/a16df7cf1d094befa6bbc72cbf51e93a/logs/count?fw_instance_id=dc3f5b8e-efed-4e31-9ed0-785f342c51fc&item=risk_ip&start_time=1751450695602&end_time=1751454295602
```

Example Responses

Status code: 200

ShowLogsCountResp

```
{
  "data" : {
    "count" : 0
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200007",
  "error_msg" : "Incorrect time range."
}
```

Status Codes

Status Code	Description
200	ShowLogsCountResp
400	Bad Request

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Error Codes

See **Error Codes**.

4.15.7 Querying Traffic Log Statistics Details

Function

This API is used to query traffic log statistics, for example, the access details of a source IP address.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/logs/flow-detail

Table 4-719 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Table 4-720 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
range	No	Integer	**Definition** Time range. **Constraints** N/A **Range** **0** (last hour), **1** (last day), or **2** (last seven days) **Default Value** N/A
log_type	Yes	String	**Definition** Log type. **Constraints** N/A **Range** **internet** (north-south logs), **nat** (NAT logs), **vpc** (east-west logs), or **vgw** (VGW logs) **Default Value** N/A

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Parameter	Mandatory	Type	Description
direction	No	String	**Definition** Session direction. **Constraints** N/A **Range** **in2out** (outbound) or **out2in** (inbound) **Default Value** N/A
start_time	No	Long	**Definition** Start time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
end_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
vgw_id	No	Array of strings	**Definition** VGW ID **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Parameter	Mandatory	Type	Description
asset_type	No	String	**Definition** IP type. **Constraints** N/A **Range** **public**: EIP **private**: private IP address open_port **Default Value** N/A
item	Yes	String	**Definition** Aggregation type. **Constraints** N/A **Range** **src_ip**: source IP address **dst_ip**: destination IP address **dst_port**: destination port **protocol**: protocol **dst_host**: destination domain name **app**: application **dst_region_name**: destination region **src_region_name**: source region **Default Value** N/A
value	Yes	String	**Definition** Statistical object. **Constraints** N/A **Range** N/A **Default Value** N/A

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Request Parameters

None

Response Parameters

Status code: 200

Table 4-721 Response body parameters

Parameter	Type	Description
data	**FlowAnalysisVO** object	

Table 4-722 FlowAnalysisVO

Parameter	Type	Description
app_count	Long	**Definition** Application statistics. **Range** N/A
bytes	Double	**Definition** Number of bytes. **Range** N/A
dst_ip_count	Long	**Definition** Number of destination IP addresses. **Range** N/A
dst_port_count	Long	**Definition** Number of destination ports. **Range** N/A
end_time	Long	**Definition** End time. **Range** N/A

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Parameter	Type	Description
records	Array of SessionVO objects	**Definition** Top session details. **Range** N/A
request_byte	Double	**Definition** Number of bytes in a request. **Range** N/A
response_byte	Double	**Definition** Number of bytes in the response. **Range** N/A
sessions	Long	**Definition** Number of sessions. **Range** N/A
src_ip_count	Long	**Definition** Number of source IP addresses. **Range** N/A
start_time	Long	**Definition** Start time. **Range** N/A

Table 4-723 SessionVO

Parameter	Type	Description
app	String	**Definition** Application. **Range** N/A
bytes	Double	**Definition** Number of bytes. **Range** N/A

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Parameter	Type	Description
dst_associate_instance_type	String	**Definition** Asset type associated with the destination IP address. **Range** N/A
dst_device_name	String	**Definition** Asset name associated with the destination IP address. **Range** N/A
dst_ip	String	**Definition** Destination IP address. **Range** N/A
dst_port	String	**Definition** Destination port. **Range** N/A
dst_host	String	**Definition** Destination domain name. **Range** N/A
dst_region_id	String	**Definition** Destination region ID. **Range** N/A
dst_region_name	String	**Definition** Destination region. **Range** N/A
end_time	Long	**Definition** End time. **Range** N/A

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Parameter	Type	Description
protocol	String	**Definition** Protocol. **Range** N/A
request_byte	Double	**Definition** Number of bytes in a request. **Range** N/A
response_byte	Double	**Definition** Number of bytes in the response. **Range** N/A
sessions	Long	**Definition** Number of sessions. **Range** N/A
src_associate_instance_type	String	**Definition** Asset type associated with the source IP address. **Range** N/A
src_device_name	String	**Definition** Asset name associated with the source IP address. **Range** N/A
src_ip	String	**Definition** Source IP address. **Range** N/A
src_region_id	String	**Definition** Source region ID. **Range** N/A

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Parameter	Type	Description
src_region_name	String	**Definition** Source region. **Range** N/A
start_time	Long	**Definition** Session start time. **Range** N/A

Status code: 400

Table 4-724 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query detailed traffic log statistics. The project ID is a16df7cf1d094befa6bbc72cbf51e93a, the firewall ID is c598d612-8112-465c-bffd-863d4ce85a50, the time range is seven days, the direction is outbound, and the destination IP address is 100.93.4.158.

```
https://{Endpoint}/v1/a16df7cf1d094befa6bbc72cbf51e93a/cfw/logs/flow-detail?
fw_instance_id=c598d612-8112-465c-
bffd-863d4ce85a50&log_type=internet&direction=in2out&item=dst_ip&range=2&value=100.93.4.158
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "app_count" : 1,
    "bytes" : 10219,
```

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```
  "dst_port_count" : 1,
  "end_time" : 1751355533000,
  "records" : [ {
    "app" : "HTTP",
    "bytes" : 10219,
    "dst_ip" : "100.93.12.160",
    "dst_port" : "8080",
    "end_time" : 1751355533000,
    "protocol" : "TCP",
    "request_byte" : 5357,
    "response_byte" : 4862,
    "sessions" : 11,
    "src_associate_instance_type" : "PORT",
    "src_device_name" : "ecs_172",
    "src_ip" : "100.93.2.30",
    "start_time" : 1751355362000
  } ],
  "request_byte" : 5357,
  "response_byte" : 4862,
  "sessions" : 11,
  "src_ip_count" : 1,
  "start_time" : 1751355362000
 }
}
```


Status code: 400

Bad Request


```
{
 "error_code" : "CFW.00200007",
 "error_msg" : "Incorrect time range."
}
```


Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.15.8 Querying Top Traffic Statistics

Function

This API is used to query top traffic statistics.

Calling Method

For details, see **Calling APIs**.

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URI

GET /v1/{project_id}/cfw/logs/flow-top

Table 4-725 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Table 4-726 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Parameter	Mandatory	Type	Description
range	No	Integer	**Definition** Time range. **Constraints** N/A **Range** **0** (last hour), **1** (last day), or **2** (last seven days) **Default Value** N/A
log_type	Yes	String	**Definition** Log type. **Constraints** N/A **Range** **internet** (north-south logs), **nat** (NAT logs), **vpc** (east-west logs), or **vgw** (VGW logs) **Default Value** N/A
direction	No	String	**Definition** Session direction. **Constraints** N/A **Range** **in2out** (outbound) or **out2in** (inbound) **Default Value** N/A
start_time	No	Long	**Definition** Start time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A

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Parameter	Mandatory	Type	Description
end_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
vgw_id	No	Array of strings	**Definition** VGW ID **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
asset_type	No	String	**Definition** IP type. **Constraints** N/A **Range** **public**: EIP **private**: private IP address open_port **Default Value** N/A

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Parameter	Mandatory	Type	Description
item	Yes	Array of strings	**Definition** Aggregation type. **Constraints** N/A **Range** **src_ip**: source IP address **dst_ip**: destination IP address **dst_port**: destination port **protocol**: protocol **dst_host**: destination domain name **app**: application **dst_region_name**: destination region **src_region_name**: source region **Default Value** N/A
order	Yes	String	**Definition** Sorting criteria. **Constraints** N/A **Range** **record**: number of sessions byte: session traffic **Default Value** 5
size	No	Integer	**Definition** Number of aggregated records. **Constraints** N/A **Range** 0 to 10 **Default Value** 5

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Request Parameters

None

Response Parameters

Status code: 200

Table 4-727 Response body parameters

Parameter	Type	Description
data	Map<String,Array<**ItemVO**>>	**Definition** Top statistics. **Range** N/A

Table 4-728 ItemVO

Parameter	Type	Description
key	String	**Definition** Aggregation item. **Range** N/A
name	String	**Definition** Aggregation item name. **Range** N/A
value	Long	**Definition** Statistical value. **Range** N/A

Status code: 400

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Table 4-729 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query the top accessed domain names and sort them by session traffic. The project ID is a16df7cf1d094befa6bbc72cbf51e93a, the firewall ID is c598d612-8112-465c-bffd-863d4ce85a50, the time range is seven days, and the direction is outbound.

```
https://{Endpoint}/v1/a16df7cf1d094befa6bbc72cbf51e93a/cfw/logs/flow-top?
fw_instance_id=c598d612-8112-465c-
bffd-863d4ce85a50&log_type=internet&order=byte&item=dst_host&range=2&direction=in2out
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "dst_host" : [ {
      "key" : "www.test.com",
      "value" : 10219
    } ]
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200007",
  "error_msg" : "Incorrect time range."
}
```

Status Codes

Status Code	Description
200	OK

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Status Code	Description
400	Bad Request

Error Codes

See **Error Codes**.

4.15.9 Querying Traffic Log Statistics

Function

This API is used to query traffic log statistics.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/logs/flow-statistic

Table 4-730 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Table 4-731 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
range	No	Integer	**Definition** Time range. **Constraints** N/A **Range** **0** (last hour), **1** (last day), or **2** (last seven days) **Default Value** N/A
log_type	Yes	String	**Definition** Log type. **Constraints** N/A **Range** **internet** (north-south logs), **nat** (NAT logs), **vpc** (east-west logs), or **vgw** (VGW logs) **Default Value** N/A

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Parameter	Mandatory	Type	Description
direction	No	String	**Definition** Session direction. **Constraints** N/A **Range** **in2out** (outbound) or **out2in** (inbound) **Default Value** N/A
start_time	No	Long	**Definition** Start time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
end_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
vgw_id	No	Array of strings	**Definition** VGW ID **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Parameter	Mandatory	Type	Description
asset_type	No	String	**Definition** IP type. **Constraints** N/A **Range** **public**: EIP **private**: private IP address open_port **Default Value** N/A
item	Yes	String	**Definition** Aggregation type. **Constraints** N/A **Range** **src_ip**: source IP address **dst_ip**: destination IP address **dst_port**: destination port **protocol**: protocol **dst_host**: destination domain name **app**: application **dst_region_name**: destination region **src_region_name**: source region **risk_ip**: unsafe IP address **risk_host**: unsafe domain name **open_port**: open port **Default Value** N/A

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Parameter	Mandatory	Type	Description
size	No	Integer	**Definition** Number of aggregated records. **Constraints** N/A **Range** 0 to 10 **Default Value** 5

Request Parameters

None

Response Parameters

Status code: 200

Table 4-732 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition** Traffic log statistics. **Range** N/A

Table 4-733 data

Parameter	Type	Description
records	Array of **FlowDetailsVO** objects	**Definition** Statistics record. **Range** N/A
total	Long	**Definition** Total number. **Range** N/A

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Table 4-734 FlowDetailsVO

Parameter	Type	Description
apps	Array of **ItemVO** objects	**Definition** Application statistics. **Range** N/A
associate_instance_type	String	**Definition** Associated asset type. **Range** N/A
device_name	String	**Definition** Associated asset name. **Range** N/A
item	String	**Definition** Aggregation item. **Range** N/A
last_time	Long	**Definition** Last access time. **Range** N/A
ports	Array of **ItemVO** objects	**Definition** Port statistics. **Range** N/A
region	String	**Definition** Region. **Range** N/A
request_byte	Double	**Definition** Number of bytes in a request. **Range** N/A

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Parameter	Type	Description
response_byte	Double	**Definition** Number of bytes in the response. **Range** N/A
sessions	Long	**Definition** Number of sessions. **Range** N/A
tags	String	**Definition** Tag. **Range** N/A
src_ip	Array of **ItemVO** objects	**Definition** Source IP address. **Range** N/A
dst_ip	Array of **ItemVO** objects	**Definition** Destination IP address. **Range** N/A
protocol	String	**Definition** Protocol. **Range** N/A

Table 4-735 ItemVO

Parameter	Type	Description
key	String	**Definition** Aggregation item. **Range** N/A
name	String	**Definition** Aggregation item name. **Range** N/A

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Parameter	Type	Description
value	Long	**Definition** Statistical value. **Range** N/A

Status code: 400

Table 4-736 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query the domain names accessing the external network. The project ID is a16df7cf1d094befa6bbc72cbf51e93a, the firewall ID is c598d612-8112-465c-bffd-863d4ce85a50, the time range is seven days, and the direction is outbound.

```
https://{Endpoint}/v1/a16df7cf1d094befa6bbc72cbf51e93a/cfw/logs/flow-statistic?
fw_instance_id=c598d612-8112-465c-
bffd-863d4ce85a50&log_type=internet&direction=in2out&item=dst_host&range=2&size=1000
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "records" : [ {
      "apps" : [ {
        "key" : "HTTP",
        "value" : 11
      } ],
      "item" : "www.test.com",
      "last_time" : 1751355533000,
      "ports" : [ {
        "key" : "8080",
        "value" : 11
      } ],
```

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```
    "request_byte" : 5357,
    "response_byte" : 4862,
    "sessions" : 11
   } ],
   "total" : 1
 }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200007",
  "error_msg" : "Incorrect time range."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.15.10 Querying the Session Trend

Function

This API is used to query the session trend.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/logs/flow-trend

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Table 4-737 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Table 4-738 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Parameter	Mandatory	Type	Description
range	No	Integer	**Definition** Time range. **Constraints** N/A **Range** **0** (last hour), **1** (last day), or **2** (last seven days) **Default Value** N/A
log_type	Yes	String	**Definition** Log type. **Constraints** N/A **Range** **internet** (north-south logs), **nat** (NAT logs), **vpc** (east-west logs), or **vgw** (VGW logs) **Default Value** N/A
direction	No	String	**Definition** Session direction. **Constraints** N/A **Range** **in2out** (outbound) or **out2in** (inbound) **Default Value** N/A
start_time	No	Long	**Definition** Start time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A

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Parameter	Mandatory	Type	Description
end_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
vgw_id	No	Array of strings	**Definition** VGW ID **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
asset_type	No	String	**Definition** IP type. **Constraints** N/A **Range** **public**: EIP **private**: private IP address open_port **Default Value** N/A
ip	No	Array of strings	ips
vpc	No	Array of strings	vpcs

Request Parameters

None

Response Parameters

Status code: 200

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Table 4-739 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition** Session trend statistics. **Range** N/A

Table 4-740 data

Parameter	Type	Description
records	Array of **FlowTrendVO** objects	**Definition** Traffic trend data. **Range** N/A
total	Long	**Definition** Total number. **Range** N/A

Table 4-741 FlowTrendVO

Parameter	Type	Description
agg_time	Long	**Definition** Aggregation time point. **Range** N/A
in_bps	Double	**Definition** Inbound bps. **Range** N/A
out_bps	Double	**Definition** Outbound bps. **Range** N/A

Status code: 400

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Table 4-742 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query the session trend. The project ID is a16df7cf1d094befa6bbc72cbf51e93a, the firewall ID is c598d612-8112-465c-bffd-863d4ce85a50, the time range is the last hour, and the VPC ID is 42562e8a-af8d-4a9a-91a4-c1d6c83ecfc5.

```
https://{Endpoint}/v1/a16df7cf1d094befa6bbc72cbf51e93a/cfw/logs/flow-trend?
fw_instance_id=c598d612-8112-465c-bffd-863d4ce85a50&range=0&vpc=42562e8a-af8d-4a9a-91a4-
c1d6c83ecfc5&log_type=vpc
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "records" : [ {
      "agg_time" : 1751522040000,
      "in_bps" : 0,
      "out_bps" : 0
    } ],
    "total" : 60
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200007",
  "error_msg" : "Incorrect time range."
}
```

Status Codes

Status Code	Description
200	OK

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Status Code	Description
400	Bad Request

Error Codes

See **Error Codes**.

4.15.11 Querying Attack Log Statistics

Function

This API is used to query attack log statistics.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/logs/attack-detail

Table 4-743 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Table 4-744 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
range	No	Integer	**Definition** Time range. **Constraints** N/A **Range** **0** (last hour), **1** (last day), or **2** (last seven days) **Default Value** N/A
log_type	Yes	String	**Definition** Log type. **Constraints** N/A **Range** **internet** (north-south logs), **nat** (NAT logs), **vpc** (east-west logs), or **vgw** (VGW logs) **Default Value** N/A

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Parameter	Mandatory	Type	Description
start_time	No	Long	**Definition** Start time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
end_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
vgw_id	No	Array of strings	**Definition** VGW ID **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
action	Yes	Integer	**Definition** Action. **Constraints** N/A **Range** **0**: all **1**: block **Default Value** N/A

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Parameter	Mandatory	Type	Description
item	Yes	String	**Definition** Aggregation type. **Constraints** N/A **Range** **src_region_id**: top external attack source regions **attack_type**: attack type **in_src_ip**: top internal attack source IP addresses **out_src_ip**: top external attack source IP addresses **dst_port**: top attacked ports **dst_ip**: top attacked IP addresses **attack_rule**: top attack rules **src_ip**: top attack source IP addresses **Default Value** N/A
value	Yes	String	**Definition** Statistical object. **Constraints** N/A **Range** N/A **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

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Table 4-745 Response body parameters

Parameter	Type	Description
data	**AttackDetailVO** object	

Table 4-746 AttackDetailVO

Parameter	Type	Description
app_count	Long	**Definition** Number of applications. **Range** N/A
attack_rule_count	Long	**Definition** Number of attack rules. **Range** N/A
attack_type_count	Long	**Definition** Number of attack types. **Range** N/A
count	Long	**Definition** Number of attacks. **Range** N/A
dst_ip_count	Long	**Definition** Number of destination IP addresses. **Range** N/A
dst_port_count	Long	**Definition** Number of attacked ports. **Range** N/A
end_time	Long	**Definition** End time. **Range** N/A

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Parameter	Type	Description
records	Array of **AttackLog** objects	**Definition** Attack event details. **Range** N/A
src_ip_count	Long	**Definition** Number of source IP addresses. **Range** N/A
start_time	Long	**Definition** Start time. **Range** N/A
total	Long	**Definition** Total number. **Range** N/A

Table 4-747 AttackLog

Parameter	Type	Description
action	String	**Definition** Action. **Range** N/A
app	String	**Definition** Application. **Range** N/A
attack_rule	String	**Definition** Attack rule. **Range** N/A
attack_rule_id	String	**Definition** Attack rule ID. **Range** N/A

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Parameter	Type	Description
attack_type	String	**Definition** Attack type. **Range** N/A
direction	String	**Definition** Attack direction. **Range** N/A
dst_ip	String	**Definition** Destination IP address. **Range** N/A
dst_port	Integer	**Definition** Destination port. **Range** N/A
dst_region_id	String	**Definition** Destination region ID. **Range** N/A
dst_region_name	String	**Definition** Destination region name. **Range** N/A
dst_province_id	String	**Definition** Destination province ID. **Range** N/A
dst_province_name	String	**Definition** Destination province name. **Range** N/A
dst_city_id	String	**Definition** Destination city ID. **Range** N/A

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Parameter	Type	Description
dst_city_name	String	**Definition** Destination city name. **Range** N/A
event_time	Long	**Definition** Occurrence time. **Range** N/A
level	String	**Definition** Risk severity. **Range** N/A
protocol	String	**Definition** Protocol. **Range** N/A
source	String	**Definition** Source. **Range** N/A
src_ip	String	**Definition** Source IP address. **Range** N/A
real_ip	String	**Definition** Real IP address. **Range** N/A
tag	Integer	**Definition** Tag. **Range** N/A
src_port	Integer	**Definition** Source port. **Range** N/A

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Parameter	Type	Description
src_region_id	String	**Definition** Source region ID. **Range** N/A
src_region_name	String	**Definition** Source region name. **Range** N/A
src_province_id	String	**Definition** Source province ID. **Range** N/A
src_province_name	String	**Definition** Source province name. **Range** N/A
src_city_id	String	**Definition** Source city ID. **Range** N/A
src_city_name	String	**Definition** Source city. **Range** N/A
vgw_id	String	**Definition** VGW Id **Range** N/A

Status code: 400

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Table 4-748 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

```
https://{Endpoint}/v1/7db2c6e2934046dd8c5a996ed4780c5b/cfw/logs/attack-detail?
fw_instance_id=a7df0f6c-da03-4511-ad0b-
b17b589ff0ec&log_type=internet&range=2&item=src_region_id&action=0&value=US
```

Query detailed attack log statistics. The project ID is 7db2c6e2934046dd8c5a996ed4780c5b, the firewall ID is a7df0f6c-da03-4511-ad0b-b17b589ff0ec, the time range is 7 days, and the external attack source region is US.

Example Responses

Status code: 200

OK


```
{
  "data" : {
    "app_count" : 1,
    "attack_rule_count" : 1,
    "attack_type_count" : 1,
    "count" : 1,
    "dst_ip_count" : 1,
    "dst_port_count" : 1,
    "end_time" : 1751014701000,
    "records" : [ {
      "action" : "permit",
      "app" : "UDP-ANY",
      "attack_rule" : "Realtek Jungle SDK Command Injection Vulnerability (CVE-2021-35394)",
      "attack_rule_id" : "806310",
      "attack_type" : "Vulnerability Exploit Attack",
      "dst_ip" : "121.37.223.24",
      "dst_port" : 9034,
      "dst_region_id" : "CN",
      "dst_region_name" : "China",
      "dst_province_id" : "GD",
      "dst_province_name" : "Guangdong",
      "dst_city_id" : "Guangzhou",
      "dst_city_name" : "Guangzhou",
      "event_time" : 1751014701000,
      "level" : "CRITICAL",
      "protocol" : "UDP",
      "source" : "predefined",
      "src_ip" : "92.112.125.103",
      "tag" : -1,
      "src_port" : 43533,
```


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```
      "src_region_id" : "US",
      "src_region_name" : "United States"
    } ],
    "src_ip_count" : 1,
    "start_time" : 1751014701000,
    "total" : 1
  }
}
```


Status code: 400

Bad Request


```
{
  "error_code" : "CFW.00200007",
  "error_msg" : "Incorrect time range."
}
```


Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.15.12 Querying Top Attack Log Statistics

Function

This API is used to query top attack log statistics.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/logs/top-attack

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Table 4-749 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Table 4-750 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Parameter	Mandatory	Type	Description
range	No	Integer	**Definition** Time range. **Constraints** N/A **Range** **0** (last hour), **1** (last day), or **2** (last seven days) **Default Value** N/A
log_type	Yes	String	**Definition** Log type. **Constraints** N/A **Range** **internet** (north-south logs), **nat** (NAT logs), **vpc** (east-west logs), or **vgw** (VGW logs) **Default Value** N/A
start_time	No	Long	**Definition** Start time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
end_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A

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Parameter	Mandatory	Type	Description
vgw_id	No	Array of strings	**Definition** VGW ID **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
action	Yes	Integer	**Definition** Action. **Constraints** N/A **Range** **0**: all **1**: block **Default Value** N/A
item	Yes	Array of strings	**Definition** Aggregation type. **Constraints** N/A **Range** **src_region_id**: top external attack source regions **attack_type**: attack type **in_src_ip**: top internal attack source IP addresses **out_src_ip**: top external attack source IP addresses **dst_port**: top attacked ports **dst_ip**: top attacked IP addresses **attack_rule**: top attack rules **src_ip**: top attack source IP addresses **level**: top threat levels **Default Value** N/A

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Parameter	Mandatory	Type	Description
size	No	Integer	**Definition** Number of aggregated records. **Constraints** N/A **Range** 0 to 10 **Default Value** 5

Request Parameters

None

Response Parameters

Status code: 200

Table 4-751 Response body parameters

Parameter	Type	Description
data	**AttackTopRespBody** object	

Table 4-752 AttackTopRespBody

Parameter	Type	Description
attack_rule	Array of **TopInfo** objects	**Definition** Top attack rules. **Range** N/A
attack_type	Array of **TopInfo** objects	**Definition** Top attack types. **Range** N/A
dst_ip	Array of **TopInfo** objects	**Definition** Top attack target IP addresses. **Range** N/A

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Parameter	Type	Description
dst_port	Array of **TopInfo** objects	**Definition** Top attacked ports. **Range** N/A
in_src_ip	Array of **TopInfo** objects	**Definition** Top internal attack source IP addresses. **Range** N/A
level	Array of **TopInfo** objects	**Definition** Top threat levels. **Range** N/A
out_src_ip	Array of **TopInfo** objects	**Definition** Top external attack source IP addresses. **Range** N/A
src_ip	Array of **TopInfo** objects	**Definition** Top attack source IP addresses. **Range** N/A
src_region_id	Array of **TopInfo** objects	**Definition** Source region ID. **Range** N/A

Table 4-753 TopInfo

Parameter	Type	Description
count	Long	**Definition** Number of times. **Range** N/A

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Parameter	Type	Description
item	String	**Definition** Item. **Range** N/A
item_id	String	**Definition** Item ID. **Range** N/A

Status code: 400

Table 4-754 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query the top attack types at the Internet border. The project ID is 7db2c6e2934046dd8c5a996ed4780c5b, the firewall ID is a7df0f6c-da03-4511-ad0b-b17b589ff0ec, and the time range is 7 days.

```
https://{Endpoint}/v1/7db2c6e2934046dd8c5a996ed4780c5b/cfw/logs/top-attack?fw_instance_id=a7df0f6c-da03-4511-ad0b-b17b589ff0ec&item=attack_type&log_type=internet&action=0&range=2
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "attack_type" : [ {
      "count" : 51,
      "item" : "Vulnerability Exploit Attack",
      "item_id" : "Vulnerability Exploit Attack"
```

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```
  } ]
 }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200007",
  "error_msg" : "Incorrect time range."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.15.13 Querying Access Control Statistics Details

Function

This API is used to query details about access control statistics.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/cfw/logs/top-access-detail

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Table 4-755 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Table 4-756 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Parameter	Mandatory	Type	Description
range	No	Integer	**Definition** Time range. **Constraints** N/A **Range** **0** (last hour), **1** (last day), or **2** (last seven days) **Default Value** N/A
direction	No	String	**Definition** Session direction. **Constraints** N/A **Range** **in2out** (outbound) or **out2in** (inbound) **Default Value** N/A
start_time	No	Long	**Definition** Start time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
end_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A

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Parameter	Mandatory	Type	Description
vgw_id	No	Array of strings	**Definition** VGW ID **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
log_type	No	String	**Definition** Log type. **Constraints** N/A **Range** **internet** (north-south logs), **nat** (NAT logs), **vpc** (east-west logs), or **vgw** (VGW logs) **Default Value** N/A
item	Yes	String	**Definition** Aggregation type. **Constraints** N/A **Range** **top_deny_rule**: the blocking rule that was hit **dst_ip**: blocked destination IP address **src_ip**: blocked source IP address **dst_port**: blocked port **dst_region**: blocked destination region **src_region**: blocked source region **Default Value** N/A

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Parameter	Mandatory	Type	Description
item_id	Yes	String	**Definition** Aggregated object. **Constraints** N/A **Range** N/A **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-757 Response body parameters

Parameter	Type	Description
data	AccessDetailVO object	

Table 4-758 AccessDetailVO

Parameter	Type	Description
dst_ip_count	Long	**Definition** Number of destination IP addresses. **Range** N/A
dst_port_count	Long	**Definition** Number of destination ports. **Range** N/A
hit_count	Long	**Definition** Number of hits. **Range** N/A

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Parameter	Type	Description
protocol_count	Long	**Definition** Number of protocols. **Range** N/A
recent_end_time	Long	**Definition** End time. **Range** N/A
recent_start_time	Long	**Definition** Start time. **Range** N/A
record_total	Long	**Definition** Number of records. **Range** N/A
records	Array of **AccessLogInfo** objects	**Definition** Hit details. **Range** N/A
rule_hit_count	Long	**Definition** Number of hit rules. **Range** N/A
src_ip_count	Long	**Definition** Number of source IP addresses. **Range** N/A

Table 4-759 AccessLogInfo

Parameter	Type	Description
action	String	**Definition** Action. **Range** N/A

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Parameter	Type	Description
app	String	**Definition** Application. **Range** N/A
url	String	
dst_host	String	**Definition** Destination domain name. **Range** N/A
dst_ip	String	**Definition** Destination IP address. **Range** N/A
dst_port	Integer	**Definition** Destination port. **Range** N/A
dst_region_id	String	**Definition** Destination region ID. **Range** N/A
dst_region_name	String	**Definition** Destination region name. **Range** N/A
dst_province_id	String	**Definition** Destination province ID. **Range** N/A
dst_province_name	String	**Definition** Destination province name. **Range** N/A

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Parameter	Type	Description
dst_city_id	String	**Definition** Destination city ID. **Range** N/A
dst_city_name	String	**Definition** Destination city name. **Range** N/A
hit_time	Long	**Definition** Hit time. **Range** N/A
log_id	String	
protocol	String	**Definition** Protocol. **Range** N/A
rule_id	String	**Definition** Rule ID. **Range** N/A
rule_name	String	**Definition** Rule name. **Range** N/A
rule_type	Integer	
src_ip	String	**Definition** Source IP address. **Range** N/A
src_port	Integer	**Definition** Source port. **Range** N/A

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Parameter	Type	Description
src_region_id	String	**Definition** Source region ID. **Range** N/A
src_region_name	String	**Definition** Source region name. **Range** N/A
src_province_id	String	**Definition** Source province ID. **Range** N/A
src_province_name	String	**Definition** Source province name. **Range** N/A
src_city_id	String	**Definition** Source city ID. **Range** N/A
src_city_name	String	**Definition** Source city name. **Range** N/A
vgw_id	String	**Definition** VGW ID. **Range** N/A
qos_rule_id	String	
qos_rule_name	String	
qos_rule_type	Integer	

Status code: 400

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Table 4-760 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query the details about blocked outbound traffic. The project ID is 7db2c6e2934046dd8c5a996ed4780c5b, the firewall ID is a7df0f6c-da03-4511-ad0b-b17b589ff0ec, the time range is 1 hour, and the IP address is 59.39.0.152.

```
v1/7db2c6e2934046dd8c5a996ed4780c5b/cfw/logs/top-access-detail?fw_instance_id=a7df0f6c-da03-4511-ad0b-b17b589ff0ec&item=dst_ip&range=0&direction=in2out&item_id=59.39.0.152
```

Example Responses

Status code: 200

OK


```
{
  "data" : {
    "dst_ip_count" : 1,
    "dst_port_count" : 1,
    "hit_count" : 3,
    "protocol_count" : 1,
    "recent_end_time" : 1751545553000,
    "recent_start_time" : 1751545469000,
    "record_total" : 3,
    "records" : [ {
      "action" : "deny",
      "app" : "HTTP",
      "dst_ip" : "59.39.0.152",
      "dst_port" : 80,
      "dst_region_id" : "CN",
      "dst_region_name" : "China",
      "dst_province_id" : "GD",
      "dst_province_name" : "Guangdong",
      "dst_city_id" : "Foshan",
      "dst_city_name" : "Foshan",
      "hit_time" : 1751545498000,
      "protocol" : "TCP",
      "rule_id" : "1ceb7988-b11b-4f1e-b7f1-1a807e9e89f3",
      "rule_name" : "deny",
      "src_ip" : "121.37.223.24",
      "src_port" : 39948,
      "src_region_id" : "CN",
      "src_region_name" : "China",
      "src_province_id" : "GD",
      "src_province_name" : "Guangdong",
```


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```
    "src_city_id" : "Guangzhou",
    "src_city_name" : "Guangzhou"
  } ],
  "rule_hit_count" : 1,
  "src_ip_count" : 1
 }
}
```

Status code: 400

Bad Request

```
{
 "error_code" : "CFW.00200007",
 "error_msg" : "Incorrect time range."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.16 Multi-Account Management

4.16.1 Querying the Account List

Function

This API is used to query the account list.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/system/multi-account/accounts

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Table 4-761 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Table 4-762 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Parameter	Mandatory	Type	Description
limit	Yes	Integer	**Definition** Maximum number of records that can be returned. **Constraints** N/A **Range** 1-1024 **Default Value** N/A
offset	Yes	Integer	**Definition** Offset. The records after this offset will be queried. **Constraints** N/A **Range** 0 - 1024 **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-763 Response body parameters

Parameter	Type	Description
data	**PageDataAccountVO** object	

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Table 4-764 PageDataAccountVO

Parameter	Type	Description
limit	Integer	**Definition** Quantity limit. **Range** N/A
offset	Integer	**Definition** Offset. **Range** N/A
records	Array of **AccountVO** objects	**Definition** Account list. **Range** N/A
total	Long	**Definition** Total number. **Range** N/A

Table 4-765 AccountVO

Parameter	Type	Description
account_id	String	**Definition** Account ID. **Range** N/A
account_name	String	**Definition** Account name. **Range** N/A
eip_count_protected	Integer	**Definition** Number of protected EIPs. **Range** N/A

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Parameter	Type	Description
eip_count_total	Integer	**Definition** Total EIPs. **Range** N/A
eip_count_unprotected	Integer	**Definition** Number of unprotected EIPs. **Range** N/A
organization_id	String	**Definition** Organization ID. **Range** N/A
project_id	String	**Definition** Project ID. **Range** N/A
project_name	String	**Definition** Project name. **Range** N/A

Status code: 400

Table 4-766 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

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Example Requests

Query the account list. The project ID is 176d761dc156471c9c9b227376594160, the firewall ID is ea0e700f-7ae6-47c1-a8d0-ed4b1acd8e8e, the maximum number of accounts is 50, and the offset is 0.

```
https://{Endpoint}/v1/176d761dc156471c9c9b227376594160/system/multi-account/accounts?limit=50&offset=0&fw_instance_id=ea0e700f-7ae6-47c1-a8d0-ed4b1acd8e8e
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "limit" : 50,
    "offset" : 0,
    "records" : [ {
      "account_id" : "09bb24e6f280d23d0f9fc0104b901480",
      "account_name" : "SCC_CNFW_c00617156",
      "eip_count_protected" : 0,
      "eip_count_total" : 36,
      "eip_count_unprotected" : 36,
      "organization_id" : "o-r0b4bh2jcr1ke7yn70uhwlp5d0ktwisb",
      "project_id" : "09bb24e6fe80d23d2fa2c010b53b418c",
      "project_name" : "cn-north-7"
    } ],
    "total" : 1
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.16.2 Enabling Multi-Account Management

Function

This API is used to enable multi-account management.

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Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/system/multi-account/enable

Table 4-767 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Table 4-768 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Request Parameters

None

Response Parameters

Status code: 200

Table 4-769 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition** Response information. **Range** N/A

Table 4-770 data

Parameter	Type	Description
id	String	**Definition** Firewall ID. **Range** N/A
name	String	**Definition** Firewall name. **Range** N/A
trust_service_status	Integer	**Definition** CFW trustworthy service status. **Range** **1**: enabled

Status code: 400

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Table 4-771 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Enable multi-account management. The project ID is 176d761dc156471c9c9b227376594160, and the firewall ID is ea0e700f-7ae6-47c1-a8d0-ed4b1acd8e8e.

```
https://{Endpoint}/v1/176d761dc156471c9c9b227376594160/system/multi-account/enable?
fw_instance_id=ea0e700f-7ae6-47c1-a8d0-ed4b1acd8e8e
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "id" : "ea0e700f-7ae6-47c1-a8d0-ed4b1acd8e8e",
    "name" : "CFW-9809-1"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

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Error Codes

See **Error Codes**.

4.16.3 Querying the Organization Account List

Function

This API is used to query the organization account list.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/system/multi-account/organization-accounts

Table 4-772 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Table 4-773 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
parent_id	No	String	**Definition** Unique ID of the parent node (root or OU). **Constraints** N/A **Range** N/A **Default Value** N/A
limit	No	Integer	**Definition** Maximum number of records that can be returned. **Constraints** N/A **Range** 1-2000 **Default Value** 2000

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Parameter	Mandatory	Type	Description
marker	No	String	**Definition** Pagination marker. **Constraints** N/A **Range** N/A **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-774 Response body parameters

Parameter	Type	Description
data	Array of **OrganizationAccountInfo** objects	**Definition** Response to the request for querying an organization account. **Range** N/A
marker	String	**Definition** Pagination marker. **Range** N/A
total	Integer	**Definition** Total number. **Range** N/A

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Table 4-775 OrganizationAccountInfo

Parameter	Type	Description
delegated	Boolean	**Definition** Added or not. **Range** N/A
id	String	**Definition** Unique ID of an account. **Range** N/A
name	String	**Definition** Account name. **Range** N/A
org_type	String	**Definition** Organization node type. **Range** account
parent_id	String	**Definition** Unique ID of the parent node (root or OU). **Range** N/A
urn	String	**Definition** Uniform resource name (URN) of an account. **Range** N/A

Status code: 400

Table 4-776 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A

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Parameter	Type	Description
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query organization accounts. The project ID is 176d761dc156471c9c9b227376594160, the firewall ID is ea0e700f-7ae6-47c1-a8d0-ed4b1acd8e8e, the organization ID is o-r0b4bh2jcr1ke7yn70uhwlp5d0ktwisb, and the account ID is 09bb24e6f280d23d0f9fc0104b901480.

```
https://{Endpoint}/v1/176d761dc156471c9c9b227376594160/system/multi-account/organization-accounts?fw_instance_id=ea0e700f-7ae6-47c1-a8d0-ed4b1acd8e8e
```

Example Responses

Status code: 200

OK

```
{
  "data" : [ {
    "delegated" : false,
    "id" : "01074115e5d14ee7b4351f22f2deb501",
    "name" : "SCC_CNFW_c00617156_test1",
    "org_type" : "account",
    "urn" : "organizations::52d4c977dc834434920af54060d74af4:account:o-r0b4bh2jcr1ke7yn70uhwlp5d0ktwisb/01074115e5d14ee7b4351f22f2deb501"
  } ]
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

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4.16.4 Querying the Organization Structure

Function

Query the organization structure.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/system/multi-account/organization-tree

Table 4-777 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Table 4-778 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
parent_id	No	String	**Definition** Unique ID of the parent node (root or OU). **Constraints** N/A **Range** N/A **Default Value** N/A
limit	No	Integer	**Definition** Maximum number of records that can be returned. **Constraints** N/A **Range** 1-2000 **Default Value** 2000

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Parameter	Mandatory	Type	Description
marker	No	String	**Definition** Pagination marker. **Constraints** N/A **Range** N/A **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-779 Response body parameters

Parameter	Type	Description
data	Array of **OrganizationAccountInfo** objects	**Definition** Response to the request for querying an organization account. **Range** N/A
marker	String	**Definition** Pagination marker. **Range** N/A
total	Integer	**Definition** Total number. **Range** N/A

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Table 4-780 OrganizationAccountInfo

Parameter	Type	Description
delegated	Boolean	**Definition** Added or not. **Range** N/A
id	String	**Definition** Unique ID of an account. **Range** N/A
name	String	**Definition** Account name. **Range** N/A
org_type	String	**Definition** Organization node type. **Range** account
parent_id	String	**Definition** Unique ID of the parent node (root or OU). **Range** N/A
urn	String	**Definition** Uniform resource name (URN) of an account. **Range** N/A

Status code: 400

Table 4-781 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A

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Parameter	Type	Description
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query the organization structure. The project ID is 176d761dc156471c9c9b227376594160, the firewall ID is ea0e700f-7ae6-47c1-a8d0-ed4b1acd8e8e, and the OU ID is ou-xuyegm9ace9gqucy2sdlw821r22s2xo0.

```
https://{Endpoint}/v1/176d761dc156471c9c9b227376594160/system/multi-account/organization-tree?fw_instance_id=ea0e700f-7ae6-47c1-a8d0-ed4b1acd8e8e&parent_id=ou-xuyegm9ace9gqucy2sdlw821r22s2xo0
```

Example Responses

Status code: 200

OK

```
{
  "data" : [ {
    "delegated" : false,
    "id" : "ou-5685cxqjfngoh898df28jm736x4ugvb2",
    "name" : "test1",
    "org_type" : "unit",
    "parent_id" : "ou-xuyegm9ace9gqucy2sdlw821r22s2xo0",
    "urn" : "organizations::52d4c977dc834434920af54060d74af4:ou:o-r0b4bh2jcr1ke7yn70uhwlp5d0ktwisb/ou-5685cxqjfngoh898df28jm736x4ugvb2"
  } ],
  "total" : 1
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

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Error Codes

See **Error Codes**.

4.17 Security report.

4.17.1 Querying the Security Report Template List

Function

This API is used to query the security report template list.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/report-profile

Table 4-782 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Table 4-783 Query Parameters

Parameter	Mandatory	Type	Description
category	No	String	**Definition** Report type. **Constraints** N/A **Range** **daily**: daily report **weekly**: weekly report **custom**: custom report **Default Value** N/A
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
limit	Yes	Integer	**Definition** Maximum number of records that can be returned. **Constraints** N/A **Range** 1-1024 **Default Value** N/A

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Parameter	Mandatory	Type	Description
offset	Yes	Integer	**Definition** Offset. The records after this offset will be queried. **Constraints** N/A **Range** 0 - 1024 **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-784 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition** Response to the request for querying the template list. **Range** N/A

Table 4-785 data

Parameter	Type	Description
limit	Integer	**Definition** Quantity limit. **Range** N/A
offset	Integer	**Definition** Offset. **Range** N/A

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Parameter	Type	Description
records	Array of ReportProfileVO objects	**Definition** Template list. **Range** N/A
total	Integer	**Definition** Total number. **Range** N/A

Table 4-786 ReportProfileVO

Parameter	Type	Description
profile_id	String	**Definition** Template ID. **Range** N/A
name	String	**Definition** Template name. **Range** N/A
category	String	**Definition** Template type. **Range** **daily**: daily report **weekly**: weekly report **custom**: custom report
status	Integer	**Definition** Enabling status. **Range** N/A
report_id	String	**Definition** Latest report ID. **Range** N/A

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Parameter	Type	Description
last_time	Long	**Definition** Latest report generation time. **Range** N/A

Status code: 400

Table 4-787 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query the security report template list of the firewall whose project ID is eb7accd78ea845078275b2ad5280a109 and firewall ID is 8a996d43-75bd-48b4-b1b8-de0706b72b8f. The offset is 0, and the maximum number of returned records is 10.

```
https://{Endpoint}/v1/eb7accd78ea845078275b2ad5280a109/report-profile?
fw_instance_id=8a996d43-75bd-48b4-b1b8-de0706b72b8f&offset=0&limit=10
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "limit" : 10,
    "offset" : 0,
    "records" : [ {
      "profile_id" : "53a9d352-4b35-4703-801a-0dbcfc306fc5",
      "name" : "test",
      "category" : "custom",
      "status" : 1,
      "report_id" : "2ff069b3-1ef8-4a6e-9aaf-d7308eeba826",
      "last_time" : 1749814939598
    } ],
```

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```
    "total" : 1
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.17.2 Creating a Report Template

Function

This API is used to create a report template.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/report-profile

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Table 4-788 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Table 4-789 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Request Parameters

Table 4-790 Request body parameters

Parameter	Mandatory	Type	Description
category	Yes	String	**Definition** Report type. **Constraints** N/A **Range** **daily**: daily report **weekly**: weekly report **custom**: custom report **Default Value** N/A
description	No	String	**Definition** Description. **Constraints** N/A **Range** N/A **Default Value** N/A
name	Yes	String	**Definition** Template name. **Constraints** N/A **Range** N/A **Default Value** N/A

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Parameter	Mandatory	Type	Description
send_period	No	Integer	**Definition** Sending time. This parameter is mandatory for daily and weekly reports. **Constraints** N/A **Range** N/A **Default Value** N/A
send_week_day	No	Integer	**Definition** Days in a week when data is sent. This parameter is mandatory for weekly reports. **Constraints** N/A **Range** N/A **Default Value** N/A
statistic_period	No	**StatisticPeriod** object	**Definition** Statistical period, which needs to be set for custom reports. **Constraints** N/A **Range** N/A **Default Value** N/A
status	No	Integer	**Definition** Enabling status. **Constraints** N/A **Range** **0**: disabled **1**: enabled **Default Value** N/A

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Parameter	Mandatory	Type	Description
topic_urn	Yes	String	**Definition** Notification group. **Constraints** N/A **Range** N/A **Default Value** N/A
subscription_type	No	Integer	**Definition** Notification method. **Constraints** N/A **Range** **0**: SMN notification **1**: no notification **Default Value** N/A

Table 4-791 StatisticPeriod

Parameter	Mandatory	Type	Description
end_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
start_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A

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Response Parameters

Status code: 200

Table 4-792 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition** Response information. **Range** N/A

Table 4-793 data

Parameter	Type	Description
id	String	**Definition** Template ID. **Range** N/A
name	String	**Definition** Template name. **Range** N/A

Status code: 400

Table 4-794 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

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Example Requests

Create a report template. The project ID is eb7accd78ea845078275b2ad5280a109, the firewall ID is 8a996d43-75bd-48b4-b1b8-de0706b72b8f, the template name is **test**, the report type is **daily**, the topic name is **test**, the URN is urn:smn:cn-north-4:eb7accd78ea845078275b2ad5280a109:test, and the sending time is 00:00 every day.

```
https://{Endpoint}/v1/eb7accd78ea845078275b2ad5280a109/report-profile?
fw_instance_id=8a996d43-75bd-48b4-b1b8-de0706b72b8f

{
  "name" : "test",
  "category" : "daily",
  "topic_urn" : "urn:smn:cn-north-4:eb7accd78ea845078275b2ad5280a109:test",
  "send_period" : 0
}
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "id" : "f9116386-4ef9-40b5-bc2e-bdd7c17b3650",
    "name" : "fgsd"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.17.3 Obtaining a Security Report Template

Function

This API is used to obtain a security report template.

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Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/report-profile/{report_profile_id}

Table 4-795 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
report_profile_id	Yes	String	**Definition** Security report template ID. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Table 4-796 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-797 Response body parameters

Parameter	Type	Description
data	**ReportProfileInfoVO** object	

Table 4-798 ReportProfileInfoVO

Parameter	Type	Description
category	String	**Definition** Report type. **Range** **daily**: daily report **weekly**: weekly report **custom**: custom report

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Parameter	Type	Description
description	String	**Definition** Description. **Range** N/A
name	String	**Definition** Template name. **Range** N/A
send_period	Integer	**Definition** Sending time. **Range** N/A
send_week_day	Integer	**Definition** Days in a week when data is sent. **Range** N/A
statistic_period	**StatisticPeriod** object	**Definition** Statistical period, which needs to be set for custom reports. **Constraints** N/A **Range** N/A **Default Value** N/A
status	Integer	**Definition** Enabling status. **Range** **0**: disabled; **1**: enabled
topic_name	String	**Definition** Notification topic name. **Range** N/A
topic_urn	String	**Definition** Notification topic URN. **Range** N/A

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Parameter	Type	Description
subscription_type	Integer	**Definition** Notification method. **Range** **0**: SMN notification; **1**: no notification

Table 4-799 StatisticPeriod

Parameter	Type	Description
end_time	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
start_time	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A

Status code: 400

Table 4-800 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A

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Parameter	Type	Description
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query the details about a security report template. The project ID is eb7accd78ea845078275b2ad5280a109, firewall ID is 8a996d43-75bd-48b4-b1b8-de0706b72b8f, and template ID is de068699-a2d6-4f3d-8e14-c0ac16ff364e.

```
https://{Endpoint}/v1/eb7accd78ea845078275b2ad5280a109/report-profile/de068699-a2d6-4f3d-8e14-c0ac16ff364e?fw_instance_id=8a996d43-75bd-48b4-b1b8-de0706b72b8f
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "category" : "daily",
    "name" : "test",
    "send_period" : 16,
    "status" : 1,
    "topic_name" : "test",
    "topic_urn" : "urn:smn:cn-north-4:eb7accd78ea845078275b2ad5280a109:test"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

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4.17.4 Updating a Security Report Template

Function

This API is used to update a security report template.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v1/{project_id}/report-profile/{report_profile_id}

Table 4-801 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
report_profile_id	Yes	String	**Definition** Security report template ID. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Table 4-802 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Request Parameters

Table 4-803 Request body parameters

Parameter	Mandatory	Type	Description
description	No	String	**Definition** Template description. **Constraints** N/A **Range** N/A **Default Value** N/A
name	No	String	**Definition** Template name. **Constraints** N/A **Range** N/A **Default Value** N/A

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Parameter	Mandatory	Type	Description
send_period	No	Integer	**Definition** Sending time. This parameter is mandatory for daily and weekly reports. **Constraints** N/A **Range** N/A **Default Value** N/A
send_week_day	No	Integer	**Definition** Days in a week when data is sent. This parameter is mandatory for weekly reports. **Constraints** N/A **Range** N/A **Default Value** N/A
statistic_period	No	**StatisticPeriod** object	**Definition** Statistical period, which needs to be set for custom reports. **Constraints** N/A **Range** N/A **Default Value** N/A
status	No	Integer	**Definition** Enabling status. **Constraints** N/A **Range** **0**: disabled **1**: enabled **Default Value** N/A

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Parameter	Mandatory	Type	Description
topic_urn	No	String	**Definition** Notification group. **Constraints** N/A **Range** N/A **Default Value** N/A
subscription_type	No	Integer	**Definition** Notification method. **Constraints** N/A **Range** **0**: SMN notification **1**: no notification **Default Value** N/A

Table 4-804 StatisticPeriod

Parameter	Mandatory	Type	Description
end_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
start_time	No	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A

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Response Parameters

Status code: 200

Table 4-805 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition** Response information. **Range** N/A

Table 4-806 data

Parameter	Type	Description
id	String	**Definition** Template ID. **Range** N/A
name	String	**Definition** Template name. **Range** N/A

Status code: 400

Table 4-807 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

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Example Requests

Update a report template. The project ID is eb7accd78ea845078275b2ad5280a109, the firewall ID is 8a996d43-75bd-48b4-b1b8-de0706b72b8f, the template name is **test**, the report type is **daily**, the topic name is **test**, the URN is urn:smn:cn-north-4:eb7accd78ea845078275b2ad5280a109:test, and the sending time is 00:00 every day.

```
https://{Endpoint}/v1/eb7accd78ea845078275b2ad5280a109/report-profile/de068699-a2d6-4f3d-8e14-c0ac16ff364e?fw_instance_id=8a996d43-75bd-48b4-b1b8-de0706b72b8f

{
  "name" : "test",
  "topic_urn" : "urn:smn:cn-north-4:eb7accd78ea845078275b2ad5280a109:test",
  "send_period" : 16
}
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "id" : "de068699-a2d6-4f3d-8e14-c0ac16ff364e",
    "name" : "test"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.17.5 Deleting a Security Report Template

Function

This API is used to delete a security report template.

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Calling Method

For details, see **Calling APIs**.

URI

DELETE /v1/{project_id}/report-profile/{report_profile_id}

Table 4-808 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
report_profile_id	Yes	String	**Definition** Security report template ID. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Table 4-809 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Request Parameters

None

Response Parameters

Status code: 200

Table 4-810 Response body parameters

Parameter	Type	Description
data	**data** object	**Definition** Response information. **Range** N/A

Table 4-811 data

Parameter	Type	Description
id	String	**Definition** Template ID. **Range** N/A

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Parameter	Type	Description
name	String	**Definition** Template name. **Range** N/A

Status code: 400

Table 4-812 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Delete a security report template. The project ID is eb7accd78ea845078275b2ad5280a109, firewall ID is 8a996d43-75bd-48b4-b1b8-de0706b72b8f, and template ID is de068699-a2d6-4f3d-8e14-c0ac16ff364e.

```
https://{Endpoint}/v1/eb7accd78ea845078275b2ad5280a109/report-profile/f9116386-4ef9-40b5-bc2e-bdd7c17b3650?fw_instance_id=8a996d43-75bd-48b4-b1b8-de0706b72b8f
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "id" : "f9116386-4ef9-40b5-bc2e-bdd7c17b3650",
    "name" : "test"
  }
}
```

Status code: 400

Bad Request

```
{
  "error_code" : "CFW.00200003",
```

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```
  "error_msg" : "Parameter error."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.17.6 Query Security Reports

Function

This API is used to query security reports.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/report/{report_id}

Table 4-813 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	**Definition** Project ID, which is used to specify the project that an asset belongs to. You can query the assets of a project by project ID. You can obtain the project ID from the API or console. For details, see **Obtaining a Project ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

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Parameter	Mandatory	Type	Description
report_id	Yes	String	**Definition** Security report ID. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Table 4-814 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	**Definition** Firewall ID. It is a unique ID generated after a firewall instance is created. You can obtain the firewall ID by referring to **Obtaining a Firewall ID**. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A
report_profile_id	Yes	String	**Definition** Security report template ID. **Constraints** N/A **Range** 32-bit UUID. **Default Value** N/A

Request Parameters

None

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Response Parameters

Status code: 200

Table 4-815 Response body parameters

Parameter	Type	Description
data	**FirewallReport** object	

Table 4-816 FirewallReport

Parameter	Type	Description
attack_info	**AttackReport** object	**Definition** Security event details. **Range** N/A
category	String	**Definition** Report type. **Range** N/A
internet_firewall	**InternetReport** object	**Definition** Internet border firewall. **Range** N/A
send_time	Long	**Definition** Sending time. **Range** N/A
statistic_period	**StatisticPeriod** object	**Definition** Statistical scope. **Range** N/A
vpc_firewall	**VpcReport** object	**Definition** VPC border firewall. **Range** N/A

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Table 4-817 AttackReport

Parameter	Type	Description
dst_ip	Array of **ItemVO** objects	**Definition** Top attack target IP addresses. **Range** N/A
ips_mode	Integer	**Definition** Intrusion prevention status. **Range** N/A
level	Array of **ItemVO** objects	**Definition** Attack severity distribution. **Range** N/A
rule	Array of **ItemVO** objects	**Definition** Top attack rules. **Range** N/A
src_ip	Array of **ItemVO** objects	**Definition** Top source IP addresses. **Range** N/A
trend	Array of **TrendVO** objects	**Definition** Attack trend. **Range** N/A
type	Array of **ItemVO** objects	**Definition** Top attack distribution. **Range** N/A

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Table 4-818 InternetReport

Parameter	Type	Description
eip	**Eip** object	**Definition** EIP protection status. **Range** N/A
in2out	**In2Out** object	**Definition** Outbound traffic. **Range** N/A
out2in	**Out2in** object	**Definition** Inbound traffic. **Range** N/A
overview	**Overview** object	**Definition** Overview. **Range** N/A
traffic_trend	Array of **TrendVO** objects	**Definition** Traffic trend. **Range** N/A

Table 4-819 Eip

Parameter	Type	Description
protected	**ChangedVO** object	**Definition** Protection status. **Range** N/A
total	Integer	**Definition** Number of EIPs. **Range** N/A

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Table 4-820 In2Out

Parameter	Type	Description
dst_host	Array of **ItemVO** objects	**Definition** Top accessed domain names. **Range** N/A
dst_ip	Array of **ItemVO** objects	**Definition** Top destination IP addresses. **Range** N/A
dst_port	Array of **ItemVO** objects	**Definition** Top accessed ports. **Range** N/A
src_ip	Array of **ItemVO** objects	**Definition** Top access source IP addresses. **Range** N/A

Table 4-821 Out2in

Parameter	Type	Description
dst_ip	Array of **ItemVO** objects	**Definition** Top destination IP addresses. **Range** N/A
dst_port	Array of **ItemVO** objects	**Definition** Top open ports. **Range** N/A
src_ip	Array of **ItemVO** objects	**Definition** Top access source IP addresses. **Range** N/A

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Table 4-822 StatisticPeriod

Parameter	Type	Description
end_time	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A
start_time	Long	**Definition** End time. **Constraints** N/A **Range** Milliseconds-level timestamp. **Default Value** N/A

Table 4-823 VpcReport

Parameter	Type	Description
app	Array of **ItemVO** objects	**Definition** Number of top applications. **Range** N/A
dst_ip	Array of **ItemVO** objects	**Definition** Top destination IP addresses. **Range** N/A
overview	**Overview** object	**Definition** Overview. **Range** N/A

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Parameter	Type	Description
src_ip	Array of **ItemVO** objects	**Definition** Top access source IP addresses. **Range** N/A
traffic_trend	Array of **TrendVO** objects	**Definition** Traffic trend. **Range** N/A
vpc	**Vpc** object	**Definition** VPC protection statistics. **Range** N/A

Table 4-824 Overview

Parameter	Type	Description
access_policies	**AccessPolicy** object	**Definition** Access control policy. **Range** N/A
assets	**ChangedVO** object	**Definition** Number of assets. **Range** N/A
attack_event	**AttackEvent** object	**Definition** Threat event. **Range** N/A
traffic_peak	**TrendVO** object	**Definition** Peak traffic. **Range** N/A

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Table 4-825 AccessPolicy

Parameter	Type	Description
changed	Integer	**Definition** Number of changes. **Range** N/A
eip	Integer	**Definition** EIP access control policy. **Range** N/A
nat	Integer	**Definition** NAT access control policy. **Range** N/A
total	Integer	**Definition** Total number. **Range** N/A

Table 4-826 AttackEvent

Parameter	Type	Description
changed	Integer	**Definition** Number of changes. **Range** N/A
deny	Integer	**Definition** Number of blocked objects. **Range** N/A
total	Integer	**Definition** Total number. **Range** N/A

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Table 4-827 TrendVO

Parameter	Type	Description
agg_time	Long	**Definition** Aggregation time. **Range** N/A
bps	Double	**Definition** Bandwidth. **Range** N/A
deny	Long	**Definition** Number of blocked objects. **Range** N/A
in_bps	Double	**Definition** Inbound bps. **Range** N/A
out_bps	Double	**Definition** Outbound bps. **Range** N/A
permit	Long	**Definition** Allowed quantity. **Range** N/A

Table 4-828 ItemVO

Parameter	Type	Description
key	String	**Definition** Aggregation item. **Range** N/A

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Parameter	Type	Description
name	String	**Definition** Aggregation item name. **Range** N/A
value	Long	**Definition** Statistical value. **Range** N/A

Table 4-829 Vpc

Parameter	Type	Description
protected	ChangedVO object	**Definition** Protection statistics. **Range** N/A
total	Integer	**Definition** Total number. **Range** N/A

Table 4-830 ChangedVO

Parameter	Type	Description
changed	Integer	**Definition** Number of changes. **Range** N/A
total	Integer	**Definition** Number of changes. **Range** N/A
value	Integer	**Definition** Quantity. **Range** N/A

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Status code: 400

Table 4-831 Response body parameters

Parameter	Type	Description
error_code	String	**Definition** Error code. **Range** N/A
error_msg	String	**Definition** Error message. **Range** N/A

Example Requests

Query a security report. The project ID is eb7accd78ea845078275b2ad5280a109, firewall ID is 8a996d43-75bd-48b4-b1b8-de0706b72b8f, template ID is e8f43868-d6e7-43a7-aa7f-dda0292f4785, and report ID is b07861af-3468-4d4e-b39b-30c9ca516888.

```
https://{Endpoint}/v1/eb7accd78ea845078275b2ad5280a109/report/b07861af-3468-4d4e-b39b-30c9ca516888?report_profile_id=e8f43868-d6e7-43a7-aa7f-dda0292f4785&fw_instance_id=8a996d43-75bd-48b4-b1b8-de0706b72b8f
```

Example Responses

Status code: 200

OK

```
{
  "data" : {
    "attack_info" : {
      "dst_ip" : [ {
        "key" : "120.52.95.246",
        "value" : 47
      } ],
      "ips_mode" : 1,
      "level" : [ {
        "key" : "CRITICAL",
        "value" : 119
      } ],
      "rule" : [ {
        "key" : "Realtek Jungle SDK Command Injection Vulnerability (CVE-2021-35394)",
        "value" : 30
      } ],
      "src_ip" : [ {
        "key" : "120.46.56.58",
        "value" : 66
      } ],
      "trend" : [ {
```

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```
    "agg_time" : 1748966700000,
    "deny" : 2,
    "permit" : 1
  } ],
  "type" : [ {
    "key" : "Vulnerability Exploit Attack",
    "value" : 30
  } ]
},
"category" : "custom",
"internet_firewall" : {
  "eip" : {
    "protected" : {
      "value" : 3
    },
    "total" : 5
  },
  "in2out" : {
    "dst_host" : [ {
      "key" : "repo.huaweicloud.com",
      "value" : 58511700
    } ],
    "dst_port" : [ {
      "key" : "22",
      "value" : 12062960684
    } ],
    "src_ip" : [ {
      "key" : "172.18.0.90",
      "value" : 12062961860
    } ]
  },
  "out2in" : {
    "dst_ip" : [ {
      "key" : "120.46.56.58",
      "value" : 41828474
    } ],
    "dst_port" : [ {
      "key" : "23",
      "value" : 925712
    } ],
    "src_ip" : [ {
      "key" : "114.116.217.114",
      "value" : 4008768
    } ]
  },
  "overview" : {
    "access_policies" : {
      "eip" : 18,
      "nat" : 105,
      "total" : 123
    },
    "assets" : {
      "total" : 5
    },
    "attack_event" : {
      "deny" : 30,
      "total" : 119
    },
    "traffic_peak" : {
      "in_bps" : 2381284,
      "out_bps" : 3977
    }
  },
  "traffic_trend" : [ {
    "agg_time" : 1748966400000,
    "bps" : 0,
    "in_bps" : 3238,
    "out_bps" : 808
  } ]
```


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```
  },
  "send_time" : 1749698298872,
  "statistic_period" : {
    "end_time" : 1749657599999,
    "start_time" : 1748966400000
  },
  "vpc_firewall" : {
    "app" : [ {
      "key" : "SSH",
      "value" : 33901440538
    }, {
      "key" : "PING",
      "value" : 784
    } ],
    "dst_ip" : [ {
      "key" : "172.17.0.192",
      "value" : 33900674752
    }, {
      "key" : "172.18.0.90",
      "value" : 766570
    } ],
    "overview" : {
      "access_policies" : {
        "total" : 10
      },
      "assets" : {
        "total" : 17
      },
      "attack_event" : {
        "deny" : 0,
        "total" : 0
      },
      "traffic_peak" : {
        "bps" : 711475757
      }
    },
    "src_ip" : [ {
      "key" : "172.18.0.90",
      "value" : 33900674752
    }, {
      "key" : "172.17.0.192",
      "value" : 766570
    } ],
    "traffic_trend" : [ {
      "agg_time" : 1748966400000,
      "bps" : 0,
      "in_bps" : 0,
      "out_bps" : 0
    } ],
    "vpc" : {
      "protected" : {
        "value" : 2
      },
      "total" : 17
    }
  }
 }
}
```


Status code: 400

Bad Request


```
{
  "error_code" : "CFW.00200003",
  "error_msg" : "Parameter error."
}
```


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Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See **Error Codes**.

4.18 Filtering traffic

4.18.1 Importing an IP Address Blacklist for Traffic Filtering

Function

This API is used to import an IP address blacklist. The IP address list is saved in the body of the request. The IP address list supports the following formats:

Single IP address, for example, 100.1.1.10

Consecutive IP address segment, for example, 80.1.1.3-80.1.1.30

CIDR block with a mask, for example, 6.6.6.0/24

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/ptf/ip-blacklist/import

Table 4-832 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-833 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-834 Request body parameters

Parameter	Mandatory	Type	Description
add_type	No	Integer	Mode of importing the IP address blacklist: **0** (incremental import) or **1** (full import). The newly imported IP address blacklist will overwrite the existing IP address blacklist.
ip_blacklist	No	String	IP address list. The IP addresses can be separated by commas (,), semicolons (;), \r \n, \n), or \t.
effect_scope	No	Array of integers	Effective scope: **1** (EIP), **2** (NAT), or **[1 2]** (EIP and NAT).

Response Parameters

Status code: 200

Table 4-835 Response body parameters

Parameter	Type	Description
data	Object	Data import

Example Requests

Import an IP address blacklist in full mode. The project ID is eefb11b22d5944f2aa067954516df1cf, the protected object ID is 812f478c-940e-4e00-824f-7287250d76dc.

The effective scope is **EIP**, and the IP address list is **100.1.1.10\n80.1.1.3-80.1.1.30\n6.6.6.0/24\n2001:db8::2-2001:db8::200\n3001:d**

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b8::2\n4001:db8::2/64. IPv4 and IPv6 addresses can be imported at the same time. Use \n to separate the IP addresses.

```
https://{Endpoint}/v1/eefb11b22d5944f2aa067954516df1cf/ptf/ip-blacklist/import?
fw_instance_id=812f478c-940e-4e00-824f-7287250d76dc

ImportIpBlacklistRequestBody:
{
  "add_type": 1,
  "ip_blacklist":
"100.1.1.10\n80.1.1.3-80.1.1.30\n6.6.6.0/24\n2001:db8::2-2001:db8::200\n3001:db8::2\n4001:db8::2/64",
  "effect_scope": [
    1 ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Import an IP address blacklist in full mode. The project ID is eefb11b22d5944f2aa067954516df1cf, the protected object ID is 812f478c-940e-4e00-824f-7287250d76dc.

The effective scope is **EIP**, and the IP address list is **100.1.1.10\n80.1.1.3-80.1.1.30\n6.6.6.0/24\n2001:db8::2-2001:db8::200\n3001:db8::2\n4001:db8::2/64**. IPv4 and IPv6 addresses can be imported at the same time. Use \n to separate the IP addresses.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ImportIpBlacklistSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or
environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running
this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        CfwClient client = CfwClient.newBuilder()
```

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```
            .withCredential(auth)
            .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
            .build();
        ImportIpBlacklistRequest request = new ImportIpBlacklistRequest();
        try {
            ImportIpBlacklistResponse response = client.importIpBlacklist(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

Import an IP address blacklist in full mode. The project ID is eefb11b22d5944f2aa067954516df1cf, the protected object ID is 812f478c-940e-4e00-824f-7287250d76dc.

The effective scope is **EIP**, and the IP address list is **100.1.1.10\n80.1.1.3-80.1.1.30\n6.6.6.0/24\n2001:db8::2-2001:db8::200\n3001:db8::2\n4001:db8::2/64**. IPv4 and IPv6 addresses can be imported at the same time. Use \n to separate the IP addresses.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = CfwClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(CfwRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ImportIpBlacklistRequest()
        response = client.import_ip_blacklist(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

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Go

Import an IP address blacklist in full mode. The project ID is eefb11b22d5944f2aa067954516df1cf, the protected object ID is 812f478c-940e-4e00-824f-7287250d76dc.

The effective scope is **EIP**, and the IP address list is **100.1.1.10\n80.1.1.3-80.1.1.30\n6.6.6.0/24\n2001:db8::2-2001:db8::200\n3001:db8::2\n4001:db8::2/64**. IPv4 and IPv6 addresses can be imported at the same time. Use \n to separate the IP addresses.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ImportIpBlacklistRequest{}
    response, err := client.ImportIpBlacklist(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

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Status Codes

Status Code	Description
200	Import success response. If the import is successful, no value is assigned to the field in the response body.
401	Authentication failed.
403	This operation is not allowed.
500	Internal error

Error Codes

See **Error Codes**.

4.18.2 Obtain the imported IP address blacklist.

Function

Obtain the IP address blacklist imported to the firewall instance. For a standard edition firewall, only one EIP record is displayed. For a professional edition firewall, one or more EIP, NAT, or EIP and NAT records may be displayed, depending on the imported records.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/ptf/ip-blacklist

Table 4-836 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-837 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
limit	Yes	Integer	Number of records on each page. The value range is 1 to 1024.
offset	Yes	Integer	Offset of data query, which is used for pagination query. It specifies the start position of the query records. The value must be a number greater than or equal to 0.

Request Parameters

None

Response Parameters

Status code: 200

Table 4-838 Response body parameters

Parameter	Type	Description
data	**PageDataIpBlacklistsVo** object	HTTP response for querying IP address blacklist information.

Table 4-839 PageDataIpBlacklistsVo

Parameter	Type	Description
limit	Integer	Number of records returned in a query. The value is assigned when the API is called.
offset	Integer	Offset of the next query after the current query results are returned.
records	Array of **IpBlacklistVO** objects	Information about the IP address blacklist.
total	Integer	Total number of IP address blacklists under a firewall instance.

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Table 4-840 IpBlacklistVO

Parameter	Type	Description
name	String	Name of the IP address blacklist file, which is the same as the exported file name.
effect_scope	Array of integers	Effective scope of the IP address blacklist. **1** indicates EIP, and **2** indicates NAT.
import_status	Integer	Import status of the IP address blacklist: **2** (generating), **1** (succeeded), or **0** (failed)
import_time	Long	Import time of the IP address blacklist
error_message	String	Error message displayed for an import failure.

Example Requests

Query the IP address blacklist imported to the firewall whose project ID is eefb11b22d5944f2aa067954516df1cf and firewall instance ID is 812f478c-940e-4e00-824f-7287250d76dc.

```
https://{Endpoint}/v1/eefb11b22d5944f2aa067954516df1cf/ptf/ip-blacklist?
fw_instance_id=812f478c-940e-4e00-824f-7287250d76dc&limit=50&offset=0
```

Example Responses

Status code: 200

```
Example of a successful query:
{
  "data": {
    "limit": 50,
    "offset": 0,
    "records": [
      {
        "name": "ip-blacklist-eip.txt",
        "effect_scope": [
          1 ],
        "import_status": 1,
        "import_time": 1740995060000,
        "error_message": "time out"
      }
    ],
    "total": 1
  }
}
```

SDK Sample Code

The SDK sample code is as follows.

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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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ListIpBlacklistSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ListIpBlacklistRequest request = new ListIpBlacklistRequest();
        try {
            ListIpBlacklistResponse response = client.listIpBlacklist(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 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
```

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```
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = CfwClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(CfwRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListIpBlacklistRequest()
        response = client.list_ip_blacklist(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"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListIpBlacklistRequest{}
    response, err := client.ListIpBlacklist(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

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Status Codes

Status Code	Description
200	
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.

Error Codes

See **Error Codes**.

4.18.3 Deleting the Imported IP Address Blacklist

Function

Delete the imported IP address blacklist of the traffic filtering function with a specified effective scope. For the standard edition, only the IP address blacklist whose effective scope is EIP is available. For the professional edition, the IP address blacklist whose effective scope is EIP and NAT is available.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v1/{project_id}/ptf/ip-blacklist

Table 4-841 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-842 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

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Request Parameters

Table 4-843 Request body parameters

Parameter	Mandatory	Type	Description
effect_scope	No	Array of integers	Effective scope: **1** (the effective scope for deletion is EIP), **2** (the effective scope for deletion is NAT), **1,2** (the effective scope for deletion is EIP and NAT)

Response Parameters

Status code: 200

Table 4-844 Response body parameters

Parameter	Type	Description
data	Object	Data import

Example Requests

Delete the IP address blacklist with the project ID eefb11b22d5944f2aa067954516df1cf and firewall instance ID 812f478c-940e-4e00-824f-7287250d76dc, and specify the effective scope as EIP.

```
https://{Endpoint}/v1/eefb11b22d5944f2aa067954516df1cf/ptf/ip-blacklist?
fw_instance_id=812f478c-940e-4e00-824f-7287250d76dc

{
  "effect_scope" : [ 1 ]
}
```

Example Responses

Status code: 200

Response returned after an IP address blacklist is successfully deleted. If the deletion succeeds, all characters in the response body are empty.

```
{ }
```

SDK Sample Code

The SDK sample code is as follows.

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Java

Delete the IP address blacklist with the project ID eefb11b22d5944f2aa067954516df1cf and firewall instance ID 812f478c-940e-4e00-824f-7287250d76dc, and specify the effective scope as EIP.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;

import java.util.List;
import java.util.ArrayList;

public class DeleteIpBlacklistSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteIpBlacklistRequest request = new DeleteIpBlacklistRequest();
        IpBlacklistDeleteDto body = new IpBlacklistDeleteDto();
        List<Integer> listbodyEffectScope = new ArrayList<>();
        listbodyEffectScope.add(1);
        body.withEffectScope(listbodyEffectScope);
        request.withBody(body);
        try {
            DeleteIpBlacklistResponse response = client.deleteIpBlacklist(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());
        }
    }
}
```

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Python

Delete the IP address blacklist with the project ID eefb11b22d5944f2aa067954516df1cf and firewall instance ID 812f478c-940e-4e00-824f-7287250d76dc, and specify the effective scope as EIP.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = CfwClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(CfwRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = DeleteIpBlacklistRequest()
        listEffectScopebody = [
            1
        ]
        request.body = IpBlacklistDeleteDto(
            effect_scope=listEffectScopebody
        )
        response = client.delete_ip_blacklist(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

Delete the IP address blacklist with the project ID eefb11b22d5944f2aa067954516df1cf and firewall instance ID 812f478c-940e-4e00-824f-7287250d76dc, and specify the effective scope as EIP.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/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.
```

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```
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteIpBlacklistRequest{}
    var listEffectScopebody = []int32{
        int32(1),
    }
    request.Body = &model.IpBlacklistDeleteDto{
        EffectScope: &listEffectScopebody,
    }
    response, err := client.DeleteIpBlacklist(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	Response returned after an IP address blacklist is successfully deleted. If the deletion succeeds, all characters in the response body are empty.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.

Error Codes

See **Error Codes**.

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4.18.4 Exporting the IP Address Blacklist for Traffic Filtering

Function

Name of the IP address blacklist to be exported. Currently, only two file names are supported: **ip-blacklist-eip.txt** (for EIP) and **ip-blacklist-nat.txt** (for NAT).

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/ptf/ip-blacklist/export

Table 4-845 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. You can obtain it by referring to **Obtaining a Project ID**.

Table 4-846 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
name	Yes	String	Name of the IP address blacklist. If you want to export an IP address blacklist whose effective scope is EIP, set the name to **ip-blacklist-eip.txt**. If you want to export an IP address blacklist whose effective scope is NAT, set the name to **ip-blacklist-nat.txt**.

Request Parameters

None

Response Parameters

Status code: 200

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Table 4-847 Response header parameters

Parameter	Type	Description
Content-Disposition	String	File name contained in the response. The current value is **attachment; filename=ip-blacklist.txt**.
Content-Type	String	Content type of the response. The current value is **text/plain**.
Content-Length	Integer	Byte size of a file.

Table 4-848 Response body parameters

Parameter	Type	Description
data	Object	Data import

Example Requests

Export the IP address blacklist file **ip-blacklist-eip.txt** from the firewall whose project ID is eefb11b22d5944f2aa067954516df1cf and instance ID is 812f478c-940e-4e00-824f-7287250d76dc.

```
https://{Endpoint}/v1/eefb11b22d5944f2aa067954516df1cf/ptf/ip-blacklist/export?
fw_instance_id=812f478c-940e-4e00-824f-7287250d76dc&name=ip-blacklist-eip.txt
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

```
package com.huaweicloud.sdk.test;

import com.huaweicloud.sdk.core.auth.ICredential;
import com.huaweicloud.sdk.core.auth.BasicCredentials;
import com.huaweicloud.sdk.core.exception.ConnectionException;
import com.huaweicloud.sdk.core.exception.RequestTimeoutException;
import com.huaweicloud.sdk.core.exception.ServiceResponseException;
import com.huaweicloud.sdk.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class ExportIpBlacklistSolution {

    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.
```

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```
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        ExportIpBlacklistRequest request = new ExportIpBlacklistRequest();
        try {
            ExportIpBlacklistResponse response = client.exportIpBlacklist(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = CfwClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(CfwRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ExportIpBlacklistRequest()
        response = client.export_ip_blacklist(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

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Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ExportIpBlacklistRequest{}
    response, err := client.ExportIpBlacklist(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	Export Successful
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.

Error Codes

See **Error Codes**.

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4.18.5 Re-importing the IP Address Blacklist Used for Traffic Filtering After an Import Failed

Function

After the IP address blacklist used for traffic filtering fails to be imported, this API is used to retry the import.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/ptf/ip-blacklist/retry

Table 4-849 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-850 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.
name	No	String	Name of the IP address blacklist that fails to be imported.

Request Parameters

None

Response Parameters

Status code: 200

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Table 4-851 Response body parameters

Parameter	Type	Description
data	Object	Data import

Example Requests

```
https://{Endpoint}/v1/eefb11b22d5944f2aa067954516df1cf/ptf/ip-blacklist/retry?
fw_instance_id=812f478c-940e-4e00-824f-7287250d76dc&name=ip-blacklist-eip.txt

Request: /v1/eefb11b22d5944f2aa067954516df1cf/ptf/ip-blacklist/retry?
fw_instance_id=812f478c-940e-4e00-824f-7287250d76dc&name=ip-blacklist-eip.txt
Response: {}
```

Example Responses

None

Status Codes

Status Code	Description
200	Response of the retry operation. If the retry succeeds, no value is assigned to the fields in this structure.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.

Error Codes

See **Error Codes**.

4.18.6 Obtaining the Traffic Filtering Switch Information

Function

Traffic filtering can be enabled or disabled. This API is used to obtain the current switch information.

Calling Method

For details, see **Calling APIs**.

URI

GET /v1/{project_id}/ptf/ip-blacklist/switch

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Table 4-852 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

Table 4-853 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

None

Response Parameters

Status code: 200

Table 4-854 Response body parameters

Parameter	Type	Description
data	**IpBlacklistSwitchInfoVo** object	The IP address blacklist switch information is included.

Table 4-855 IpBlacklistSwitchInfoVo

Parameter	Type	Description
status	Integer	The IP address blacklist switch information. **1**: enable; **0**: disable

Example Requests

Query the IP address blacklist function of the firewall whose project ID is eefb11b22d5944f2aa067954516df1cf and instance ID is e494f486-fa6f-410e-9cfa-8edacfb28970. The query result shows that the function is enabled.

```
https://{Endpoint}/v1/eefb11b22d5944f2aa067954516df1cf/ptf/ip-blacklist/switch?fw_instance_id=e494f486-fa6f-410e-9cfa-8edacfb28970
```

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Example Responses

Status code: 200

Response body for returning the traffic filtering switch information

```
{
  "data" : {
    "status" : 1
  }
}
```

Status Codes

Status Code	Description
200	Response body for returning the traffic filtering switch information
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.

Error Codes

See **Error Codes**.

4.18.7 Enabling or Disabling the IP Address Blacklist for Traffic Filtering

Function

Enable or disable the traffic filtering function. Currently, traffic filtering is implemented by importing an IP address blacklist.

Calling Method

For details, see **Calling APIs**.

URI

POST /v1/{project_id}/ptf/ip-blacklist/switch

Table 4-856 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID, which can be obtained by calling an API or from the console. For details, see **Obtaining a Project ID**.

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Table 4-857 Query Parameters

Parameter	Mandatory	Type	Description
fw_instance_id	Yes	String	Firewall ID, which can be obtained by referring to **Obtaining a Firewall ID**.

Request Parameters

Table 4-858 Request body parameters

Parameter	Mandatory	Type	Description
status	Yes	Integer	Enable or disable the IP address blacklist. **0**: disable; **1**: enable

Response Parameters

Status code: 200

Table 4-859 Response body parameters

Parameter	Type	Description
data	Object	Data import

Example Requests

Disable the IP address blacklist for the instance whose project ID is eefb11b22d5944f2aa067954516df1cf and instance ID is e494f486-fa6f-410e-9cfa-8edacfb28970.

```
https://{Endpoint}/v1/eefb11b22d5944f2aa067954516df1cf/ptf/ip-blacklist/switch?fw_instance_id=e494f486-fa6f-410e-9cfa-8edacfb28970

Request body:
{
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

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Java

Disable the IP address blacklist for the instance whose project ID is eefb11b22d5944f2aa067954516df1cf and instance ID is e494f486-fa6f-410e-9cfa-8edacfb28970.

```
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.cfw.v1.region.CfwRegion;
import com.huaweicloud.sdk.cfw.v1.*;
import com.huaweicloud.sdk.cfw.v1.model.*;


public class EnableIpBlacklistSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");
        String projectId = "{project_id}";

        ICredential auth = new BasicCredentials()
                .withProjectId(projectId)
                .withAk(ak)
                .withSk(sk);

        CfwClient client = CfwClient.newBuilder()
                .withCredential(auth)
                .withRegion(CfwRegion.valueOf("<YOUR REGION>"))
                .build();
        EnableIpBlacklistRequest request = new EnableIpBlacklistRequest();
        try {
            EnableIpBlacklistResponse response = client.enableIpBlacklist(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

Disable the IP address blacklist for the instance whose project ID is eefb11b22d5944f2aa067954516df1cf and instance ID is e494f486-fa6f-410e-9cfa-8edacfb28970.

```
# coding: utf-8

import os
from huaweicloudsdkcore.auth.credentials import BasicCredentials
```

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```
from huaweicloudsdkcfw.v1.region.cfw_region import CfwRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkcfw.v1 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    # In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak = os.environ["CLOUD_SDK_AK"]
    sk = os.environ["CLOUD_SDK_SK"]
    projectId = "{project_id}"

    credentials = BasicCredentials(ak, sk, projectId)

    client = CfwClient.new_builder() \
        .with_credentials(credentials) \
        .with_region(CfwRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = EnableIpBlacklistRequest()
        response = client.enable_ip_blacklist(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

Disable the IP address blacklist for the instance whose project ID is eefb11b22d5944f2aa067954516df1cf and instance ID is e494f486-fa6f-410e-9cfa-8edacfb28970.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    cfw "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/cfw/v1/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
    // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")
    projectId := "{project_id}"

    auth := basic.NewCredentialsBuilder().
        WithAk(ak).
        WithSk(sk).
        WithProjectId(projectId).
        Build()

    client := cfw.NewCfwClient(
        cfw.CfwClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())
```

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```
    request := &model.EnableIpBlacklistRequest{}
    response, err := client.EnableIpBlacklist(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

More

For SDK sample code of more programming languages, see the Sample Code tab in **API Explorer**. SDK sample code can be automatically generated.

Status Codes

Status Code	Description
200	The IP address blacklist function is enabled or disabled successfully, no value is assigned to the internal field.
401	Unauthorized: Request error.
403	Forbidden: Access forbidden.

Error Codes

See **Error Codes**.

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A Appendix

A.1 Status Code

- Normal

Status Code	Description	Description
200	OK	The request is successfully processed.
201	Created	The request for creating resources has been fulfilled.
202	Accepted	The request has been accepted, but the processing has not been completed.
204	No Content	The request has been fulfilled, but the HTTP response does not contain a response body. The status code is returned in response to an HTTP OPTIONS request.

- Abnormal

Status Code	Description	Description
400	Bad Request	It is a bad request.
401	Unauthorized	You do not have permissions to perform this action.
403	Forbidden	Access is denied.
404	Not Found	The page is not found.

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Status Code	Description	Description
405	Method Not Allowed	The request contains one or more methods not supported for the resource. Modify the request and then try again.
409	Conflict	The request could not be processed due to a conflict with the current state of the resource. This status code indicates that the resource that the client is attempting to create already exists, or that the requested update cannot be fulfilled due to the conflict.
413	Request Entity Too Large	The request is larger than what the server is able to process. The server may close the connection to prevent the client from continuing the request. If the server cannot process the request temporarily, the response will contain a **Retry-After** header field.
415	Unsupported Media Type	The server is unable to process the media format in the request.
429	Too Many Requests	The client has sent excessive number of requests to the server within a given time (exceeding the limit on the access frequency of the client), or the server has received an excessive number of requests within a given time (beyond its processing capability). In this case, the client should resend the request after the time specified in the **Retry-After** header of the response has elapsed.
500	Internal Server Error	There is an internal server error.
501	Not Implemented	The server does not support the function required to fulfill the request.
503	Service Unavailable	The requested service is invalid. Modify the request and then try again.

A.2 Error Codes

If an error code starting with **APIGW** is returned after you call an API, rectify the fault by referring to the instructions provided in **Error Codes**.

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Module	Status Code	Error Code	Message	Description	Measure
Common module	400	CFW.00109004	HTTP request error	HTTP request error	Try again later or contact technical support.
	400	CFW.00300001	Failed to query the database.	Failed to query the database.	Contact technical support.
	400	CFW.00400008	The protected object does not exist.	The protected object does not exist.	Contact technical support.
	400	CFW.00800001	An exception occurred when querying ETCD.	An exception occurred when querying ETCD.	Contact technical support.
	400	CFW.00800002	An exception occurred when querying ETCD.	An exception occurred when querying ETCD.	Contact technical support.
	400	CFW.00800003	An exception occurred when querying ETCD.	An exception occurred when querying ETCD.	Contact technical support.
	400	CFW.01100008	Configurations cannot be delivered during cluster scale-out.	Configurations cannot be delivered during cluster scale-out.	Contact technical support.
DNS resolution	400	CFW.00200005	The domain name group in the request does not exist.	The domain name group in the request does not exist.	Check whether the domain name group carried in the request exists.
Deleting a domain name	400	CFW.00200005	The domain name group in the request does not exist.	The domain name group in the request does not exist.	Check whether the domain name group carried in the request exists.

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Module	Status Code	Error Code	Message	Description	Measure
Deleting a domain name group	400	CFW.00200004	The domain name group to be deleted is referenced.	The domain name group to be deleted is referenced.	Delete the rules that reference the domain name group and then delete the domain name group.
	400	CFW.00200005	The domain name group in the request does not exist.	The domain name group in the request does not exist.	Check whether the domain name group carried in the request exists.
Updating a domain group	400	CFW.00200005	The domain name group in the request does not exist.	The domain name group in the request does not exist.	Check whether the domain name group carried in the request exists.
Querying access control logs	400	CFW.00500002	Invalid interval	Invalid interval	Contact technical support.
Querying attack logs	400	CFW.00500002	Invalid interval	Invalid interval	Contact technical support.
	400	CFW.00500004	The page jump spacing is too large.	The page jump spacing is too large.	Contact technical support.
Querying traffic logs	400	CFW.00500002	Invalid interval	Invalid interval	Contact technical support.
Querying the protected EIP list	400	CFW.00200030	Incorrect address type	Incorrect address type	Contact technical support.
	400	CFW.00200016	Incorrect instance status	Incorrect instance status	Contact technical support.
Querying the rule list	400	CFW.00200030	Incorrect address type	Incorrect address type	Contact technical support.

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Module	Status Code	Error Code	Message	Description	Measure
Adding an ACL rule	400	CFW.00200001	The rule direction cannot be empty.	The rule direction cannot be empty.	Check whether the rule direction in the request parameter is empty.
	400	CFW.00200005	The address group ID in the request does not exist.	The address group ID in the request does not exist.	Check whether the address group ID carried in the request exists.
	400	CFW.00200005	The service group ID in the request does not exist.	The service group ID in the request does not exist.	Check whether the service group ID in the request exists.
	400	CFW.00200005	The domain name group in the request does not exist.	The domain name group in the request does not exist.	Check whether the domain name group carried in the request exists.
	400	CFW.00200007	The rule name carried in the request is the same as a rule name in the database.	The rule name carried in the request is the same as a rule name in the database.	Delete duplicate rules from the request.
	400	CFW.00200020	Up to 20 ACL rules can be added.	Up to 20 ACL rules can be added.	Reduce the number of ACL rules to be added.
	400	CFW.00200025	The time limit of persistent connection is exceeded.	The time limit of persistent connection is exceeded.	Ensure that the duration of the persistent connection is in the range from 1 second to 1000 days.
	400	CFW.00200026	The number of persistent connection rules reaches the upper limit.	The number of persistent connection rules reaches the upper limit.	Delete unnecessary persistent connection rules.

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Module	Status Code	Error Code	Message	Description	Measure
	400	CFW.00200028	Inconsistent address types	Inconsistent address types	Ensure the address types are the same.
	400	CFW.00200032	The engine does not support IPv6.	The engine does not support IPv6.	Contact technical support.
	400	CFW.00400007	The types of the added rules are inconsistent.	The types of the added rules are inconsistent.	Ensure the types of the added rules are the same.
	400	CFW.00400010	The protocol is not supported by the persistent connection.	The protocol is not supported by the persistent connection.	Ensure the protocol is TCP or UDP.
Updating an ACL rule	400	CFW.00200005	The address group ID in the request does not exist.	The address group ID in the request does not exist.	Check whether the address group ID carried in the request is correct.
	400	CFW.00200005	The service group ID in the request does not exist.	The service group ID in the request does not exist.	Check whether the service group ID carried in the request is correct.
	400	CFW.00200005	The domain name group in the request does not exist.	The domain name group in the request does not exist.	Check whether the domain name group carried in the request is correct.
	400	CFW.00200007	The rule name carried in the request is the same as a rule name in the database.	The rule name carried in the request is the same as a rule name in the database.	Delete duplicate rules from the request.
	400	CFW.00200025	The time limit of persistent connection is exceeded.	The time limit of persistent connection is exceeded.	Ensure that the duration of the persistent connection is in the range from 1 second to 1000 days.

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Module	Status Code	Error Code	Message	Description	Measure
	400	CFW.00200026	The number of persistent connection rules reaches the upper limit.	The number of persistent connection rules reaches the upper limit.	Delete unnecessary persistent connection rules.
	400	CFW.00200028	Inconsistent address types	Inconsistent address types	Ensure the address types are the same.
	400	CFW.00400010	The protocol is not supported by the persistent connection.	The protocol is not supported by the persistent connection.	Ensure the protocol is TCP or UDP.
Modifying the priority of an ACL rule	400	CFW.00400002	No operation is required.	No operation is required.	Contact technical support.
Deleting the rule hit count	400	CFW.00400006	An error occurred when the rule hit count is deleted.	An error occurred when the rule hit count is deleted.	Check whether the parameter value is valid.
Creating a packet capture task	400	CFW.00200028	Inconsistent address types	Inconsistent address types	Ensure the address types are the same.
	400	CFW.00200032	The engine does not support IPv6.	The engine does not support IPv6.	Contact technical support.
Querying the packet capture task list	400	CFW.00200030	Incorrect address type	Incorrect address type	Contact technical support.

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Module	Status Code	Error Code	Message	Description	Measure
Creating an east-west CFW instance	400	CFW.00700001	The associated ER does not exist.	The associated ER does not exist.	The associated ER does not exist.
	400	CFW.00700002	The associated VPC does not exist.	The associated VPC does not exist.	Check whether the VPC exists.
	400	CFW.00700003	The network segments of the associated subnets conflict.	The network segments of the associated subnets conflict.	Ensure the subnet to be created does not overlap with the subnet CIDR block in the existing VPC.
	400	CFW.00700004	Failed to create the subnet.	Failed to create the subnet.	Contact technical support.
	400	CFW.00700007	ER failed to create a VPC connection	ER failed to create a VPC connection	Contact technical support.
	400	CFW.00700012	Failed to modify the route.	Failed to modify the route.	Contact technical support.
	400	CFW.00700015	Failed to query VPC quotas.	Failed to query VPC quotas.	Contact technical support.
	400	CFW.00700016	Insufficient route table quota for the VPC.	Insufficient route table quota for the VPC.	Delete the existing route table in the VPC.
Changing the east-west protection status	400	CFW.00200016	Incorrect instance status	Incorrect instance status	Contact technical support.
Creating a firewall	400	CFW.00600003	The available specifications are empty.	The available specifications are empty.	Contact technical support.

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Module	Status Code	Error Code	Message	Description	Measure
Deleting a firewall	400	CFW.00200016	Incorrect instance status	Incorrect instance status	Contact technical support.
Adding an address group	400	CFW.00200001	The address group name is empty.	The address group name is empty.	Check whether the address group name in the request is empty.
	400	CFW.00200007	The address group name carried in the request is the same as an address group name in the database.	The address group name carried in the request is the same as an address group name in the database.	Delete duplicate address group names from the request.
	400	CFW.00200032	The engine does not support IPv6.	The engine does not support IPv6.	Contact technical support.
	400	CFW.00900020	The number of address groups exceeds the upper limit.	The number of address groups exceeds the upper limit.	Delete some address groups.
Adding an address group member list	400	CFW.00200001	The address group member list is empty.	The address group member list is empty.	Check whether the address group member list in the request is empty.
Obtaining the address group list	400	CFW.00200030	Incorrect address type	Incorrect address type	Contact technical support.
Updating an address group	400	CFW.00200005	The address group in the request does not exist.	The address group in the request does not exist.	Check whether the address group carried in the request exists.

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Module	Status Code	Error Code	Message	Description	Measure
	400	CFW.00200007	The address group name carried in the request is the same as an address group name in the database.	The address group name carried in the request is the same as an address group name in the database.	Delete duplicate address group names from the request.
	400	CFW.00200016	Incorrect instance status	Incorrect instance status	Contact technical support.
Deleting an address group	400	CFW.00200004	The address group to be deleted is being referenced.	The address group to be deleted is being referenced.	Delete the rules that reference the address group and then delete the address group.
	400	CFW.00200005	The address group in the request does not exist.	The address group in the request does not exist.	Check whether the address group carried in the request exists.
Updating members in an address group	400	CFW.00400004	The member already exists.	The member already exists.	Delete unnecessary address group members.
Adding a service group	400	CFW.00200007	The service group name carried in the request is the same as a service group name in the database.	The service group name carried in the request is the same as a service group name in the database.	Delete duplicate service group names from the request.
	400	CFW.00200024	The number of added service groups exceeds the upper limit.	The number of added service groups exceeds the upper limit.	Remove unnecessary service groups and try again.

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Module	Status Code	Error Code	Message	Description	Measure
Adding a member to a service group	400	CFW.00400004	The member already exists.	The member already exists.	Delete unnecessary service group members.
	400	CFW.00900030	The total number of services reaches the upper limit.	The total number of services reaches the upper limit.	Delete unnecessary service group members.
Updating a service group	400	CFW.00200005	The service group in the request does not exist.	The service group in the request does not exist.	Check whether the service group in the request exists.
	400	CFW.00200007	The address group name carried in the request is the same as an address group name in the database.	The address group name carried in the request is the same as an address group name in the database.	Delete duplicate service group names from the request.
Deleting a service group	400	CFW.00200004	The service group to be deleted is being referenced.	The service group to be deleted is being referenced.	Delete the rules that reference the service group and then delete the address group.
	400	CFW.00200005	The service group in the request does not exist.	The service group in the request does not exist.	Check whether the service group in the request exists.
Updating a member in a service group	400	CFW.00400004	The member already exists.	The member already exists.	Delete unnecessary service group members.
Configuring the blacklist or whitelist	400	CFW.00200022	It is not allowed to configuring all IP address segments in the blacklist and whitelist.	It is not allowed to configuring all IP address segments in the blacklist and whitelist.	Set specific IP address segments in the blacklist and whitelist.

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Module	Status Code	Error Code	Message	Description	Measure
	400	CFW.00200016	Incorrect instance status	Incorrect instance status	Contact technical support.
	400	CFW.00200032	The engine does not support IPv6.	The engine does not support IPv6.	Contact technical support.
	400	CFW.00400011	Duplicate blacklist and whitelist information.	Duplicate blacklist and whitelist information.	Ensure unique blacklist and whitelist items are added.
	400	CFW.00400012	East-west protection does not support IPv6, and the private IP address blacklist and whitelist cannot be delivered.	East-west protection does not support IPv6, and the private IP address blacklist and whitelist cannot be delivered.	Add east-west protection.
	400	CFW.00400013	The number of records in the blacklist and whitelist has reached the upper limit (2000).	The number of records in the blacklist and whitelist has reached the upper limit (2000).	Delete unnecessary blacklist or whitelist items.
Updating the blacklist or whitelist	400	CFW.00200005	The blacklist or whitelist item carried in the request does not exist.	The blacklist or whitelist item carried in the request does not exist.	Check whether the blacklist and whitelist items carried in the request exist.
	400	CFW.00200005	The blacklist or whitelist item carried in the request does not exist.	The blacklist or whitelist item carried in the request does not exist.	Check whether the blacklist and whitelist items carried in the request exist.

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Module	Status Code	Error Code	Message	Description	Measure
	400	CFW.00200022	It is not allowed to configuring all IP address segments in the blacklist and whitelist.	It is not allowed to configuring all IP address segments in the blacklist and whitelist.	Set specific IP address segments in the blacklist and whitelist.
	400	CFW.00200032	The engine does not support IPv6.	The engine does not support IPv6.	Contact technical support.
	400	CFW.00200036	The CIDR block cannot be changed to a private network segment.	The CIDR block cannot be changed to a private network segment.	Contact technical support.
	400	CFW.00200016	Incorrect instance status	Incorrect instance status	Contact technical support.
	400	CFW.00400011	Duplicate blacklist and whitelist information.	Duplicate blacklist and whitelist information.	Ensure unique blacklist and whitelist items are added.
	400	CFW.00200028	Inconsistent address types	Inconsistent address types	Ensure the address types are the same.
Removing a blacklisted or whitelisted item	400	CFW.00200005	The blacklist or whitelist item carried in the request does not exist.	The blacklist or whitelist item carried in the request does not exist.	Check whether the blacklist and whitelist items carried in the request exist.
User-defined IPS rules	400	CFW.00200016	Incorrect instance status	Incorrect instance status	Contact technical support.

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Module	Status Code	Error Code	Message	Description	Measure
Changing the IPS switch status	400	CFW.00200023	Failed to call the background API for modifying the IPS switch status.	Failed to call the background API for modifying the IPS switch status.	Try again later or contact technical support.
	400	CFW.00200110	Basic defense cannot be operated.	Basic defense cannot be operated.	Contact technical support.
Changing the EIP protection mode	400	CFW.00200016	Incorrect instance status	Incorrect instance status	Contact technical support.

A.3 Obtaining a Project ID

Obtaining a Project ID by Calling an API

You can obtain the project ID by calling the API used to **query project information based on the specified criteria**.

The API used to obtain a project ID is GET https://{Endpoint}/v3/projects. **{Endpoint}** is the IAM endpoint and can be obtained from **Regions and Endpoints**. For details about API authentication, see **Authentication**.

In the following example, **id** indicates the project ID.


```
{
    "projects": [
        {
            "domain_id": "65382450e8f64ac0870cd180d14e684b",
            "is_domain": false,
            "parent_id": "65382450e8f64ac0870cd180d14e684b",
            "name": "xxxxxxxx",
            "description": "",
            "links": {
                "next": null,
                "previous": null,
                "self": "https://www.example.com/v3/projects/a4a5d4098fb4474fa22cd05f897d6b99"
            },
            "id": "a4a5d4098fb4474fa22cd05f897d6b99",
            "enabled": true
        }
    ],
    "links": {
        "next": null,
        "previous": null,
```


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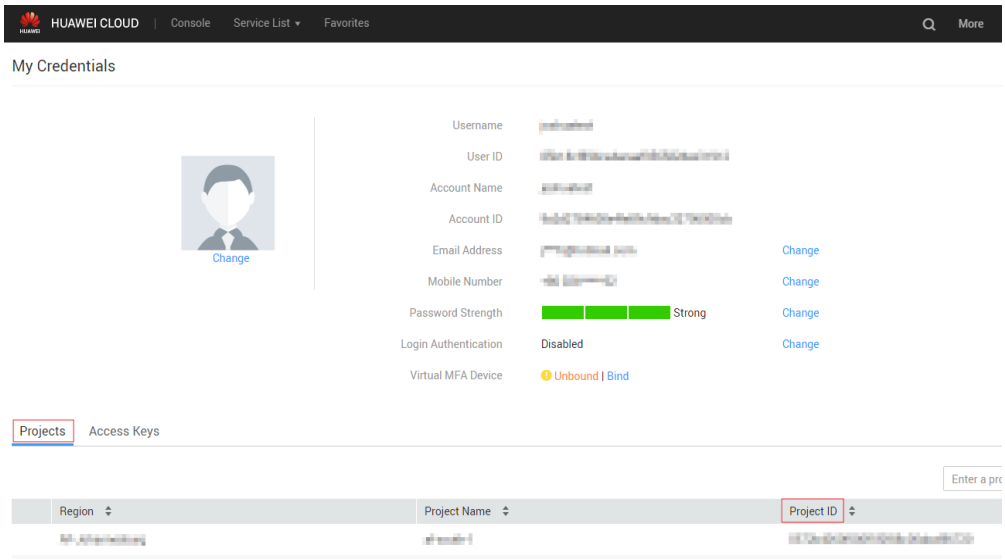
```
    "self": "https://www.example.com/v3/projects"
  }
}
```

Obtaining a Project ID from the Console

A project ID is required for some URLs when an API is called. To obtain a project ID, perform the following operations:

1. Log in to the management console.
2. Click the username and choose **Basic Information** from the drop-down list.
3. On the **Account Info** page, click **Manage** next to **Security Credentials**.
   On the **My Credentials** page, view project IDs in the project list.

Figure A-1 Viewing project IDs



A.4 Obtaining an Enterprise Project ID

This section describes how to obtain an enterprise project ID on the management console.

Procedure

Step 1 Log in to the management console.

Step 2 Choose **Enterprise** > **Project Management** in the upper right corner of the page.

Step 3 Copy the enterprise project ID in the **Name/ID** column.

----End

A.5 Obtaining a Firewall ID

A firewall ID (**fw_instance_Id**) is a CFW instance ID. It is automatically generated by the system after CFW is created.

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You can obtain the value by calling the API for **Querying the Firewall List**.

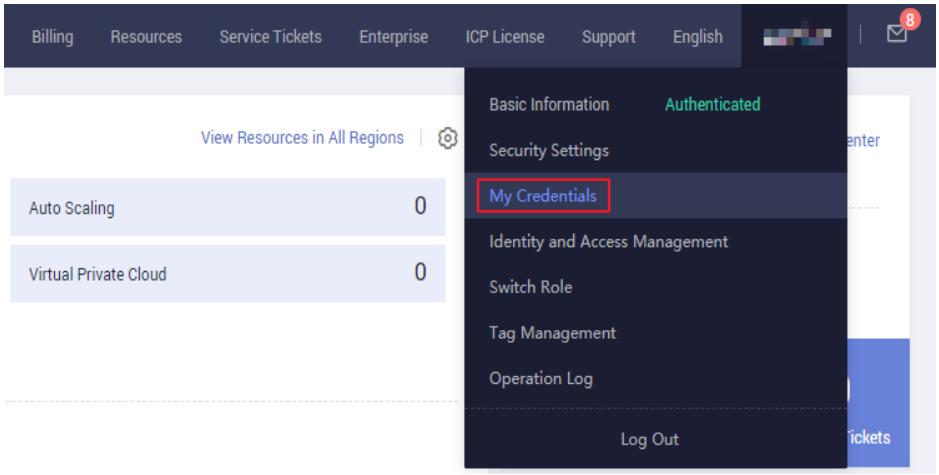
- By default, if **fw_instance_Id** is not specified, information about the first firewall under the account is returned. If **fw_instance_Id** is specified, information about the firewall with this **fw_instance_Id** is returned.
- If **object_Id** is specified, information about the firewall with this **object_Id** is returned by default. If both **fw_instance_Id** and **object_Id** are specified, the specified **object_Id** must belong to the specified firewall.

A.6 Obtaining Account, IAM User, Group, Project, Region, and Agency Information

Obtaining Account, IAM User, and Project Information

- **Using the console**
  a. On the Huawei Cloud homepage, click **Console** in the upper right corner.
  b. Hover over the username in the upper right corner and choose **My Credentials**.

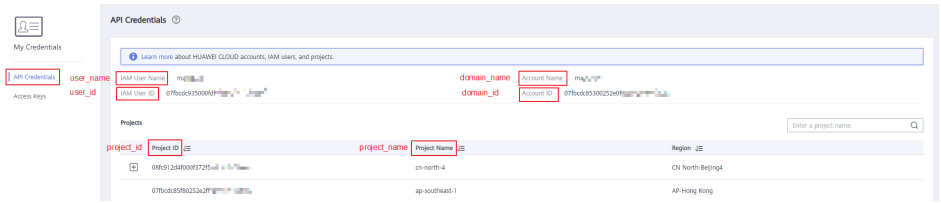
  Figure A-2 My Credentials

  c. View the account name, account ID, username, user ID, project name, and project ID on the **API Credentials** page.

  The project ID varies depending on the region where the service is located.

  Figure A-3 Viewing the account, user, and project information

- **Calling an API**
  – For details about how to obtain a user ID, see **Listing IAM Users**.

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- For details about how to obtain a project ID, see **Querying Project Information**.

Obtaining User Group Information

Step 1 Log in to the IAM console, and choose **User Groups** from the navigation pane.

Step 2 Expand the details page of a user group and view the group name and ID.

----End

Obtaining Region Information

Step 1 Log in to the IAM console, and choose **Projects** from the navigation pane.

Step 2 The value in the **Project Name** column is the ID of the region which the project belongs to.

----End

Obtaining Agency Information

Step 1 Log in to the IAM console, and choose **Agencies** from the navigation pane.

Step 2 Hover over the target agency. The name and ID of this agency are displayed.

----End

A.7 Region Information

Continent Information

Continent	Code
North America	NA
Oceania	OA
Africa	AF
Antarctica	AN
South America	SA
Europe	EU
Asia	AS

Country/Province Information

Country	Code
Albania	AL

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Country	Code
Algeria	DZ
Afghanistan	AF
Libya	LY
United Arab Emirates	AE
Aruba	AW
Oman	OM
Azerbaijan	AZ
Egypt	EG
Ethiopia	ET
Ireland	IE
Estonia	EE
Andorra	AD
Angola	AO
Anguilla	AI
Antigua and Barbuda	AG
Austria	AT
Åland Islands	AX
Australia	AU
Barbados	BB
Papua New Guinea	PG
Bahamas	BS
Pakistan	PK
Paraguay	PY
Bahrain	BH
Brazil	BR
Belarus	BY
Bermuda	BM
Bulgaria	BG
Benin	BJ
Belgium	BE

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Country	Code
Iceland	IS
Poland	PL
Bosnia and Herzegovina	BA
Botswana	BW
Bhutan	BT
Burkina Faso	BF
Burundi	BI
North Korea	KP
Equatorial Guinea	GQ
Denmark	DK
Germany	DE
East Timor	TL
Togo	TG
Dominica	DM
Dominican Republic	DO
Russia	RU
Eritrea	ER
France	FR
Faroe Islands	FO
French Guiana	GF
French Southern Territories	TF
Philippines	PH
Fiji	FJ
Finland	FI
Cape Verde	CV
Falkland Islands	FK
Gambia	GM
Republic of the Congo	CG
Guernsey	GG
Greenland	GL

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Country	Code
Georgia	GE
Guyana	GY
Kazakhstan	KZ
South Korea	KR
Netherlands	NL
Montenegro	ME
Djibouti	DJ
Kyrgyzstan	KG
Guinea	GN
Guinea-Bissau	GW
Ghana	GH
Gabon	GA
Cambodia	KH
Czech Republic	CZ
Zimbabwe	ZW
Cameroon	CM
Qatar	QA
Cocos (Keeling) Islands	CC
Comoros	KM
Kuwait	KW
Croatia	HR
Kenya	KE
Cook Islands	CK
Latvia	LV
Lesotho	LS
Laos	LA
Lebanon	LB
Republic of Lithuania	LT
Liberia	LR
Liechtenstein	LI

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Country	Code
Reunion	RE
Luxembourg	LU
Rwanda	RW
Romania	RO
Madagascar	MG
Maldives	MV
Malta	MT
Malawi	MW
Malaysia	MY
Mali	ML
Marshall Islands	MH
Martinique	MQ
Mayotte	YT
Isle of Man	IM
Mauritius	MU
Mauritania	MR
Mongolia	MN
Bangladesh	BD
Federated States of Micronesia	FM
Myanmar	MM
Republic of Moldova	MD
Morocco	MA
Monaco	MC
Mozambique	MZ
Namibia	NA
South Africa	ZA
South Georgia and South Sandwich Islands	GS
Nauru	NR
Nepal	NP

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Country	Code
Niger	NE
Nigeria	NG
Norway	NO
Norfolk Island	NF
Palau	PW
Portugal	PT
North Macedonia	MK
Japan	JP
Sweden	SE
Switzerland	CH
Sierra Leone	SL
Senegal	SN
Cyprus	CY
Seychelles	SC
Saudi Arabia	SA
Christmas Island	CX
Sao Tome and Principe	ST
Saint Helena	SH
Saint Kitts and Nevis	KN
Sant Lucia	LC
San Marino	SM
Saint Pierre and Miquelon	PM
Vatican City	VA
Sri Lanka	LK
Slovak Republic	SK
Slovenia	SI
Svalbard and Jan Mayen	SJ
Eswatini	SZ
Suriname	SR
Solomon Islands	SB

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Country	Code
Somalia	SO
Tajikistan	TJ
Thailand	TH
Tanzania	TZ
Turks and Caicos Islands	TC
Trinidad and Tobago	TT
Tunisia	TN
Tuvalu	TV
Türkiye	TR
Turkmenistan	TM
Vanuatu	VU
Brunei	BN
Uganda	UG
Ukraine	UA
Uruguay	UY
Uzbekistan	UZ
Spain	ES
Greece	GR
Ivory Coast	CI
Singapore	SG
New Caledonia	NC
New Zealand	NZ
Hungary	HU
Jamaica	JM
Armenia	AM
Yemen	YE
Iraq	IQ
Israel	IL
Italy	IT
India	IN

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Country	Code
Indonesia	ID
United Kingdom	GB
Virgin Islands, British	VG
British Indian Ocean Territory	IO
Jordan	JO
Vietnam	VN
Zambia	ZM
Jersey	JE
Republic of Zaire	CD
Chad	TD
Gibraltar	GI
Central African Republic	CF
Macao (China)	MO
Chinese mainland	CN
Taiwan (China)	TW
Hong Kong (China)	HK

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