Host Security Service

API Reference

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HUAWEI

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1 Before You Start

1.1 Overview

Host Security Service (HSS) helps you identify and manage the assets on your servers, eliminate risks, and defend against intrusions and web page tampering. There are also advanced protection and security operations functions available to help you easily detect and prevent threats.

This document describes how to use application programming interfaces (APIs) to perform operations on HSS.

If you plan to access HSS through an API, ensure that you are familiar with HSS concepts. For details, see **Service Overview**.

1.2 API Calling

HSS supports Representational State Transfer (REST) APIs, allowing you to call APIs using HTTPS. For details on API calling, see **Calling APIs**.

1.3 Endpoints

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions.

The following table describes HSS endpoints. Select a desired one based on the service requirements.

Table 1-1 HSS endpoints

Name	Region	Endpoint	Protocol
CN-Hong Kong	ap-southeast-1	hss.ap-southeast-1.myhuaweicloud.com	HTTPS

Name	Region	Endpoint	Protocol
AP-Bangkok	ap-southeast-2	hss.ap-southeast-2.myhuaweicloud.com	HTTPS
AP-Singapore	ap-southeast-3	hss.ap-southeast-3.myhuaweicloud.com	HTTPS

1.4 Limitations and Constraints

An API can be accessed up to 600 times/minute, in which a single user or IP address can access an API for up to five times/minute.

See the descriptions of specific APIs.

1.5 Basic Concepts

- Account

  An account is created upon successful registration with the cloud platform. 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 to perform routine management. For security purposes, create IAM 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).

  The account name, username, and password will be required for API authentication.

- Region

  Regions are divided based on geographical location and network latency. Public services, such as Elastic Cloud Server (ECS), Elastic Volume Service (EVS), Object Storage Service (OBS), Virtual Private Cloud (VPC), Elastic IP (EIP), and Image Management Service (IMS), are shared within the same region. Regions are classified 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.

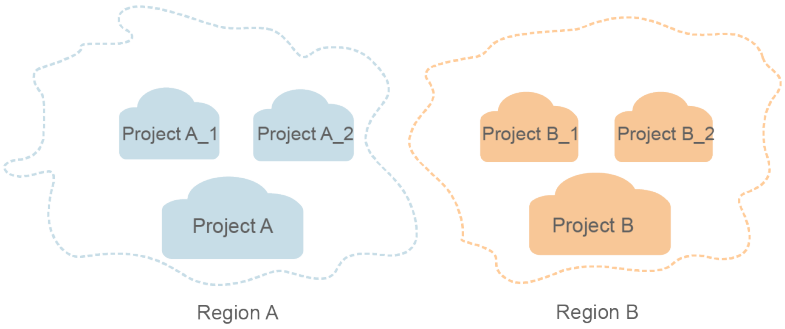
- Availability Zone (AZ)

  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 connected 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 isolation model

- Enterprise Project

  Enterprise projects group and manage resources across regions. Resources in enterprise projects are logically isolated from each other. An enterprise project can contain resources of multiple regions, and resources can be added to or removed from enterprise projects.

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

2 Calling APIs

2.1 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**:

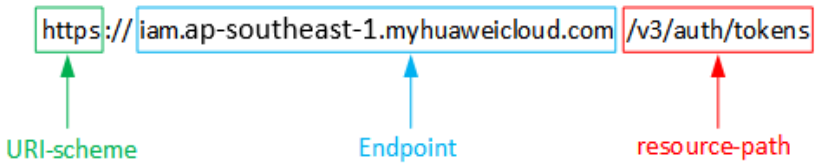
  Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of "Parameter name=Parameter value". For example, **?limit=10** indicates that a maximum of 10 data records will be displayed.

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

the **resource-path** (**/v3/auth/tokens**) in the URI of the API used to **obtain a user token**. Then, construct the URI as follows:

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

Figure 2-1 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/auth/tokens
```

Request Header

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

Common request header fields are as follows:

- **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.
- **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.

> **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**.

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

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

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. Set ***username*** to the name of a user, ***domainname*** to the name of the account that the user belongs to, ********* to the user's login password, and ***xxxxxxxxxxxxxxxxx*** to the project name. You can learn more information about projects from **Regions and Endpoints**. Check the value of the **Region** column.

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

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
Content-Type: application/json
{
    "auth": {
        "identity": {
            "methods": [
                "password"
            ],
            "password": {
                "user": {
                    "name": "username",
                    "password": "*********",
                    "domain": {
                        "name": "domainname"
                    }
                }
            }
        },
        "scope": {
            "project": {
                "name": "xxxxxxxxxxxxxxxxx"
            }
        }
```



```
    }
}
```

If all data required for the API request is available, you can send the request to call the API through **curl**, **Postman**, or coding. In the response to the API used to obtain a user token, **x-subject-token** is the desired user token. This token can then be used to authenticate the calling of other APIs.

2.2 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-based authentication: Requests are authenticated by encrypting the request body using an AK/SK pair. 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.

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.

The token can be obtained by calling the required API. For more information, see **Obtaining a User Token**. A project-level token is required for calling this API, that is, **auth.scope** must be set to **project** in the request body. Example:

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

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


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

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.

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 Signature Guide**.

NOTICE

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

2.3 Response

Status Code

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

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

Figure 2-2 shows the response header for the API of **obtaining a user token**, in which **x-subject-token** is the desired user token. This token can then be used to authenticate the calling of other APIs.

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

(Optional) 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.

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

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": {
        "message": "The request you have made requires authentication.",
        "title": "Unauthorized"
    }
}
```

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

3 API Description

3.1 Asset Management

3.1.1 Collecting Asset Statistics, Including Accounts, Ports, and Processes

Function

This API is used to collect statistics on assets, such as accounts, ports, and processes.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/statistics

Table 3-1 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-2 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **128**
host_id	No	String	Host ID Minimum: **1** Maximum: **128**
category	No	String	Type. The default value is host. The options are as follows: • host • container Minimum: **1** Maximum: **64**

Request Parameters

Table 3-3 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**

Response Parameters

Status code: 200

Table 3-4 Response body parameters

Parameter	Type	Description
account_num	Long	Number of server accounts Minimum: **0** Maximum: **2147483647**
port_num	Long	Number of open ports Minimum: **0** Maximum: **2147483647**
process_num	Long	Number of processes Minimum: **0** Maximum: **2147483647**
app_num	Long	Pieces of software Minimum: **0** Maximum: **2147483647**
auto_launch_num	Long	Number of auto-startup processes Minimum: **0** Maximum: **2147483647**
web_framework_num	Long	Number of web frameworks Minimum: **0** Maximum: **2147483647**
web_site_num	Long	Number of websites Minimum: **0** Maximum: **2147483647**
jar_package_num	Long	Number of JAR packages Minimum: **0** Maximum: **2147483647**
kernel_module_num	Long	Number of kernel modules Minimum: **0** Maximum: **2147483647**
web_service_num	Long	Number of web services Minimum: **0** Maximum: **2147483647**
web_app_num	Long	Number of web applications Minimum: **0** Maximum: **2147483647**

Parameter	Type	Description
database_num	Long	Number of databases Minimum: **0** Maximum: **2147483647**

Example Requests

This API is used to query the fingerprint information, accounts, ports, and processes of a server.

```
GET https://{endpoint}/v5/{project_id}/asset/statistics?category=host
```

Example Responses

Status code: 200

Asset statistic info

```
{
  "account_num" : 5,
  "port_num" : 5,
  "process_num" : 5,
  "app_num" : 5,
  "auto_launch_num" : 5,
  "web_framework_num" : 5,
  "web_site_num" : 5,
  "jar_package_num" : 5,
  "kernel_module_num" : 5,
  "database_num" : 1,
  "web_app_num" : 8,
  "web_service_num" : 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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ShowAssetStatisticSolution {

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



```
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowAssetStatisticRequest request = new ShowAssetStatisticRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withHostId("<host_id>");
        request.withCategory("<category>");
        try {
            ShowAssetStatisticResponse response = client.showAssetStatistic(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ShowAssetStatisticRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.host_id = "<host_id>"
        request.category = "<category>"
        response = client.show_asset_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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowAssetStatisticRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    categoryRequest:= "<category>"
    request.Category = &categoryRequest
    response, err := client.ShowAssetStatistic(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	Asset statistic info

Error Codes

See **Error Codes**.

3.1.2 Querying the Account List

Function

This API is used to query the account list. The number of servers can be queried based on the account name parameter.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/user/statistics

Table 3-5 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-6 Query Parameters

Parameter	Mandatory	Type	Description
user_name	No	String	Account name. It must comply with the Windows file naming rules. The value can contain letters, digits, underscores (_), and the following special characters: !@.-. Chinese punctuations are not allowed. Minimum: **1** Maximum: **128**
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **128**

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **200** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**
category	No	String	Type. The default value is host. The options are as follows: • host • container Minimum: **0** Maximum: **64**

Request Parameters

Table 3-7 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**

Response Parameters

Status code: 200

Table 3-8 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number of accounts Minimum: **0** Maximum: **10000**
data_list	Array of **UserStatisticInfoResponseInfo** objects	Account statistics list Array Length: **0 - 10000**

Table 3-9 UserStatisticInfoResponseInfo

Parameter	Type	Description
user_name	String	Account name. It must comply with the Windows file naming rules. The value can contain letters, digits, underscores (_), and the following special characters: !@.- Minimum: **1** Maximum: **128**
num	Integer	Number of servers of the account Minimum: **0** Maximum: **10000**

Example Requests

The first 10 accounts are queried by default.

```
GET https://{endpoint}/v5/{project_id}/asset/user/statistics
```

Example Responses

Status code: 200

Number of servers having the account

```
{
  "total_num" : 1,
  "data_list" : [ {
    "user_name" : "bin",
    "num" : 5
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListUserStatisticsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListUserStatisticsRequest request = new ListUserStatisticsRequest();
        request.withUserName("<user_name>");
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withCategory("<category>");
        try {
            ListUserStatisticsResponse response = client.listUserStatistics(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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



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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListUserStatisticsRequest()
        request.user_name = "<user_name>"
        request.enterprise_project_id = "<enterprise_project_id>"
        request.limit = <limit>
        request.offset = <offset>
        request.category = "<category>"
        response = client.list_user_statistics(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListUserStatisticsRequest{}
    userNameRequest:= "<user_name>"
    request.UserName = &userNameRequest
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    categoryRequest:= "<category>"
```



```
    request.Category = &categoryRequest
    response, err := client.ListUserStatistics(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	Number of servers having the account

Error Codes

See **Error Codes**.

3.1.3 Querying Open Port Statistics

Function

This API is used to query the list of open ports. The number of servers can be queried by port or protocol type.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/port/statistics

Table 3-10 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-11 Query Parameters

Parameter	Mandatory	Type	Description
port	No	Integer	Port number, which is used for exact match. Minimum: **1** Maximum: **65535**
port_string	No	String	Port string, which is used for fuzzy match. Minimum: **1** Maximum: **256**
type	No	String	Port type Minimum: **1** Maximum: **256**
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **128**
sort_key	No	String	Sort key. Currently, sorting by port number is supported. Minimum: **1** Maximum: **128**
sort_dir	No	String	Whether to sort data in ascending or descending order. Default value: asc Minimum: **1** Maximum: **32**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **200** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**

Parameter	Mandatory	Type	Description
category	No	String	Type. The default value is host. The options are as follows: • host • container Minimum: **0** Maximum: **64**

Request Parameters

Table 3-12 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**

Response Parameters

Status code: 200

Table 3-13 Response body parameters

Parameter	Type	Description
total_num	Integer	Number of open ports Minimum: **0** Maximum: **10000**
data_list	Array of **PortStatisticResponseInfo** objects	Open port statistics list Array Length: **0 - 10000**

Table 3-14 PortStatisticResponseInfo

Parameter	Type	Description
port	Integer	Port number Minimum: **0** Maximum: **65535**
type	String	Port type Minimum: **1** Maximum: **256**
num	Integer	Number of ports Minimum: **0** Maximum: **10000**
status	String	Risk type: danger or unknown Minimum: **1** Maximum: **16**

Example Requests

The first 10 open ports whose port number is 123 and type is host are queried by default.

```
GET https://{endpoint}/v5/{project_id}/asset/port/statistics?port=123&category=host
```

Example Responses

Status code: 200

Returns the port information, including the port number, type, quantity, and risk status.

```
{
  "total_num" : 1,
  "data_list" : [ {
    "num" : 4,
    "port" : 123,
    "type" : "UDP",
    "status" : "danger"
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListPortStatisticsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListPortStatisticsRequest request = new ListPortStatisticsRequest();
        request.withPort(<port>);
        request.withPortString("<port_string>");
        request.withType("<type>");
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withSortKey("<sort_key>");
        request.withSortDir("<sort_dir>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withCategory("<category>");
        try {
            ListPortStatisticsResponse response = client.listPortStatistics(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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



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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListPortStatisticsRequest()
        request.port = <port>
        request.port_string = "<port_string>"
        request.type = "<type>"
        request.enterprise_project_id = "<enterprise_project_id>"
        request.sort_key = "<sort_key>"
        request.sort_dir = "<sort_dir>"
        request.limit = <limit>
        request.offset = <offset>
        request.category = "<category>"
        response = client.list_port_statistics(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListPortStatisticsRequest{}
    portRequest:= int32(<port>)
    request.Port = &portRequest
    portStringRequest:= "<port_string>"
    request.PortString = &portStringRequest
    typeRequest:= "<type>"
    request.Type = &typeRequest
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
```



```
    sortKeyRequest:= "<sort_key>"
    request.SortKey = &sortKeyRequest
    sortDirRequest:= "<sort_dir>"
    request.SortDir = &sortDirRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    categoryRequest:= "<category>"
    request.Category = &categoryRequest
    response, err := client.ListPortStatistics(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	Returns the port information, including the port number, type, quantity, and risk status.

Error Codes

See **Error Codes**.

3.1.4 Querying the Process List

Function

This API is used to query the process list and query the number of servers based on the process path parameter.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/process/statistics

Table 3-15 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-16 Query Parameters

Parameter	Mandatory	Type	Description
path	No	String	Executable process path Minimum: **1** Maximum: **256**
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **1** Maximum: **256**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **100** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **10000** Default: **0**
category	No	String	Type. The default value is host. The options are as follows: • host • container Minimum: **0** Maximum: **64**

Request Parameters

Table 3-17 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**

Response Parameters

Status code: 200

Table 3-18 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number of process statistics Minimum: **0** Maximum: **10000**
data_list	Array of **ProcessStatisticResponseInfo** objects	Process statistics list Array Length: **0 - 10000**

Table 3-19 ProcessStatisticResponseInfo

Parameter	Type	Description
path	String	Path of the process execution file. Minimum: **1** Maximum: **256**
num	Integer	Number of processes Minimum: **0** Maximum: **100000**

Example Requests

The first 10 accounts are queried by default.


```
GET https://{endpoint}/v5/{project_id}/asset/process/statistics?category=host
```

Example Responses

Status code: 200

Number of servers having the process

```
{
  "total_num" : 1,
  "data_list" : [ {
    "num" : 13,
    "path" : "/usr/lib/systemd/systemd-journald"
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListProcessStatisticsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListProcessStatisticsRequest request = new ListProcessStatisticsRequest();
        request.withPath("<path>");
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withCategory("<category>");
        try {
            ListProcessStatisticsResponse response = client.listProcessStatistics(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
```



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

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListProcessStatisticsRequest()
        request.path = "<path>"
        request.enterprise_project_id = "<enterprise_project_id>"
        request.limit = <limit>
        request.offset = <offset>
        request.category = "<category>"
        response = client.list_process_statistics(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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



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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListProcessStatisticsRequest{}
    pathRequest:= "<path>"
    request.Path = &pathRequest
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    categoryRequest:= "<category>"
    request.Category = &categoryRequest
    response, err := client.ListProcessStatistics(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	Number of servers having the process

Error Codes

See **Error Codes**.

3.1.5 Querying the Software List

Function

This API is used to query the software list. The number of servers can be queried by software name.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/app/statistics

Table 3-20 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-21 Query Parameters

Parameter	Mandatory	Type	Description
app_name	No	String	Software name Minimum: **1** Maximum: **256**
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **1** Maximum: **256**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **100** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **10000** Default: **0**
category	No	String	Type. The default value is host. The options are as follows: • host • container Minimum: **0** Maximum: **64**

Request Parameters

Table 3-22 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**

Response Parameters

Status code: 200

Table 3-23 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number of process statistics Minimum: **0** Maximum: **10000**
data_list	Array of **AppStatisticResponseInfo** objects	Process statistics list Array Length: **0 - 10000**

Table 3-24 AppStatisticResponseInfo

Parameter	Type	Description
app_name	String	Software name Minimum: **1** Maximum: **128**
num	Integer	Number of processes Minimum: **0** Maximum: **100000**

Example Requests

The first 10 software lists whose type is host are queried by default.


```
GET https://{endpoint}/v5/{project_id}/asset/app/statistics?category=host
```

Example Responses

Status code: 200

Number of servers having the software

```
{
  "total_num" : 1,
  "data_list" : [ {
    "app_name" : "kernel",
    "num" : 13
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListAppStatisticsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAppStatisticsRequest request = new ListAppStatisticsRequest();
        request.withAppName("<app_name>");
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withCategory("<category>");
        try {
            ListAppStatisticsResponse response = client.listAppStatistics(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
```



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

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListAppStatisticsRequest()
        request.app_name = "<app_name>"
        request.enterprise_project_id = "<enterprise_project_id>"
        request.limit = <limit>
        request.offset = <offset>
        request.category = "<category>"
        response = client.list_app_statistics(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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



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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListAppStatisticsRequest{}
    appNameRequest:= "<app_name>"
    request.AppName = &appNameRequest
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    categoryRequest:= "<category>"
    request.Category = &categoryRequest
    response, err := client.ListAppStatistics(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	Number of servers having the software

Error Codes

See **Error Codes**.

3.1.6 Querying Automatic Startup Item Information

Function

This API is used to query the automatic startup information. The startup type and number of servers can be queried based on the automatic startup name.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/auto-launch/statistics

Table 3-25 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-26 Query Parameters

Parameter	Mandatory	Type	Description
name	No	String	Auto-started item name Minimum: **1** Maximum: **256**
type	No	String	Auto-started item type • 0: auto-started service • 1: scheduled task • 2: Preload dynamic library • 3: Run registry key • 4: startup folder Minimum: **1** Maximum: **256**
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **1** Maximum: **256**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **100** Default: **10**

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. Minimum: **0** Maximum: **10000** Default: **0**

Request Parameters

Table 3-27 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**

Response Parameters

Status code: 200

Table 3-28 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number of auto-started items Minimum: **0** Maximum: **10000**
data_list	Array of **AutoLaunchStatisticsResponseInfo** objects	List of auto-started item statistics Array Length: **0 - 10000**

Table 3-29 AutoLaunchStatisticsResponseInfo

Parameter	Type	Description
name	String	Auto-started item name Minimum: **1** Maximum: **256**
type	String	Auto-started item type • 0: auto-started service • 1: scheduled task • 2: Preload dynamic library • 3: Run registry key • 4: startup folder Minimum: **1** Maximum: **11**
num	Integer	Number of servers that have the auto-startup items. Minimum: **0** Maximum: **10000**

Example Requests

The first 10 auto-startup items are queried by default.

```
GET https://{endpoint}/v5/{project_id}/asset/auto-launch/statistics
```

Example Responses

Status code: 200

Number of servers having the process

```
{
  "total_num" : 1,
  "data_list" : [ {
    "name" : "S12hostguard",
    "type" : "0",
    "num" : 5
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListAutoLaunchStatisticsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAutoLaunchStatisticsRequest request = new ListAutoLaunchStatisticsRequest();
        request.withName("<name>");
        request.withType("<type>");
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        try {
            ListAutoLaunchStatisticsResponse response = client.listAutoLaunchStatistics(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

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



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

    try:
        request = ListAutoLaunchStatisticsRequest()
        request.name = "<name>"
        request.type = "<type>"
        request.enterprise_project_id = "<enterprise_project_id>"
        request.limit = <limit>
        request.offset = <offset>
        response = client.list_auto_launch_statistics(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListAutoLaunchStatisticsRequest{}
    nameRequest:= "<name>"
    request.Name = &nameRequest
    typeRequest:= "<type>"
    request.Type = &typeRequest
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    response, err := client.ListAutoLaunchStatistics(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	Number of servers having the process

Error Codes

See **Error Codes**.

3.1.7 Querying the Server List of an Account

Function

This API is used to query the server list of an account.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/users

Table 3-30 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **128**

Table 3-31 Query Parameters

Parameter	Mandatory	Type	Description
host_id	No	String	Host ID Minimum: **0** Maximum: **128**

Parameter	Mandatory	Type	Description
user_name	No	String	Account name Minimum: **0** Maximum: **32**
host_name	No	String	Host name Minimum: **0** Maximum: **128**
private_ip	No	String	Server private IP address Minimum: **0** Maximum: **128**
login_permission	No	Boolean	Whether login is allowed.
root_permission	No	Boolean	Whether the user has root permissions
user_group	No	String	Server user group Minimum: **0** Maximum: **128**
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **128**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **200** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**

Parameter	Mandatory	Type	Description
category	No	String	Type. The default value is host. The options are as follows: • host • container Minimum: **0** Maximum: **64**
part_match	No	Boolean	Whether fuzzy match is used. The default value is false.

Request Parameters

Table 3-32 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**

Response Parameters

Status code: 200

Table 3-33 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number of accounts Minimum: **0** Maximum: **10000**
data_list	Array of **UserResponseInfo** objects	Account information list Array Length: **0 - 10000**

Table 3-34 UserResponseInfo

Parameter	Type	Description
agent_id	String	Agent ID Minimum: **1** Maximum: **128**
host_id	String	Host ID Minimum: **1** Maximum: **128**
host_name	String	Server name Minimum: **1** Maximum: **128**
host_ip	String	Server IP address Minimum: **1** Maximum: **128**
user_name	String	Username Minimum: **1** Maximum: **128**
login_permission	Boolean	Whether the user has the login permission
root_permission	Boolean	Whether the user has root permissions
user_group_name	String	User group name Minimum: **1** Maximum: **128**
user_home_dir	String	User home directory Minimum: **1** Maximum: **256**
shell	String	User startup shell Minimum: **1** Maximum: **128**
recent_scan_time	Long	Latest scan time Minimum: **0** Maximum: **4070880000000**
container_id	String	Container ID Minimum: **1** Maximum: **128**

Parameter	Type	Description
container_name	String	Container name Minimum: **1** Maximum: **256**

Example Requests

Query servers list whose account is daemon by default.

```
GET https://{endpoint}/v5/{project_id}/asset/users?user_name=daemon
```

Example Responses

Status code: 200

Account information list

```
{
  "total_num" : 1,
  "data_list" : [ {
    "agent_id" : "0bf792d910xxxxxxxxxx52cb7e63exxx",
    "host_id" : "13xxxxxxece69",
    "host_ip" : "192.168.0.1",
    "host_name" : "test",
    "login_permission" : false,
    "recent_scan_time" : 1667039707730,
    "root_permission" : false,
    "shell" : "/sbin/nologin",
    "user_group_name" : "bin",
    "user_home_dir" : "/bin",
    "user_name" : "bin",
    "container_id" : "ce794b8a6-xxxx-xxxx-xxxxx-36bedf2c7a4f6083fb82e5bbc82709b50018",
    "container_name" : "hss_imagescan_W73V1WO6"
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListUsersSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
```



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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListUsersRequest request = new ListUsersRequest();
        request.withHostId("<host_id>");
        request.withUserName("<user_name>");
        request.withHostName("<host_name>");
        request.withPrivateIp("<private_ip>");
        request.withLoginPermission(<login_permission>);
        request.withRootPermission(<root_permission>);
        request.withUserGroup("<user_group>");
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withCategory("<category>");
        request.withPartMatch(<part_match>);
        try {
            ListUsersResponse response = client.listUsers(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
```



```
        request = ListUsersRequest()
        request.host_id = "<host_id>"
        request.user_name = "<user_name>"
        request.host_name = "<host_name>"
        request.private_ip = "<private_ip>"
        request.login_permission = <LoginPermission>
        request.root_permission = <RootPermission>
        request.user_group = "<user_group>"
        request.enterprise_project_id = "<enterprise_project_id>"
        request.limit = <limit>
        request.offset = <offset>
        request.category = "<category>"
        request.part_match = <PartMatch>
        response = client.list_users(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListUsersRequest{}
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    userNameRequest:= "<user_name>"
    request.UserName = &userNameRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    privateIpRequest:= "<private_ip>"
    request.PrivateIp = &privateIpRequest
    loginPermissionRequest:= <login_permission>
    request.LoginPermission = &loginPermissionRequest
    rootPermissionRequest:= <root_permission>
    request.RootPermission = &rootPermissionRequest
    userGroupRequest:= "<user_group>"
    request.UserGroup = &userGroupRequest
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
```



```
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    categoryRequest:= "<category>"
    request.Category = &categoryRequest
    partMatchRequest:= <part_match>
    request.PartMatch = &partMatchRequest
    response, err := client.ListUsers(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	Account information list

Error Codes

See **Error Codes**.

3.1.8 Querying the Open Port List of a Single Server

Function

This API is used to query the open port list of a single server.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/ports

Table 3-35 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-36 Query Parameters

Parameter	Mandatory	Type	Description
host_id	Yes	String	Server ID Minimum: **0** Maximum: **128**
host_name	No	String	Server name Minimum: **0** Maximum: **128**
host_ip	No	String	Server IP address Minimum: **0** Maximum: **128**
port	No	Integer	Port number Minimum: **1** Maximum: **65535**
type	No	String	Port type: TCP or UDP. Minimum: **0** Maximum: **128**
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **256**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **100** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **10000** Default: **0**

Parameter	Mandatory	Type	Description
category	No	String	Type. The default value is host. The options are as follows: • host • container Minimum: **0** Maximum: **64**

Request Parameters

Table 3-37 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**

Response Parameters

Status code: 200

Table 3-38 Response body parameters

Parameter	Type	Description
total_num	Integer	Number of open ports Minimum: **0** Maximum: **10000**
data_list	Array of **PortResponseInfo** objects	Port information list Array Length: **0 - 10000**

Table 3-39 PortResponseInfo

Parameter	Type	Description
host_id	String	Server ID Minimum: **1** Maximum: **128**
laddr	String	Listening IP address Minimum: **1** Maximum: **128**
status	String	Port status. • normal • "danger" • "unknown" Minimum: **1** Maximum: **10**
port	Integer	Port number Minimum: **0** Maximum: **65535**
type	String	Port type: TCP or UDP. Minimum: **1** Maximum: **64**
pid	Integer	Process ID Minimum: **1** Maximum: **65535**
path	String	Path of the process execution file. Minimum: **1** Maximum: **256**
agent_id	String	Agent ID Minimum: **1** Maximum: **64**
container_id	String	Container ID Minimum: **0** Maximum: **128**

Example Requests

The first 10 open ports whose host_id is dd91cd32-a238-4c0e-bc01-3b11653714ac are queried by default.


```
GET https://{endpoint}/v5/{project_id}/asset/ports?hlimit=10&offset=0&host_id=dd91cd32-a238-4c0e-bc01-3b11653714ac
```

Example Responses

Status code: 200

Port information list

```
{
  "data_list" : [ {
    "agent_id" : "eb5d03f02fffd85aaf5d0ba5c992d97713244f420e0b076dcf6ae0574c78aa4b",
    "container_id" : "",
    "host_id" : "dd91cd32-a238-4c0e-bc01-3b11653714ac",
    "laddr" : "0.0.0.0",
    "path" : "/usr/sbin/dhclient",
    "pid" : 1507,
    "port" : 68,
    "status" : "unknow",
    "type" : "UDP"
  }, {
    "agent_id" : "eb5d03f02fffd85aaf5d0ba5c992d97713244f420e0b076dcf6ae0574c78aa4b",
    "container_id" : "",
    "host_id" : "dd91cd32-a238-4c0e-bc01-3b11653714ac",
    "laddr" : "127.0.0.1",
    "path" : "/usr/sbin/chronyd",
    "pid" : 493,
    "port" : 323,
    "status" : "unknow",
    "type" : "UDP"
  } ],
  "total_num" : 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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListPortsSolution {

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

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



```
        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListPortsRequest request = new ListPortsRequest();
        request.withHostId("<host_id>");
        request.withHostName("<host_name>");
        request.withHostIp("<host_ip>");
        request.withPort(<port>);
        request.withType("<type>");
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withCategory("<category>");
        try {
            ListPortsResponse response = client.listPorts(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListPortsRequest()
        request.host_id = "<host_id>"
        request.host_name = "<host_name>"
        request.host_ip = "<host_ip>"
        request.port = <port>
        request.type = "<type>"
        request.enterprise_project_id = "<enterprise_project_id>"
        request.limit = <limit>
        request.offset = <offset>
        request.category = "<category>"
        response = client.list_ports(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListPortsRequest{}
    request.HostId = "<host_id>"
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    hostIpRequest:= "<host_ip>"
    request.HostIp = &hostIpRequest
    portRequest:= int32(<port>)
    request.Port = &portRequest
    typeRequest:= "<type>"
    request.Type = &typeRequest
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    categoryRequest:= "<category>"
    request.Category = &categoryRequest
    response, err := client.ListPorts(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	Port information list

Error Codes

See **Error Codes**.

3.1.9 Querying the Server List of the Software

Function

This API is used to query the server list of the software.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/apps

Table 3-40 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-41 Query Parameters

Parameter	Mandatory	Type	Description
host_id	Yes	String	Server ID Minimum: **0** Maximum: **128**
host_name	No	String	Server name Minimum: **0** Maximum: **128**

Parameter	Mandatory	Type	Description
app_name	No	String	Software name Minimum: **0** Maximum: **128**
host_ip	No	String	Server IP address Minimum: **0** Maximum: **128**
version	No	String	Software version Minimum: **0** Maximum: **128**
install_dir	No	String	Installation directory Minimum: **0** Maximum: **512**
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **1** Maximum: **256**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **100** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **10000** Default: **0**
category	No	String	Type. The default value is host. The options are as follows: • host • container Minimum: **0** Maximum: **64**
part_match	No	Boolean	Whether fuzzy match is used. The default value is false.

Request Parameters

Table 3-42 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**

Response Parameters

Status code: 200

Table 3-43 Response body parameters

Parameter	Type	Description
total_num	Integer	Total software Minimum: **0** Maximum: **10000**
data_list	Array of **AppResponseInfo** objects	Software list Array Length: **0 - 10000**

Table 3-44 AppResponseInfo

Parameter	Type	Description
agent_id	String	Agent ID of HSS Minimum: **0** Maximum: **128**
host_id	String	Server ID Minimum: **1** Maximum: **128**

Parameter	Type	Description
host_name	String	Server name Minimum: **1** Maximum: **256**
host_ip	String	Server IP address Minimum: **1** Maximum: **256**
app_name	String	Software name Minimum: **1** Maximum: **128**
version	String	Version number Minimum: **1** Maximum: **128**
update_time	Long	Latest update time, in milliseconds. Minimum: **0** Maximum: **2147483647**
recent_scan_time	Long	Latest scanning time, in milliseconds. Minimum: **0** Maximum: **2147483647**
container_id	String	Container ID Minimum: **1** Maximum: **128**
container_name	String	Container name Minimum: **1** Maximum: **256**

Example Requests

The first 10 servers whose software name is ACL are queried by default.

```
GET https://{endpoint}/v5/{project_id}/asset/apps?app_name=acl
```

Example Responses

Status code: 200

Applications installed on a host

```
{
  "total_num" : 1,
  "data_list" : [ {
    "agent_id" : "c9bed5397db449ebdfba15e85fcfc36accee125c68954daf5cab0528bab59bd8",
    "host_id" : "55dac7fe-d81b-43bc-a4a7-4710fe673972",
```



```
    "host_name" : "xxxx",
    "host_ip" : "192.168.0.126",
    "app_name" : "acl",
    "version" : "2.2.51-14.eulerosv2r7",
    "update_time" : 1668150671981,
    "recent_scan_time" : 1668506044147,
    "container_id" : "ce794b8a6071f5fd7e4d142dab7b36bedf2c7a4f6083fb82e5bbc82709b50018",
    "container_name" : "hss_imagescan_W73V1WO6"
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListAppsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAppsRequest request = new ListAppsRequest();
        request.withHostId("<host_id>");
        request.withHostName("<host_name>");
        request.withAppName("<app_name>");
        request.withHostIp("<host_ip>");
        request.withVersion("<version>");
        request.withInstallDir("<install_dir>");
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withCategory("<category>");
        request.withPartMatch(<part_match>);
        try {
            ListAppsResponse response = client.listApps(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
```



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

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListAppsRequest()
        request.host_id = "<host_id>"
        request.host_name = "<host_name>"
        request.app_name = "<app_name>"
        request.host_ip = "<host_ip>"
        request.version = "<version>"
        request.install_dir = "<install_dir>"
        request.enterprise_project_id = "<enterprise_project_id>"
        request.limit = <limit>
        request.offset = <offset>
        request.category = "<category>"
        request.part_match = <PartMatch>
        response = client.list_apps(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
```



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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListAppsRequest{}
    request.HostId = "<host_id>"
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    appNameRequest:= "<app_name>"
    request.AppName = &appNameRequest
    hostIpRequest:= "<host_ip>"
    request.HostIp = &hostIpRequest
    versionRequest:= "<version>"
    request.Version = &versionRequest
    installDirRequest:= "<install_dir>"
    request.InstallDir = &installDirRequest
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    categoryRequest:= "<category>"
    request.Category = &categoryRequest
    partMatchRequest:= <part_match>
    request.PartMatch = &partMatchRequest
    response, err := client.ListApps(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	Applications installed on a host

Error Codes

See **Error Codes**.

3.1.10 Querying the Service List of Auto-Started Items

Function

This API is used to query the service list of auto-started items.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/auto-launchs

Table 3-45 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-46 Query Parameters

Parameter	Mandatory	Type	Description
host_id	No	String	Server ID Minimum: **1** Maximum: **128**
host_name	No	String	Server name Minimum: **1** Maximum: **128**
name	No	String	Auto-started item name Minimum: **1** Maximum: **256**
host_ip	No	String	Server IP address Minimum: **1** Maximum: **128**

Parameter	Mandatory	Type	Description
type	No	String	Auto-started item type • 0: auto-started service • 1: scheduled task • 2: Preload dynamic library • 3: Run registry key • 4: startup folder Minimum: **1** Maximum: **128**
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **1** Maximum: **256**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **100** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **10000** Default: **0**
part_match	No	Boolean	Whether fuzzy match is used. The default value is false.

Request Parameters

Table 3-47 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**

Response Parameters

Status code: 200

Table 3-48 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number of auto-startup items Minimum: **0** Maximum: **10000**
data_list	Array of **AutoLauchResponseInfo** objects	Auto-started item list Array Length: **0 - 10000**

Table 3-49 AutoLauchResponseInfo

Parameter	Type	Description
agent_id	String	Agent ID Minimum: **0** Maximum: **128**
host_id	String	Server ID Minimum: **1** Maximum: **128**
host_name	String	Server name Minimum: **1** Maximum: **256**

Parameter	Type	Description
host_ip	String	Server IP address Minimum: **1** Maximum: **256**
name	String	Auto-started item name Minimum: **1** Maximum: **256**
type	Integer	Auto-started item type • 0: auto-started service • 1: scheduled task • 2: Preload dynamic library • 3: Run registry key • 4: startup folder Minimum: **0** Maximum: **11**
path	String	Path of the auto-startup item Minimum: **1** Maximum: **256**
hash	String	Hash value of the file generated using the SHA256 algorithm Minimum: **1** Maximum: **128**
run_user	String	User who starts the execution Minimum: **1** Maximum: **128**
recent_scan_time	Long	Latest scan time Minimum: **0** Maximum: **4824430336000**

Example Requests

The first 10 services whose auto-startup item name is S50multi-queue are queried by default.

```
GET https://{endpoint}/v5/{project_id}/asset/auto-launchs?name=S50multi-queue
```

Example Responses

Status code: 200

auto launch list


```
{
  "total_num" : 1,
  "data_list" : [ {
    "agent_id" : "9e742932bff2894e3d0869d03989b05cefb27a6cbc201d98c4465296xxxxxxxx",
    "host_id" : "3d0581a5-03b9-4311-9149-c026b0726a7e",
    "host_name" : "name",
    "host_ip" : "3d0581a5-03b9-4311-9149-c026b0726a7e",
    "name" : "S12hostguard",
    "type" : 0,
    "path" : "/etc/hostguard",
    "hash" : "xxxxxxxx227bffa0c04425ba6c8e0024046caa38dfbca6281b40109axxxxxxxx",
    "run_user" : "user",
    "recent_scan_time" : 1668240858425
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListAutoLaunchsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAutoLaunchsRequest request = new ListAutoLaunchsRequest();
        request.withHostId("<host_id>");
        request.withHostName("<host_name>");
        request.withName("<name>");
        request.withHostIp("<host_ip>");
        request.withType("<type>");
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withPartMatch(<part_match>);
        try {
            ListAutoLaunchsResponse response = client.listAutoLaunchs(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
```



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

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListAutoLaunchsRequest()
        request.host_id = "<host_id>"
        request.host_name = "<host_name>"
        request.name = "<name>"
        request.host_ip = "<host_ip>"
        request.type = "<type>"
        request.enterprise_project_id = "<enterprise_project_id>"
        request.limit = <limit>
        request.offset = <offset>
        request.part_match = <PartMatch>
        response = client.list_auto_launchs(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

func main() {
```



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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListAutoLaunchsRequest{}
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    nameRequest:= "<name>"
    request.Name = &nameRequest
    hostIpRequest:= "<host_ip>"
    request.HostIp = &hostIpRequest
    typeRequest:= "<type>"
    request.Type = &typeRequest
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    partMatchRequest:= <part_match>
    request.PartMatch = &partMatchRequest
    response, err := client.ListAutoLaunchs(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	auto launch list

Error Codes

See **Error Codes**.

3.1.11 Obtaining the Account Change History

Function

This API is used to obtain the account change history.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/user/change-history

Table 3-50 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-51 Query Parameters

Parameter	Mandatory	Type	Description
user_name	No	String	Username Minimum: **1** Maximum: **128**
host_id	No	String	Server ID Minimum: **1** Maximum: **128**
root_permission	No	Boolean	Whether the user has root permissions
host_name	No	String	Server name Minimum: **1** Maximum: **128**
private_ip	No	String	Server private IP address Minimum: **1** Maximum: **128**

Parameter	Mandatory	Type	Description
change_type	No	String	Account change type. The options are as follows: • ADD • DELETE • MODIFY Minimum: **1** Maximum: **128**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **100** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **10000** Default: **0**
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **1** Maximum: **256**
start_time	No	Long	Start time of a change. Its value is a 13-digit timestamp. Minimum: **0** Maximum: **4070880000000**
end_time	No	Long	End time of a change. Its value is a 13-digit timestamp. Minimum: **0** Maximum: **4070880000000**

Request Parameters

Table 3-52 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**

Response Parameters

Status code: 200

Table 3-53 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number of changed accounts Minimum: **0** Maximum: **10000000**
data_list	Array of **UserChangeHistoryResponseInfo** objects	Account change history Array Length: **0 - 200**

Table 3-54 UserChangeHistoryResponseInfo

Parameter	Type	Description
agent_id	String	Agent ID Minimum: **1** Maximum: **128**

Parameter	Type	Description
change_type	String	Change type. Its value can be: • ADD • DELETE • MODIFY Minimum: **1** Maximum: **128**
host_id	String	Host ID Minimum: **1** Maximum: **128**
host_name	String	Server name Minimum: **1** Maximum: **128**
private_ip	String	Server private IP address Minimum: **1** Maximum: **128**
login_permission	Boolean	Whether the user has the login permission
root_permission	Boolean	Whether the user has root permissions
user_group_name	String	User group name Minimum: **1** Maximum: **128**
user_home_dir	String	User home directory Minimum: **1** Maximum: **128**
shell	String	User startup shell Minimum: **1** Maximum: **128**
user_name	String	Account name Minimum: **1** Maximum: **128**
expire_time	Long	Expiration time, which is a timestamp. The default unit is millisecond. Minimum: **0** Maximum: **4070880000000**

Parameter	Type	Description
recent_scan_time	Long	Time when an account is added, modified, or deleted. Minimum: **0** Maximum: **4070880000000**

Example Requests

The first 10 account change records whose start time is 1700446129130 and end time is 1701050929130 are queried by default.

```
GET https://{endpoint}/v5/{project_id}/asset/user/change-history?
start_time=1700446129130&end_time=1701050929130
```

Example Responses

Status code: 200

account change history

```
{
  "total_num" : 1,
  "data_list" : [ {
    "agent_id" : "0bf792d910xxxxxxxxxx52cb7e63exxx",
    "host_id" : "13xxxxxxece69",
    "private_ip" : "192.168.0.1",
    "host_name" : "test",
    "user_home_dir" : "/test",
    "login_permission" : false,
    "recent_scan_time" : 1667039707730,
    "expire_time" : 1667039707730,
    "root_permission" : false,
    "shell" : "/sbin/nologin",
    "user_group_name" : "bin",
    "user_name" : "bin",
    "change_type" : "ADD"
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListUserChangeHistoriesSolution {
```



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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListUserChangeHistoriesRequest request = new ListUserChangeHistoriesRequest();
        request.withUserName("<user_name>");
        request.withHostId("<host_id>");
        request.withRootPermission(<root_permission>);
        request.withHostName("<host_name>");
        request.withPrivateIp("<private_ip>");
        request.withChangeType("<change_type>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withStartTime(<start_time>L);
        request.withEndTime(<end_time>L);
        try {
            ListUserChangeHistoriesResponse response = client.listUserChangeHistories(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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



```
        .build()

    try:
        request = ListUserChangeHistoriesRequest()
        request.user_name = "<user_name>"
        request.host_id = "<host_id>"
        request.root_permission = <RootPermission>
        request.host_name = "<host_name>"
        request.private_ip = "<private_ip>"
        request.change_type = "<change_type>"
        request.limit = <limit>
        request.offset = <offset>
        request.enterprise_project_id = "<enterprise_project_id>"
        request.start_time = <start_time>
        request.end_time = <end_time>
        response = client.list_user_change_histories(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListUserChangeHistoriesRequest{}
    userNameRequest:= "<user_name>"
    request.UserName = &userNameRequest
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    rootPermissionRequest:= <root_permission>
    request.RootPermission = &rootPermissionRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    privateIpRequest:= "<private_ip>"
    request.PrivateIp = &privateIpRequest
    changeTypeRequest:= "<change_type>"
    request.ChangeType = &changeTypeRequest
    limitRequest:= int32(<limit>)
```



```
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    startTimeRequest:= int64(<start_time>)
    request.StartTime = &startTimeRequest
    endTimeRequest:= int64(<end_time>)
    request.EndTime = &endTimeRequest
    response, err := client.ListUserChangeHistories(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	account change history

Error Codes

See **Error Codes**.

3.1.12 Obtaining the Historical Change Records of Software Information

Function

This API is used to obtain the historical change records of software information.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/app/change-history

Table 3-55 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-56 Query Parameters

Parameter	Mandatory	Type	Description
host_id	No	String	Server ID Minimum: **0** Maximum: **128**
host_ip	No	String	Server IP address Minimum: **0** Maximum: **128**
host_name	No	String	Server name Minimum: **0** Maximum: **128**
app_name	No	String	Software name Minimum: **0** Maximum: **128**
variation_type	No	String	Change type. Its value can be: • add • delete • modify Minimum: **0** Maximum: **10**
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **256**
sort_key	No	String	Sort key. Currently, sorting by recent_scan_time is supported. Minimum: **1** Maximum: **128**

Parameter	Mandatory	Type	Description
sort_dir	No	String	Sorting mode. The default value is descending. • **asc**: ascending order • **desc**: descending order Minimum: **1** Maximum: **32**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **100** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **10000** Default: **0**
start_time	No	Long	Start time of a change. Its value is a 13-digit timestamp. Minimum: **0** Maximum: **9007199254740992**
end_time	No	Long	End time of a change. Its value is a 13-digit timestamp. Minimum: **0** Maximum: **9007199254740992**

Request Parameters

Table 3-57 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**

Response Parameters

Status code: 200

Table 3-58 Response body parameters

Parameter	Type	Description
total_num	Integer	Number of software changes Minimum: **0** Maximum: **10000**
data_list	Array of **AppChangeResponseInfo** objects	Account change history Array Length: **0 - 10000**

Table 3-59 AppChangeResponseInfo

Parameter	Type	Description
agent_id	String	Agent ID Minimum: **0** Maximum: **128**
variation_type	String	Type of change. • add • delete • modify Minimum: **0** Maximum: **10**

Parameter	Type	Description
host_id	String	host_id Minimum: **1** Maximum: **128**
app_name	String	Software name Minimum: **1** Maximum: **128**
host_name	String	Host name Minimum: **1** Maximum: **128**
host_ip	String	Server IP address Minimum: **1** Maximum: **256**
version	String	Version number Minimum: **1** Maximum: **128**
update_time	Long	Software update time Minimum: **0** Maximum: **4824430336000**
recent_scan_time	Long	Last scanned, in ms. Minimum: **0** Maximum: **4824430336000**

Example Requests

The first 10 software change records whose start time is 1700446175490 and end time is 1701050975490 are queried by default.

```
GET https://{endpoint}/v5/{project_id}/asset/app/change-history?
start_time=1700446175490&end_time=1701050975490
```

Example Responses

Status code: 200

App change history info list

```
{
  "total_num" : 1,
  "data_list" : [ {
    "agent_id" : "d83c7be8a106485a558f97446617443b87604c8116e3cf0453c2a44exxxxxxxx",
    "variation_type" : "abnormal_behavior",
    "host_id" : "f4aaca51-xxxx-xxxx-xxxx-891c9e84d885",
    "app_name" : "hostguard",
    "host_name" : "host_name",
```



```
    "host_ip" : "host_ip",
    "version" : "3.2.3",
    "update_time" : 1668246126302,
    "recent_scan_time" : 1668246126302
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListAppChangeHistoriesSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAppChangeHistoriesRequest request = new ListAppChangeHistoriesRequest();
        request.withHostId("<host_id>");
        request.withHostIp("<host_ip>");
        request.withHostName("<host_name>");
        request.withAppName("<app_name>");
        request.withVariationType("<variation_type>");
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withSortKey("<sort_key>");
        request.withSortDir("<sort_dir>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withStartTime(<start_time>L);
        request.withEndTime(<end_time>L);
        try {
            ListAppChangeHistoriesResponse response = client.listAppChangeHistories(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
```



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

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListAppChangeHistoriesRequest()
        request.host_id = "<host_id>"
        request.host_ip = "<host_ip>"
        request.host_name = "<host_name>"
        request.app_name = "<app_name>"
        request.variation_type = "<variation_type>"
        request.enterprise_project_id = "<enterprise_project_id>"
        request.sort_key = "<sort_key>"
        request.sort_dir = "<sort_dir>"
        request.limit = <limit>
        request.offset = <offset>
        request.start_time = <start_time>
        request.end_time = <end_time>
        response = client.list_app_change_histories(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
```



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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListAppChangeHistoriesRequest{}
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    hostIpRequest:= "<host_ip>"
    request.HostIp = &hostIpRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    appNameRequest:= "<app_name>"
    request.AppName = &appNameRequest
    variationTypeRequest:= "<variation_type>"
    request.VariationType = &variationTypeRequest
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    sortKeyRequest:= "<sort_key>"
    request.SortKey = &sortKeyRequest
    sortDirRequest:= "<sort_dir>"
    request.SortDir = &sortDirRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    startTimeRequest:= int64(<start_time>)
    request.StartTime = &startTimeRequest
    endTimeRequest:= int64(<end_time>)
    request.EndTime = &endTimeRequest
    response, err := client.ListAppChangeHistories(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	App change history info list

Error Codes

See **Error Codes**.

3.1.13 Obtaining the Historical Change Records of Auto-started Items

Function

This API is used to obtain the historical change records of auto-startup items.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/auto-launch/change-history

Table 3-60 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-61 Query Parameters

Parameter	Mandatory	Type	Description
host_id	No	String	Server ID Minimum: **0** Maximum: **128**
host_ip	No	String	Server IP address Minimum: **0** Maximum: **128**
host_name	No	String	Server name Minimum: **0** Maximum: **128**
auto_launch_name	No	String	Auto-started item name Minimum: **0** Maximum: **128**

Parameter	Mandatory	Type	Description
type	No	Integer	Auto-started item type. • 0: auto-started service • 1: scheduled task • 2: Preload the dynamic library. • 3: Run registry key • 4: startup folder Minimum: **0** Maximum: **100**
variation_type	No	String	Change type. Its value can be: • add • delete • modify Minimum: **0** Maximum: **10**
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **256**
sort_key	No	String	Sort key. Currently, sorting by recent_scan_time is supported. Minimum: **0** Maximum: **128**
sort_dir	No	String	Sorting mode. The default value is descending. • **asc**: ascending order • **desc**: descending order Minimum: **0** Maximum: **32**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **200** Default: **10**

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. Minimum: **0** Maximum: **2000000** Default: **0**
start_time	No	Long	Start time of a change. Its value is a 13-digit timestamp. Minimum: **0** Maximum: **9007199254740992**
end_time	No	Long	End time of a change. Its value is a 13-digit timestamp. Minimum: **0** Maximum: **9007199254740992**

Request Parameters

Table 3-62 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**

Response Parameters

Status code: 200

Table 3-63 Response body parameters

Parameter	Type	Description
total_num	Integer	Number of changes of auto-started items Minimum: **0** Maximum: **10000**
data_list	Array of **AutoLaunchChangeResponseInfo** objects	Account change history Array Length: **0 - 10000**

Table 3-64 AutoLaunchChangeResponseInfo

Parameter	Type	Description
agent_id	String	Agent ID Minimum: **0** Maximum: **128**
variation_type	String	Type of change. • add • delete • modify Minimum: **0** Maximum: **10**
type	Integer	Auto-started item type • 0: auto-started service • 1: scheduled task • 2: Preload dynamic library • 3: Run registry key • 4: startup folder Minimum: **0** Maximum: **11**
host_id	String	host_id Minimum: **1** Maximum: **128**
host_name	String	ECS name Minimum: **1** Maximum: **256**

Parameter	Type	Description
host_ip	String	Server IP address Minimum: **1** Maximum: **256**
path	String	Path of the auto-startup item Minimum: **1** Maximum: **256**
hash	String	Hash value of the file generated using the SHA256 algorithm Minimum: **1** Maximum: **128**
run_user	String	User who starts the execution Minimum: **1** Maximum: **64**
name	String	Auto-started item name Minimum: **1** Maximum: **256**
recent_scan_time	Long	Last update time. The value is a 13-bit timestamp. Minimum: **0** Maximum: **4824430336000**

Example Requests

The first 10 auto-startup item change records whose start time is 1693101881568 and end time is 1701050681569 are queried by default.

```
GET https://{endpoint}/v5/{project_id}/asset/auto-launch/change-history?
start_time=1693101881568&end_time=1701050681569
```

Example Responses

Status code: 200

App change history info list

```
{
  "total_num" : 1,
  "data_list" : [ {
    "agent_id" : "d83c7be8a106485a558f97446617443b87604c8116e3cf0453c2a44exxxxxxxx",
    "variation_type" : "add",
    "type" : 0,
    "host_id" : "host_id",
    "host_name" : "host_name",
    "host_ip" : "host_ip",
    "path" : "/path",
    "hash" : "xxxxxxxx227bffa0c04425ba6c8e0024046caa38dfbca6281b40109axxxxxxxx",
```



```
    "run_user" : "SYSTEM",
    "name" : "S12hostguard",
    "recent_scan_time" : 1668246126302
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListAutoLaunchChangeHistoriesSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAutoLaunchChangeHistoriesRequest request = new ListAutoLaunchChangeHistoriesRequest();
        request.withHostId("<host_id>");
        request.withHostIp("<host_ip>");
        request.withHostName("<host_name>");
        request.withAutoLaunchName("<auto_launch_name>");
        request.withType(<type>);
        request.withVariationType("<variation_type>");
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withSortKey("<sort_key>");
        request.withSortDir("<sort_dir>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withStartTime(<start_time>L);
        request.withEndTime(<end_time>L);
        try {
            ListAutoLaunchChangeHistoriesResponse response = client.listAutoLaunchChangeHistories(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
```



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

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListAutoLaunchChangeHistoriesRequest()
        request.host_id = "<host_id>"
        request.host_ip = "<host_ip>"
        request.host_name = "<host_name>"
        request.auto_launch_name = "<auto_launch_name>"
        request.type = <type>
        request.variation_type = "<variation_type>"
        request.enterprise_project_id = "<enterprise_project_id>"
        request.sort_key = "<sort_key>"
        request.sort_dir = "<sort_dir>"
        request.limit = <limit>
        request.offset = <offset>
        request.start_time = <start_time>
        request.end_time = <end_time>
        response = client.list_auto_launch_change_histories(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
```



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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListAutoLaunchChangeHistoriesRequest{}
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    hostIpRequest:= "<host_ip>"
    request.HostIp = &hostIpRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    autoLaunchNameRequest:= "<auto_launch_name>"
    request.AutoLaunchName = &autoLaunchNameRequest
    typeRequest:= int32(<type>)
    request.Type = &typeRequest
    variationTypeRequest:= "<variation_type>"
    request.VariationType = &variationTypeRequest
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    sortKeyRequest:= "<sort_key>"
    request.SortKey = &sortKeyRequest
    sortDirRequest:= "<sort_dir>"
    request.SortDir = &sortDirRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    startTimeRequest:= int64(<start_time>)
    request.StartTime = &startTimeRequest
    endTimeRequest:= int64(<end_time>)
    request.EndTime = &endTimeRequest
    response, err := client.ListAutoLaunchChangeHistories(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	App change history info list

Error Codes

See **Error Codes**.

3.1.14 Asset Fingerprints - Process - Server List

Function

Servers or containers having the process

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/processes/detail

Table 3-65 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-66 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **1** Maximum: **256**
host_name	No	String	Server name Minimum: **1** Maximum: **256**
host_ip	No	String	Server IP address Minimum: **1** Maximum: **256**
path	No	String	Path of the process execution file. Minimum: **1** Maximum: **256**

Parameter	Mandatory	Type	Description
category	No	String	Type. The default value is host. The options are as follows: • host • container Minimum: **0** Maximum: **64**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **100** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**

Request Parameters

Table 3-67 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**

Response Parameters

Status code: 200

Table 3-68 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number of server statistics Minimum: **0** Maximum: **10000**
data_list	Array of **ProcessesHostResponseInfo** objects	Server statistics list Array Length: **0 - 10000**

Table 3-69 ProcessesHostResponseInfo

Parameter	Type	Description
hash	String	The SHA256 value of the path. Minimum: **1** Maximum: **256**
host_ip	String	Server IP address Minimum: **1** Maximum: **256**
host_name	String	Server name Minimum: **1** Maximum: **256**
launch_params	String	Startup parameter Minimum: **1** Maximum: **256**
launch_time	Long	Start time Minimum: **0** Maximum: **4070880000000**
process_path	String	Process executable file path Minimum: **1** Maximum: **256**
process_pid	Integer	PID of the process Minimum: **0** Maximum: **65535**
run_permission	String	File permission Minimum: **1** Maximum: **256**

Parameter	Type	Description
container_id	String	Container ID Minimum: **1** Maximum: **128**
container_name	String	Container name Minimum: **1** Maximum: **256**

Example Requests

The first 10 servers whose process path is /usr/bin/bash are queried by default.

```
GET https://{endpoint}/v5/{project_id}/asset/processes/detail?path=/usr/bin/bash
```

Example Responses

Status code: 200

Servers having the process

```
{
  "total_num" : 1,
  "data_list" : [ {
    "hash" : "xxxxxx96a7ceb67731c0158xxxxxxff8456914d8275d221671d1190e888xxxxx",
    "host_ip" : "192.168.0.1",
    "host_name" : "ecs-euler-z00800211",
    "launch_params" : "",
    "launch_time" : 1673504622000,
    "process_path" : "/CloudResetPwdUpdateAgent/bin/wrapper",
    "process_pid" : 888,
    "run_permission" : "rwx------",
    "container_id" : "ce794b8a6071f5fd7e4d142dab7b36bedf2c7a4f6083fb82e5bbc82709b50018",
    "container_name" : "hss_imagescan_W73V1WO6"
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListProcessesHostSolution {

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



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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListProcessesHostRequest request = new ListProcessesHostRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withHostName("<host_name>");
        request.withHostIp("<host_ip>");
        request.withPath("<path>");
        request.withCategory("<category>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        try {
            ListProcessesHostResponse response = client.listProcessesHost(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListProcessesHostRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
```



```
        request.host_name = "<host_name>"
        request.host_ip = "<host_ip>"
        request.path = "<path>"
        request.category = "<category>"
        request.limit = <limit>
        request.offset = <offset>
        response = client.list_processes_host(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListProcessesHostRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    hostIpRequest:= "<host_ip>"
    request.HostIp = &hostIpRequest
    pathRequest:= "<path>"
    request.Path = &pathRequest
    categoryRequest:= "<category>"
    request.Category = &categoryRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    response, err := client.ListProcessesHost(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	Servers having the process

Error Codes

See **Error Codes**.

3.1.15 Asset Fingerprints - Port - Server List

Function

Servers or containers having the port

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/ports/detail

Table 3-70 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-71 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **1** Maximum: **256**

Parameter	Mandatory	Type	Description
host_name	No	String	Server name Minimum: **1** Maximum: **256**
host_ip	No	String	Server IP address Minimum: **1** Maximum: **256**
port	Yes	Integer	Port number Minimum: **1** Maximum: **65535**
type	No	String	Port type: TCP or UDP. Minimum: **1** Maximum: **256**
category	No	String	Type. The default value is host. The options are as follows: • host • container Minimum: **0** Maximum: **64**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **100** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **10000** Default: **0**

Request Parameters

Table 3-72 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**

Response Parameters

Status code: 200

Table 3-73 Response body parameters

Parameter	Type	Description
total_num	Integer	Total servers Minimum: **0** Maximum: **10000**
data_list	Array of **PortHostResponseInfo** objects	Server information list Array Length: **0 - 10000**

Table 3-74 PortHostResponseInfo

Parameter	Type	Description
container_id	String	Image ID Minimum: **1** Maximum: **256**
host_id	String	Server ID Minimum: **1** Maximum: **256**
host_ip	String	Server IP address Minimum: **1** Maximum: **256**

Parameter	Type	Description
host_name	String	Server name Minimum: **1** Maximum: **256**
laddr	String	Listening IP address Minimum: **1** Maximum: **256**
path	String	Path of the process execution file. Minimum: **1** Maximum: **256**
pid	Integer	pid Minimum: **0** Maximum: **100000**
port	Integer	Port Minimum: **0** Maximum: **65535**
status	String	Status Minimum: **1** Maximum: **256**
type	String	Port type: TCP or UDP. Minimum: **1** Maximum: **256**
container_name	String	Container name Minimum: **1** Maximum: **256**
agent_id	String	Agent ID Minimum: **1** Maximum: **128**

Example Requests

The first 10 servers whose port number is 22 are queried by default.

```
GET https://{endpoint}/v5/{project_id}/asset/ports/detail?port=22
```

Example Responses

Status code: 200

Servers having the port


```
{
  "total_num" : 1,
  "data_list" : [ {
    "host_id" : "03117200-xxxx-xxxx-xxxx-a89a10e66dbe",
    "host_ip" : "192.168.0.1",
    "host_name" : "ecs-eule",
    "laddr" : "0.0.0.0",
    "path" : "C:\\Windows\\system32\\svchost.exe",
    "port" : 888,
    "status" : "unknow",
    "type" : "UDP",
    "container_id" : "ce794b8a6-xxxx-xxxx-xxxxx-36bedf2c7a4f6083fb82e5bbc82709b50018",
    "container_name" : "hss_imagescan_W73V1WO6",
    "agent_id" : "03jjj-xxxx-xxxx-wwwsedf"
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListPortHostSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListPortHostRequest request = new ListPortHostRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withHostName("<host_name>");
        request.withHostIp("<host_ip>");
        request.withPort(<port>);
        request.withType("<type>");
        request.withCategory("<category>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        try {
            ListPortHostResponse response = client.listPortHost(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
```



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

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListPortHostRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.host_name = "<host_name>"
        request.host_ip = "<host_ip>"
        request.port = <port>
        request.type = "<type>"
        request.category = "<category>"
        request.limit = <limit>
        request.offset = <offset>
        response = client.list_port_host(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
```



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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListPortHostRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    hostIpRequest:= "<host_ip>"
    request.HostIp = &hostIpRequest
    request.Port = int32(<port>)
    typeRequest:= "<type>"
    request.Type = &typeRequest
    categoryRequest:= "<category>"
    request.Category = &categoryRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    response, err := client.ListPortHost(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	Servers having the port

Error Codes

See **Error Codes**.

3.1.16 Querying the Middleware List

Function

This API is used to query the middleware list. The server list can be queried by middleware name.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/midwares

Table 3-75 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **20** Maximum: **64**

Table 3-76 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **64**
file_name	No	String	JAR file name Minimum: **0** Maximum: **256**
category	No	String	Type. Its value can be: • host • container Minimum: **0** Maximum: **64**

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **200** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**

Request Parameters

Table 3-77 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **32** Maximum: **2097152**

Response Parameters

Status code: 200

Table 3-78 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number of JAR packages Minimum: **0** Maximum: **10000**

Parameter	Type	Description
data_list	Array of **JarPackageStatisticsResponseInfo** objects	JAR package statistics list Array Length: **0 - 300000**

Table 3-79 JarPackageStatisticsResponseInfo

Parameter	Type	Description
file_name	String	JAR file name Minimum: **0** Maximum: **256**
num	Integer	Total number of JAR packages Minimum: **0** Maximum: **300000**

Example Requests

The first 10 middleware records whose name is rt.jar and type is host are queried by default.

```
GET https://{endpoint}/v5/{project_id}/asset/midwares?file_name=rt.jar&category=host
```

Example Responses

Status code: 200

JarPackage statistics

```
{
  "data_list" : [ {
    "file_name" : "rt.jar",
    "num" : 18
  } ],
  "total_num" : 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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListJarPackageStatisticsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListJarPackageStatisticsRequest request = new ListJarPackageStatisticsRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withFileName("<file_name>");
        request.withCategory("<category>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        try {
            ListJarPackageStatisticsResponse response = client.listJarPackageStatistics(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

    client = HssClient.new_builder() \
```



```
        .with_credentials(credentials) \
        .with_region(HssRegion.value_of("<YOUR REGION>")) \
        .build()

    try:
        request = ListJarPackageStatisticsRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.file_name = "<file_name>"
        request.category = "<category>"
        request.limit = <limit>
        request.offset = <offset>
        response = client.list_jar_package_statistics(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListJarPackageStatisticsRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    fileNameRequest:= "<file_name>"
    request.FileName = &fileNameRequest
    categoryRequest:= "<category>"
    request.Category = &categoryRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    response, err := client.ListJarPackageStatistics(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	JarPackage statistics

Error Codes

See **Error Codes**.

3.1.17 Querying the Server List of a Specified Middleware

Function

This API is used to query the server list of a specified middleware. You can query the middleware server list by its middleware name.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/asset/midwares/detail

Table 3-80 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **20** Maximum: **64**

Table 3-81 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **64**

Parameter	Mandatory	Type	Description
file_name	Yes	String	File name Minimum: **1** Maximum: **256**
category	No	String	Type. Its value can be: • host • container Minimum: **0** Maximum: **64**
host_name	No	String	Server name Minimum: **0** Maximum: **64**
host_ip	No	String	Server IP address Minimum: **0** Maximum: **64**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **10** Maximum: **100** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **300000** Default: **0**
part_match	No	Boolean	Whether fuzzy match is used. The default value is false.

Request Parameters

Table 3-82 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **32** Maximum: **2097152**

Response Parameters

Status code: 200

Table 3-83 Response body parameters

Parameter	Type	Description
total_num	Integer	Total Minimum: **0** Maximum: **10000**
data_list	Array of **JarPackageHostInfo** objects	Server list Array Length: **0 - 10000**

Table 3-84 JarPackageHostInfo

Parameter	Type	Description
agent_id	String	agent_id Minimum: **1** Maximum: **64**
host_id	String	Server ID Minimum: **0** Maximum: **128**
host_name	String	Server name Minimum: **0** Maximum: **256**

Parameter	Type	Description
host_ip	String	Server IP address Minimum: **0** Maximum: **128**
file_name	String	JAR package name Minimum: **0** Maximum: **256**
name	String	JAR package name (without suffix) Minimum: **0** Maximum: **256**
catalogue	String	JAR package type Minimum: **0** Maximum: **32**
file_type	String	JAR package suffix Minimum: **0** Maximum: **32**
version	String	JAR package version Minimum: **0** Maximum: **64**
path	String	JAR package path Minimum: **0** Maximum: **512**
hash	String	JAR package hash Minimum: **0** Maximum: **512**
size	Integer	JAR package size Minimum: **0** Maximum: **2147483647**
uid	Integer	uid Minimum: **0** Maximum: **2147483647**
gid	Integer	gid Minimum: **0** Maximum: **2147483647**

Parameter	Type	Description
mode	String	File permissions Minimum: **0** Maximum: **32**
pid	Integer	Process ID Minimum: **0** Maximum: **2147483647**
proc_path	String	Process executable file path Minimum: **0** Maximum: **1024**
container_id	String	Container instance ID Minimum: **0** Maximum: **128**
container_name	String	Container name Minimum: **0** Maximum: **256**
package_path	String	Package path Minimum: **0** Maximum: **1024**
is_embedded	Integer	Whether to display a nested package Minimum: **0** Maximum: **2147483647**
record_time	Long	Scan time Minimum: **0** Maximum: **4070880000000**

Example Requests

The first 10 servers whose middleware name is log4j-core-2.8.2.jar and type is host are queried by default.

```
GET https://{endpoint}/v5/{project_id}/asset/midwares/detail?file_name=log4j-core-2.8.2.jar&category=host
```

Example Responses

Status code: 200

ListJarPackageHostInfo

```
{
  "data_list" : [ {
    "agent_id" : "2d0fe7824005bf001220ad9d892e86f8af44a7d3608dab11165008ce439d3583",
```

```
    "catalogue" : "util",
    "container_id" : "",
    "file_name" : "rt.jar",
    "file_type" : "jar",
    "gid" : 0,
    "hash" : "04bf14e3b1da55d95561ca78cb29caa909410051dbe047e91ad6f5c1dedb8d6d",
    "host_id" : "103ed820-62e5-4754-b0f8-3e47b6dd49d2",
    "host_ip" : "192.168.1.76",
    "host_name" : "Do not delete the test.",
    "mode" : "-rw-------",
    "name" : "Java Runtime Environment",
    "path" : "/CloudResetPwdUpdateAgent/depend/jre/lib/rt.jar",
    "pid" : 1614,
    "proc_path" : "/CloudResetPwdUpdateAgent/depend/jre/bin/java",
    "record_time" : 1690513169986,
    "uid" : 0,
    "version" : "1.8.0_252",
    "size" : 128,
    "container_name" : "aaaa",
    "package_path" : "/CloudResetPwdUpdateAgent/depend/jre/bin/java",
    "is_embedded" : 0
  } ],
  "total_num" : 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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListJarPackageHostInfoSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListJarPackageHostInfoRequest request = new ListJarPackageHostInfoRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withFileName("<file_name>");
        request.withCategory("<category>");
        request.withHostName("<host_name>");
        request.withHostIp("<host_ip>");
```



```
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withPartMatch(<part_match>);
        try {
            ListJarPackageHostInfoResponse response = client.listJarPackageHostInfo(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListJarPackageHostInfoRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.file_name = "<file_name>"
        request.category = "<category>"
        request.host_name = "<host_name>"
        request.host_ip = "<host_ip>"
        request.limit = <limit>
        request.offset = <offset>
        request.part_match = <PartMatch>
        response = client.list_jar_package_host_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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListJarPackageHostInfoRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    request.FileName = "<file_name>"
    categoryRequest:= "<category>"
    request.Category = &categoryRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    hostIpRequest:= "<host_ip>"
    request.HostIp = &hostIpRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    partMatchRequest:= <part_match>
    request.PartMatch = &partMatchRequest
    response, err := client.ListJarPackageHostInfo(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	ListJarPackageHostInfo

Error Codes

See **Error Codes**.

3.2 Ransomware Prevention

3.2.1 Querying the Servers Protected Against Ransomware

Function

This API is used to query the list of servers protected against ransomware. This API needs to be used together with Cloud Backup and Recovery (CBR). Ensure the site has CBR before using ransomware-related APIs.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/ransomware/server

Table 3-85 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-86 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**

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 no less than 0. The default value is **0**. Minimum: **0** Maximum: **2000000** Default: **0**
limit	No	Integer	Number of records displayed on each page. Minimum: **10** Maximum: **200** Default: **10**
host_name	No	String	Server name
os_type	No	String	OS type. Its value can be: ● Linux ● Windows Minimum: **0** Maximum: **64**
host_ip	No	String	Server IP address Minimum: **0** Maximum: **256**
host_status	No	String	Server status. Its value can be: ● If no parameter is transferred, it indicates all items. – ACTIVE – SHUTOFF Minimum: **1** Maximum: **32**
last_days	No	Integer	Number of days in the query time range. To query records in the last seven days, set last_days=7. If this parameter is not specified, the events and existing backups in the last day are queried by default. Minimum: **1** Maximum: **30**

Request Parameters

Table 3-87 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-88 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number Minimum: **0** Maximum: **2097152**
data_list	Array of **ProtectionServerInfo** objects	Query the servers protected against ransomware. Array Length: **0 - 10241**

Table 3-89 ProtectionServerInfo

Parameter	Type	Description
host_id	String	Server ID Minimum: **0** Maximum: **128**
agent_id	String	Agent ID Minimum: **0** Maximum: **128**

Parameter	Type	Description
host_name	String	Server name Minimum: **0** Maximum: **128**
host_ip	String	EIP Minimum: **0** Maximum: **128**
private_ip	String	Private IP address Minimum: **0** Maximum: **128**
os_type	String	OS type. Its value can be: • Linux • Windows Minimum: **0** Maximum: **128**
os_name	String	OS name Minimum: **0** Maximum: **128**
host_status	String	Server status. The options are as follows: • ACTIVE • SHUTOFF Minimum: **1** Maximum: **32**
ransom_protection_status	String	Ransomware protection status. The options are as follows: • closed • opened • opening: The function is being enabled. • closing: The function is being disabled. Minimum: **0** Maximum: **128**
agent_version	String	Agent version Minimum: **1** Maximum: **128**

Parameter	Type	Description
protect_status	String	Protection status. Its value can be: • closed • opened: protection enabled Minimum: **1** Maximum: **32**
group_id	String	Server group ID Minimum: **1** Maximum: **128**
group_name	String	Server group name Minimum: **1** Maximum: **128**
protect_policy_id	String	Policy ID Minimum: **1** Maximum: **128**
protect_policy_name	String	Protection policy name Minimum: **1** Maximum: **128**
backup_error	**backup_error** object	Backup error message
backup_protection_status	String	Whether to enable backup. The options are as follows: • failed_to_turn_on_backup: Backup cannot be enabled. • closed • opened Minimum: **0** Maximum: **128**
count_protect_event	Integer	Number of protection events Minimum: **0** Maximum: **2097152**
count_backuped	Integer	Existing backups Minimum: **0** Maximum: **2097152**
agent_status	String	Agent status Minimum: **1** Maximum: **128**

Parameter	Type	Description
version	String	HSS edition. Its value can be: • hss.version.null • hss.version.basic: basic edition • hss.version.advanced: professional edition • hss.version.enterprise: enterprise edition • hss.version.premium: premium edition • hss.version.wtp: WTP edition • hss.version.container.enterprise: container edition Minimum: **1** Maximum: **32**
host_source	String	Indicates the server type. The options are as follows: • ecs : • outside: on-premises servers • workspace: cloud desktop Minimum: **1** Maximum: **32**
vault_id	String	Vault ID Minimum: **0** Maximum: **128**
vault_name	String	Vault name Minimum: **0** Maximum: **128**
vault_size	Integer	Total capacity, in GB. Minimum: **0** Maximum: **2097152**
vault_used	Integer	Used capacity, in MB. Minimum: **0** Maximum: **2097152**
vault_allocated	Integer	Allocated bound server capacity, in GB. Minimum: **0** Maximum: **2097152**
vault_charging_mode	String	Repository mode, the value can be post_paid (pay-per-use) or pre_paid. Minimum: **0** Maximum: **128**

Parameter	Type	Description
vault_status	String	Vault status can be: • available • lock • frozen • deleting • error Minimum: **0** Maximum: **128**
backup_policy_id	String	Specifies the backup policy ID. If this parameter is empty, the backup policy is not bound. If this parameter is not empty, check whether the backup policy is enabled based on the backup_policy_enabled field. Minimum: **1** Maximum: **128**
backup_policy_name	String	Backup policy name Minimum: **1** Maximum: **128**
backup_policy_enabled	Boolean	Whether the policy is enabled
resources_num	Integer	Bound servers Minimum: **0** Maximum: **2097152**

Table 3-90 backup_error

Parameter	Type	Description
error_code	Integer	Error code. The options are as follows: • 0: No error information. • 1: Backup cannot be enabled because another vault has been bound. • 2: The number of backup vaults exceeds the upper limit. • 3: An exception occurs when the CBR API is called. Minimum: **0** Maximum: **128**

Parameter	Type	Description
error_description	String	Error description Minimum: **1** Maximum: **128**

Example Requests

Query the list of ransomware protection servers. If the limit parameter is not set, 10 records are returned by default.

```
GET https://{endpoint}/v5/{project_id}/ransomware/server
```

Example Responses

Status code: 200

List of servers protected against ransomware

```
{
  "total_num" : 1,
  "data_list" : [ {
    "agent_id" : "2758d2a61598fd9144cfa6b201049e7c0af8c3f1280cd24e3ec95a2f0811a2a2",
    "agent_status" : "online",
    "backup_error" : {
      "error_code" : 1,
      "error_description" : "Backup cannot be enabled because another vault has been bound."
    },
    "ransom_protection_status" : "opened",
    "backup_protection_status" : "failed_to_turn_on_backup",
    "count_backuped" : 0,
    "count_protect_event" : 0,
    "group_id" : "7c659ea3-006f-4687-9f1c-6d975d955f37",
    "group_name" : "333",
    "host_id" : "caa958ad-a481-4d46-b51e-6861b8864515",
    "host_ip" : "100.85.119.68",
    "host_name" : "Euler",
    "host_status" : "ACTIVE",
    "os_name" : "EulerOS",
    "os_type" : "Linux",
    "private_ip" : "100.85.123.9",
    "protect_policy_id" : "0253edfd-30e7-439d-8f3f-17c54c99706",
    "protect_policy_name" : "tst",
    "protect_status" : "opened"
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListProtectionServerSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListProtectionServerRequest request = new ListProtectionServerRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withOffset(<offset>);
        request.withLimit(<limit>);
        request.withHostName("<host_name>");
        request.withOsType("<os_type>");
        request.withHostIp("<host_ip>");
        request.withHostStatus("<host_status>");
        request.withLastDays(<last_days>);
        try {
            ListProtectionServerResponse response = client.listProtectionServer(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

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



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

    try:
        request = ListProtectionServerRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.offset = <offset>
        request.limit = <limit>
        request.host_name = "<host_name>"
        request.os_type = "<os_type>"
        request.host_ip = "<host_ip>"
        request.host_status = "<host_status>"
        request.last_days = <last_days>
        response = client.list_protection_server(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListProtectionServerRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    osTypeRequest:= "<os_type>"
    request.OsType = &osTypeRequest
    hostIpRequest:= "<host_ip>"
    request.HostIp = &hostIpRequest
```



```
    hostStatusRequest:= "<host_status>"
    request.HostStatus = &hostStatusRequest
    lastDaysRequest:= int32(<last_days>)
    request.LastDays = &lastDaysRequest
    response, err := client.ListProtectionServer(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	List of servers protected against ransomware

Error Codes

See **Error Codes**.

3.2.2 Querying the Protection Policy List of Ransomware

Function

This API is used to query the the protection policy list of ransomware.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/ransomware/protection/policy

Table 3-91 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-92 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**
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**. Minimum: **0** Maximum: **2000000** Default: **0**
limit	No	Integer	Number of records displayed on each page. Minimum: **10** Maximum: **200** Default: **10**
policy_name	No	String	Policy name Minimum: **0** Maximum: **128**
protect_policy_id	No	String	Policy ID Minimum: **0** Maximum: **128**
operating_system	No	String	OSs supported by the policy. The options are as follows: • Windows • Linux Minimum: **0** Maximum: **128**

Request Parameters

Table 3-93 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-94 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number of policies Minimum: **0** Maximum: **2097152**
data_list	Array of **ProtectionPolicyInfo** objects	Query the list of policies. Array Length: **0 - 10241**

Table 3-95 ProtectionPolicyInfo

Parameter	Type	Description
policy_id	String	Policy ID Minimum: **0** Maximum: **128**
policy_name	String	Policy name Minimum: **0** Maximum: **128**

Parameter	Type	Description
protection_mode	String	Action. Its value can be: • alarm_and_isolation: Report an alarm and isolate. • alarm_only: Only report alarms. Minimum: **0** Maximum: **128**
bait_protection_status	String	Whether to enable honeypot protection. By default, the protection is enabled. Its value can be: • opened • closed Minimum: **0** Maximum: **128**
deploy_mode	String	Whether to enable honeypot protection. The options are as follows. By default, dynamic honeypot protection is disabled. • opened • closed Minimum: **0** Maximum: **128**
protection_directory	String	Protected directory Minimum: **1** Maximum: **128**
protection_type	String	Protected file type, for example, .docx, .txt, and .avi. Minimum: **0** Maximum: **128**
exclude_directory	String	(Optional) excluded directory Minimum: **1** Maximum: **128**
runtime_detection_status	String	Whether to perform runtime checks. The options are as follows. Currently, it can only be disabled. This field is reserved. • opened • closed Minimum: **0** Maximum: **128**

Parameter	Type	Description
runtime_detection_directory	String	Directory to be checked during running. This field is reserved. Minimum: **1** Maximum: **128**
count_associated_server	Integer	Number of associated servers Minimum: **0** Maximum: **2097152**
operating_system	String	OS type. • Linux • Windows Minimum: **0** Maximum: **128**
process_whitelist	Array of **TrustProcessInfo** objects	Process whitelist Array Length: **0 - 20**
default_policy	Integer	Indicates whether the policy is the default policy. The options are as follows: • 0: non-default policy • 1: default policy Minimum: **0** Maximum: **10**

Table 3-96 TrustProcessInfo

Parameter	Type	Description
path	String	Indicates the process path. Minimum: **0** Maximum: **128**
hash	String	Process hash Minimum: **0** Maximum: **128**

Example Requests

Query the protection policy list of ransomware. If limit is not specified, 10 records are returned by default.

```
GET https://{endpoint}/v5/{project_id}/ransomware/protection/policy
```


Example Responses

Status code: 200

Protection policy list

```
{
  "total_num" : 1,
  "data_list" : [ {
    "bait_protection_status" : "opened",
    "exclude_directory" : "/opt",
    "count_associated_server" : 0,
    "operating_system" : "Linux",
    "protection_mode" : "alarm_only",
    "policy_id" : "4117d16-074b-41ae-b7d7-9cc25ee258",
    "policy_name" : "test",
    "protection_directory" : "/dd",
    "protection_type" : "docx",
    "runtime_detection_status" : "closed"
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListProtectionPolicySolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListProtectionPolicyRequest request = new ListProtectionPolicyRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withOffset(<offset>);
        request.withLimit(<limit>);
        request.withPolicyName("<policy_name>");
        request.withProtectPolicyId("<protect_policy_id>");
        request.withOperatingSystem("<operating_system>");
        try {
```



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

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListProtectionPolicyRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.offset = <offset>
        request.limit = <limit>
        request.policy_name = "<policy_name>"
        request.protect_policy_id = "<protect_policy_id>"
        request.operating_system = "<operating_system>"
        response = client.list_protection_policy(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)
```



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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListProtectionPolicyRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    policyNameRequest:= "<policy_name>"
    request.PolicyName = &policyNameRequest
    protectPolicyIdRequest:= "<protect_policy_id>"
    request.ProtectPolicyId = &protectPolicyIdRequest
    operatingSystemRequest:= "<operating_system>"
    request.OperatingSystem = &operatingSystemRequest
    response, err := client.ListProtectionPolicy(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	Protection policy list

Error Codes

See **Error Codes**.

3.2.3 Modifying Ransomware Protection Policies

Function

This API is used to modify ransomware protection policies.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v5/{project_id}/ransomware/protection/policy

Table 3-97 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-98 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**

Request Parameters

Table 3-99 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**

Parameter	Mandatory	Type	Description
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Table 3-100 Request body parameters

Parameter	Mandatory	Type	Description
policy_id	Yes	String	Policy ID Minimum: **0** Maximum: **128**
policy_name	Yes	String	Policy name Minimum: **0** Maximum: **128**
protection_mode	Yes	String	Action. Its value can be: • alarm_and_isolation: Report an alarm and isolate. • alarm_only: Only report alarms. Minimum: **0** Maximum: **128**
bait_protection_status	No	String	Whether to enable honeypot protection. By default, the protection is enabled. Its value can be: • opened • closed Minimum: **0** Maximum: **128**
protection_directory	Yes	String	Protected directory. Separate multiple directories with semicolons (;). You can configure up to 20 directories. Minimum: **1** Maximum: **128**
protection_type	Yes	String	Protected file type, for example, .docx, .txt, and .avi. Minimum: **1** Maximum: **128**

Parameter	Mandatory	Type	Description
exclude_directory	No	String	(Optional) Excluded directory. Separate multiple directories with semicolons (;). You can configure up to 20 directories. Minimum: **1** Maximum: **128**
agent_id_list	No	Array of strings	Specifies the IDs of agents for which the ransomware protection policy is enabled. Minimum: **1** Maximum: **128** Array Length: **0 - 10000**
operating_system	Yes	String	OSs supported by the policy. The options are as follows: • Windows • Linux Minimum: **0** Maximum: **64**
runtime_detection_status	No	String	Whether to perform runtime checks. The options are as follows. Currently, it can only be disabled. This field is reserved. • opened • closed Minimum: **0** Maximum: **128**
process_whitelist	No	Array of **TrustProcessInfo** objects	Process whitelist Array Length: **0 - 20**

Table 3-101 TrustProcessInfo

Parameter	Mandatory	Type	Description
path	No	String	Indicates the process path. Minimum: **0** Maximum: **128**

Parameter	Mandatory	Type	Description
hash	No	String	Process hash Minimum: **0** Maximum: **128**

Response Parameters

None

Example Requests

Modify the ransomware protection policy. Set the OS type to Linux, protection policy ID to 0253edfd-30e7-439d-8f3f-17c54c997064, and protection action to alert only.

```
PUT https://{endpoint}/v5/{project_id}/ransomware/protection/policy

{
  "bait_protection_status" : "opened",
  "protection_type" : "docx",
  "exclude_directory" : "",
  "operating_system" : "Linux",
  "policy_id" : "0253edfd-30e7-439d-8f3f-17c54c997064",
  "policy_name" : "aaa",
  "protection_mode" : "alarm_only",
  "protection_directory" : "/root",
  "runtime_detection_status" : "closed",
  "agent_id_list" : [ "" ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Modify the ransomware protection policy. Set the OS type to Linux, protection policy ID to 0253edfd-30e7-439d-8f3f-17c54c997064, and protection action to alert only.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

import java.util.List;
```



```
import java.util.ArrayList;

public class UpdateProtectionPolicySolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateProtectionPolicyRequest request = new UpdateProtectionPolicyRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        UpdateProtectionPolicyInfoRequestInfo body = new UpdateProtectionPolicyInfoRequestInfo();
        List<String> listbodyAgentIdList = new ArrayList<>();
        listbodyAgentIdList.add("");
        body.withRuntimeDetectionStatus("closed");
        body.withOperatingSystem("Linux");
        body.withAgentIdList(listbodyAgentIdList);
        body.withExcludeDirectory("");
        body.withProtectionType("docx");
        body.withProtectionDirectory("/root");
        body.withBaitProtectionStatus("opened");
        body.withProtectionMode("alarm_only");
        body.withPolicyName("aaa");
        body.withPolicyId("0253edfd-30e7-439d-8f3f-17c54c997064");
        request.withBody(body);
        try {
            UpdateProtectionPolicyResponse response = client.updateProtectionPolicy(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

Modify the ransomware protection policy. Set the OS type to Linux, protection policy ID to 0253edfd-30e7-439d-8f3f-17c54c997064, and protection action to alert only.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

if __name__ == "__main__":
```



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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = UpdateProtectionPolicyRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        listAgentIdListbody = [
            ""
        ]
        request.body = UpdateProtectionPolicyInfoRequestInfo(
            runtime_detection_status="closed",
            operating_system="Linux",
            agent_id_list=listAgentIdListbody,
            exclude_directory="",
            protection_type="docx",
            protection_directory="/root",
            bait_protection_status="opened",
            protection_mode="alarm_only",
            policy_name="aaa",
            policy_id="0253edfd-30e7-439d-8f3f-17c54c997064"
        )
        response = client.update_protection_policy(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

Modify the ransomware protection policy. Set the OS type to Linux, protection policy ID to 0253edfd-30e7-439d-8f3f-17c54c997064, and protection action to alert only.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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



```
        WithSk(sk).
        Build()

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateProtectionPolicyRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    var listAgentIdListbody = []string{
        "",
    }
    runtimeDetectionStatusUpdateProtectionPolicyInfoRequestInfo:= "closed"
    excludeDirectoryUpdateProtectionPolicyInfoRequestInfo:= ""
    baitProtectionStatusUpdateProtectionPolicyInfoRequestInfo:= "opened"
    request.Body = &model.UpdateProtectionPolicyInfoRequestInfo{
        RuntimeDetectionStatus: &runtimeDetectionStatusUpdateProtectionPolicyInfoRequestInfo,
        OperatingSystem: "Linux",
        AgentIdList: &listAgentIdListbody,
        ExcludeDirectory: &excludeDirectoryUpdateProtectionPolicyInfoRequestInfo,
        ProtectionType: "docx",
        ProtectionDirectory: "/root",
        BaitProtectionStatus: &baitProtectionStatusUpdateProtectionPolicyInfoRequestInfo,
        ProtectionMode: "alarm_only",
        PolicyName: "aaa",
        PolicyId: "0253edfd-30e7-439d-8f3f-17c54c997064",
    }
    response, err := client.UpdateProtectionPolicy(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	success

Error Codes

See **Error Codes**.

3.2.4 Enabling Ransomware Prevention

Function

To enable ransomware protection, ensure CBR is available in the region. Ransomware prevention works with CBR.

Calling Method

For details, see **Calling APIs**.

URI

POST /v5/{project_id}/ransomware/protection/open

Table 3-102 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-103 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**

Request Parameters

Table 3-104 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Table 3-105 Request body parameters

Parameter	Mandatory	Type	Description
operating_system	Yes	String	OSs of the server to be protected. The options are as follows: • Windows • Linux Minimum: **0** Maximum: **64**
ransom_protection_status	Yes	String	Whether ransomware protection is enabled. Its value can be: • closed • opened If this parameter is enabled, either protection_policy_id or create_protection_policy must be specified. Minimum: **0** Maximum: **64**
protection_policy_id	No	String	Ransomware protection policy ID. If you select an existing policy, this parameter is mandatory. Minimum: **0** Maximum: **64**
create_protection_policy	No	**ProtectionProxyInfoRequestInfo** object	Create a protection policy. For a new protection policy, leave protection_policy_id blank and specify create_protection_policy.
backup_protection_status	Yes	String	Whether to back up data on the server. Its value can be: • closed • opened If server backup is enabled, backup_cycle is mandatory. Minimum: **0** Maximum: **64**

Parameter	Mandatory	Type	Description
backup_resources	No	**BackupResources** object	This parameter is mandatory when the backup function is enabled. If this parameter is empty, the vault bound to HSS_projectid is compatible.
backup_policy_id	No	String	Backup policy ID Minimum: **0** Maximum: **64**
backup_cycle	No	**UpdateBackupPolicyRequestInfo1** object	Backup policy.
agent_id_list	Yes	Array of strings	IDs of agents where protection is enabled Minimum: **0** Maximum: **64** Array Length: **0 - 24**
host_id_list	Yes	Array of strings	IDs of servers where protection is enabled Minimum: **0** Maximum: **64** Array Length: **0 - 24**

Table 3-106 ProtectionProxyInfoRequestInfo

Parameter	Mandatory	Type	Description
policy_id	No	String	Policy ID. This parameter is optional for a new policy. Minimum: **0** Maximum: **64**
policy_name	No	String	Policy name. This parameter is mandatory when you create a protection policy. Minimum: **0** Maximum: **64**

Parameter	Mandatory	Type	Description
protection_mode	No	String	Protection action. This parameter is mandatory when you create a protection policy. The options are as follows: • alarm_and_isolation: Report an alarm and isolate. • alarm_only: Only report alarms. Minimum: **0** Maximum: **64**
bait_protection_status	No	String	Whether to enable honeypot protection. This parameter is mandatory when you create a protection policy. The options are as follows. By default, honeypot protection is enabled. • opened • closed Minimum: **0** Maximum: **64**
protection_directory	No	String	Protected directory. This parameter is mandatory when you create a protection policy. Minimum: **0** Maximum: **64**
protection_type	No	String	Protection type. This parameter is mandatory when you create a protection policy. Minimum: **0** Maximum: **64**
exclude_directory	No	String	(Optional) Excluded directory Minimum: **0** Maximum: **64**

Parameter	Mandatory	Type	Description
runtime_detection_status	No	String	(Optional) Whether to perform runtime checks. The options are as follows. Currently, it can only be disabled. This field is reserved. • opened • closed Minimum: **0** Maximum: **64**
operating_system	No	String	OS. This parameter is mandatory when you create a protection policy. Its value can be: • Windows • Linux Minimum: **0** Maximum: **64**
process_whitelist	No	Array of **TrustProcessInfo** objects	Process whitelist Array Length: **0 - 20**

Table 3-107 TrustProcessInfo

Parameter	Mandatory	Type	Description
path	No	String	Indicates the process path. Minimum: **0** Maximum: **128**
hash	No	String	Process hash Minimum: **0** Maximum: **128**

Table 3-108 BackupResources

Parameter	Mandatory	Type	Description
vault_id	No	String	Select the ID of the vault to be bound. The value cannot be empty. Minimum: **0** Maximum: **64**

Parameter	Mandatory	Type	Description
resource_list	No	Array of **ResourceInfo** objects	List of servers for which the backup function needs to be enabled Array Length: **0 - 20**

Table 3-109 ResourceInfo

Parameter	Mandatory	Type	Description
host_id	No	String	Server ID Minimum: **0** Maximum: **128**
history_backup_status	No	String	Whether to enable backup status depends on error_message or status of available servers. If error_message is empty, backup is not enabled and the value of this field is closed. If error_message is not empty, the value of this field is opened. Minimum: **0** Maximum: **128**

Table 3-110 UpdateBackupPolicyRequestInfo1

Parameter	Mandatory	Type	Description
enabled	No	Boolean	Whether the policy is enabled. The default value is true.
policy_id	No	String	Policy ID. This parameter is mandatory if backup protection is enabled. Minimum: **1** Maximum: **256**
operation_definition	No	**OperationDefinitionRequestInfo** object	Scheduling parameter.
trigger	No	**BackupTriggerRequestInfo1** object	Time scheduling rule for the policy.

Table 3-111 OperationDefinitionRequestInfo

Parameter	Mandatory	Type	Description
day_backups	No	Integer	Maximum number of retained daily backups. The latest backup of each day is saved in the long term. This parameter is not affected by the maximum number of retained backup. The value ranges from 0 to 100. If this parameter is specified, timezone must be configured. Minimum value: 0. Maximum value: 100 Minimum: **0** Maximum: **100**
max_backups	No	Integer	Maximum number of automated backups that can be retained for an object. The value can be -1 or ranges from 0 to 99999. If the value is set to -1, the backups will not be cleared even though the configured retained backup quantity limit is exceeded. If this parameter and retention_duration_days are left blank at the same time, the backups will be retained permanently. Minimum value: 1. Maximum value: 99999. Default value: -1 Minimum: **-1** Maximum: **99999**
month_backups	No	Integer	Maximum number of retained monthly backups. The latest backup of each month is saved in the long term. This parameter is not affected by the maximum number of retained backup. The value ranges from 0 to 100. If this parameter is specified, timezone must be configured. Minimum value: 0. Maximum value: 100 Minimum: **0** Maximum: **100**

Parameter	Mandatory	Type	Description
retention_duration_days	No	Integer	Duration of retaining a backup, in days. The maximum value is 99999. If the value is set to -1, backups will not be cleared even though the configured retention duration is exceeded. If this parameter and max_backups are left blank at the same time, the backups will be retained permanently. Minimum value: 1. Maximum value: 99999. Default value: -1 Minimum: **-1** Maximum: **99999**
timezone	No	String	Time zone where the user is located, for example, UTC +08:00. Set this parameter only after you have configured any of the parameters day_backups, week_backups, month_backups, and year_backups. Minimum: **0** Maximum: **256**
week_backups	No	Integer	Maximum number of retained weekly backups. The latest backup of each week is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by max_backups. The value ranges from 0 to 100. If this parameter is specified, timezone must be configured. Minimum: **0** Maximum: **100**

Parameter	Mandatory	Type	Description
year_backups	No	Integer	Maximum number of retained yearly backups. The latest backup of each year is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by max_backups. The value ranges from 0 to 100. If this parameter is specified, timezone must be configured. Minimum value: 0. Maximum value: 100 Minimum: **0** Maximum: **100**

Table 3-112 BackupTriggerRequestInfo1

Parameter	Mandatory	Type	Description
properties	No	**BackupTriggerPropertiesRequestInfo1** object	Time rule for policy execution. This parameter is mandatory if the backup function is enabled with ransomware protection.

Table 3-113 BackupTriggerPropertiesRequestInfo1

Parameter	Mandatory	Type	Description
pattern	No	Array of strings	Scheduling rule. This parameter is mandatory if the backup function is enabled with ransomware protection. A maximum of 24 rules can be configured. The scheduling rule complies with iCalendar RFC 2445, but it supports only parameters FREQ, BYDAY, BYHOUR, BYMINUTE, and INTERVAL. FREQ can be set only to WEEKLY or DAILY. BYDAY can be set to MO, TU, WE, TH, FR, SA, or SU (seven days of a week). BYHOUR ranges from 0 to 23 hours. BYMINUTE ranges from 0 minutes to 59 minutes. The scheduling interval must not be less than 1 hour. A maximum of 24 time points are allowed in a day. For example, if the scheduling time is 14:00 from Monday to Sunday, set the scheduling rule as follows: FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;BYHOUR=14;BYMINUTE=00. To start scheduling at 14:00 every day, the rule is as follows: FREQ=DAILY;INTERVAL=1;BYHOUR=14;BYMINUTE=00'. Minimum: **1** Maximum: **256** Array Length: **0 - 24**

Response Parameters

None

Example Requests

Enable ransomware protection for the server. The OS type is Linux, the target server ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f, and the agent ID of the target server is

c9bed5397db449ebdfba15e85fcfc36accee125c68954daf5cab0528bab59bd8. Server backup is disabled.

```
POST https://{endpoint}/v5/{project_id}/ransomware/protection/open

{
  "ransom_protection_status" : "opened",
  "backup_protection_status" : "closed",
  "operating_system" : "Linux",
  "protection_policy_id" : "",
  "agent_id_list" : [ "c9bed5397db449ebdfba15e85fcfc36accee125c68954daf5cab0528bab59bd8" ],
  "host_id_list" : [ "71a15ecc-049f-4cca-bd28-5e90aca1817f" ],
  "create_protection_policy" : {
    "bait_protection_status" : "opened",
    "exclude_directory" : "",
    "protection_mode" : "alarm_only",
    "policy_name" : "test111",
    "protection_directory" : "/etc/test",
    "protection_type" : "docx"
  }
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Enable ransomware protection for the server. The OS type is Linux, the target server ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f, and the agent ID of the target server is c9bed5397db449ebdfba15e85fcfc36accee125c68954daf5cab0528bab59bd8. Server backup is 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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class StartProtectionSolution {

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

        ICredential auth = new BasicCredentials()
```



```
            .withAk(ak)
            .withSk(sk);

    HssClient client = HssClient.newBuilder()
            .withCredential(auth)
            .withRegion(HssRegion.valueOf("<YOUR REGION>"))
            .build();
    StartProtectionRequest request = new StartProtectionRequest();
    request.withEnterpriseProjectId("<enterprise_project_id>");
    ProtectionInfoRequestInfo body = new ProtectionInfoRequestInfo();
    List<String> listbodyHostIdList = new ArrayList<>();
    listbodyHostIdList.add("71a15ecc-049f-4cca-bd28-5e90aca1817f");
    List<String> listbodyAgentIdList = new ArrayList<>();
    listbodyAgentIdList.add("c9bed5397db449ebdfba15e85fcfc36accee125c68954daf5cab0528bab59bd8");
    ProtectionProxyInfoRequestInfo createProtectionPolicybody = new ProtectionProxyInfoRequestInfo();
    createProtectionPolicybody.withPolicyName("test111")
        .withProtectionMode("alarm_only")
        .withBaitProtectionStatus("opened")
        .withProtectionDirectory("/etc/test")
        .withProtectionType("docx")
        .withExcludeDirectory("");
    body.withHostIdList(listbodyHostIdList);
    body.withAgentIdList(listbodyAgentIdList);
    body.withBackupProtectionStatus("closed");
    body.withCreateProtectionPolicy(createProtectionPolicybody);
    body.withProtectionPolicyId("");
    body.withRansomProtectionStatus("opened");
    body.withOperatingSystem("Linux");
    request.withBody(body);
    try {
        StartProtectionResponse response = client.startProtection(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 ransomware protection for the server. The OS type is Linux, the target server ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f, and the agent ID of the target server is c9bed5397db449ebdfba15e85fcfc36accee125c68954daf5cab0528bab59bd8. Server backup is disabled.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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



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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = StartProtectionRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        listHostIdListbody = [
            "71a15ecc-049f-4cca-bd28-5e90aca1817f"
        ]
        listAgentIdListbody = [
            "c9bed5397db449ebdfba15e85fcfc36accee125c68954daf5cab0528bab59bd8"
        ]
        createProtectionPolicybody = ProtectionProxyInfoRequestInfo(
            policy_name="test111",
            protection_mode="alarm_only",
            bait_protection_status="opened",
            protection_directory="/etc/test",
            protection_type="docx",
            exclude_directory=""
        )
        request.body = ProtectionInfoRequestInfo(
            host_id_list=listHostIdListbody,
            agent_id_list=listAgentIdListbody,
            backup_protection_status="closed",
            create_protection_policy=createProtectionPolicybody,
            protection_policy_id="",
            ransom_protection_status="opened",
            operating_system="Linux"
        )
        response = client.start_protection(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 ransomware protection for the server. The OS type is Linux, the target server ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f, and the agent ID of the target server is c9bed5397db449ebdfba15e85fcfc36accee125c68954daf5cab0528bab59bd8. Server backup is disabled.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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



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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.StartProtectionRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    var listHostIdListbody = []string{
        "71a15ecc-049f-4cca-bd28-5e90aca1817f",
    }
    var listAgentIdListbody = []string{
        "c9bed5397db449ebdfba15e85fcfc36accee125c68954daf5cab0528bab59bd8",
    }
    policyNameCreateProtectionPolicy:= "test111"
    protectionModeCreateProtectionPolicy:= "alarm_only"
    baitProtectionStatusCreateProtectionPolicy:= "opened"
    protectionDirectoryCreateProtectionPolicy:= "/etc/test"
    protectionTypeCreateProtectionPolicy:= "docx"
    excludeDirectoryCreateProtectionPolicy:= ""
    createProtectionPolicybody := &model.ProtectionProxyInfoRequestInfo{
        PolicyName: &policyNameCreateProtectionPolicy,
        ProtectionMode: &protectionModeCreateProtectionPolicy,
        BaitProtectionStatus: &baitProtectionStatusCreateProtectionPolicy,
        ProtectionDirectory: &protectionDirectoryCreateProtectionPolicy,
        ProtectionType: &protectionTypeCreateProtectionPolicy,
        ExcludeDirectory: &excludeDirectoryCreateProtectionPolicy,
    }
    protectionPolicyIdProtectionInfoRequestInfo:= ""
    request.Body = &model.ProtectionInfoRequestInfo{
        HostIdList: listHostIdListbody,
        AgentIdList: listAgentIdListbody,
        BackupProtectionStatus: "closed",
        CreateProtectionPolicy: createProtectionPolicybody,
        ProtectionPolicyId: &protectionPolicyIdProtectionInfoRequestInfo,
        RansomProtectionStatus: "opened",
        OperatingSystem: "Linux",
    }
    response, err := client.StartProtection(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	Ransomware protection enabled.

Error Codes

See **Error Codes**.

3.2.5 Disabling Ransomware Prevention

Function

This API is used to disable ransomware prevention.

Calling Method

For details, see **Calling APIs**.

URI

POST /v5/{project_id}/ransomware/protection/close

Table 3-114 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-115 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**

Request Parameters

Table 3-116 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Table 3-117 Request body parameters

Parameter	Mandatory	Type	Description
host_id_list	Yes	Array of strings	IDs of servers where ransomware protection needs to be disabled Minimum: **0** Maximum: **64** Array Length: **0 - 20**
agent_id_list	Yes	Array of strings	IDs of agents where ransomware prevention needs to be disabled Minimum: **0** Maximum: **64** Array Length: **0 - 20**
close_protection_type	Yes	String	Type of disabled protection. The options are as follows: • close_anti: Ransomware prevention is disabled. Minimum: **0** Maximum: **64**

Response Parameters

None

Example Requests

Disable ransomware protection for the server. The target server ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f, and the agent ID of the target server is c9bed5397db449ebdfba15e85fcfc36accee954daf5cab0528bab59bd8.

```
POST https://{endpoint}/v5/{project_id}/ransomware/protection/close

{
  "close_protection_type" : "close_anti",
  "host_id_list" : [ "71a15ecc-049f-4cca-bd28-5e90aca1817f" ],
  "agent_id_list" : [ "c9bed5397db449ebdfba15e85fcfc36accee954daf5cab0528bab59bd8" ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Disable ransomware protection for the server. The target server ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f, and the agent ID of the target server is c9bed5397db449ebdfba15e85fcfc36accee954daf5cab0528bab59bd8.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class StopProtectionSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        StopProtectionRequest request = new StopProtectionRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        CloseProtectionInfoRequestInfo body = new CloseProtectionInfoRequestInfo();
```



```
        List<String> listbodyAgentIdList = new ArrayList<>();
        listbodyAgentIdList.add("c9bed5397db449ebdfba15e85fcfc36accee954daf5cab0528bab59bd8");
        List<String> listbodyHostIdList = new ArrayList<>();
        listbodyHostIdList.add("71a15ecc-049f-4cca-bd28-5e90aca1817f");
        body.withCloseProtectionType("close_anti");
        body.withAgentIdList(listbodyAgentIdList);
        body.withHostIdList(listbodyHostIdList);
        request.withBody(body);
        try {
            StopProtectionResponse response = client.stopProtection(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 ransomware protection for the server. The target server ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f, and the agent ID of the target server is c9bed5397db449ebdfba15e85fcfc36accee954daf5cab0528bab59bd8.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = StopProtectionRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        listAgentIdListbody = [
            "c9bed5397db449ebdfba15e85fcfc36accee954daf5cab0528bab59bd8"
        ]
        listHostIdListbody = [
            "71a15ecc-049f-4cca-bd28-5e90aca1817f"
        ]
        request.body = CloseProtectionInfoRequestInfo(
            close_protection_type="close_anti",
            agent_id_list=listAgentIdListbody,
            host_id_list=listHostIdListbody
        )
```



```
        response = client.stop_protection(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 ransomware protection for the server. The target server ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f, and the agent ID of the target server is c9bed5397db449ebdfba15e85fcfc36accee954daf5cab0528bab59bd8.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.StopProtectionRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    var listAgentIdListbody = []string{
        "c9bed5397db449ebdfba15e85fcfc36accee954daf5cab0528bab59bd8",
    }
    var listHostIdListbody = []string{
        "71a15ecc-049f-4cca-bd28-5e90aca1817f",
    }
    request.Body = &model.CloseProtectionInfoRequestInfo{
        CloseProtectionType: "close_anti",
        AgentIdList: listAgentIdListbody,
        HostIdList: listHostIdListbody,
    }
    response, err := client.StopProtection(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	Ransomware protection disabled.

Error Codes

See **Error Codes**.

3.2.6 Querying the Backup Policy Bound to HSS Protection Vault

Function

This API is used to query the backup policy bound to the HSS protection vault. Ensure that a ransomware protection vault has been purchased in CBR. Such a vault is named in the HSS_projectid format.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/backup/policy

Table 3-118 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-119 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**

Request Parameters

Table 3-120 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-121 Response body parameters

Parameter	Type	Description
enabled	Boolean	Whether the policy is enabled
id	String	Policy ID Minimum: **1** Maximum: **128**
name	String	Policy name Minimum: **1** Maximum: **128**

Parameter	Type	Description
operation_type	String	Backup type. Its value can be: • backup • replication Minimum: **1** Maximum: **128**
operation_definition	**OperationDefinitionInfo** object	Policy attribute. Reserved rule.
trigger	**BackupTriggerInfo** object	Backup policy scheduling rule

Table 3-122 OperationDefinitionInfo

Parameter	Type	Description
day_backups	Integer	Maximum number of retained daily backups. The latest backup of each day is saved in the long term. This parameter is not affected by the maximum number of retained backup. The value ranges from 0 to 100. If this parameter is specified, timezone must be configured. Minimum value: 0. Maximum value: 100 Minimum: **0** Maximum: **100**
max_backups	Integer	Maximum number of automated backups that can be retained for an object. The value can be -1 or ranges from 0 to 99999. If the value is set to -1, the backups will not be cleared even though the configured retained backup quantity limit is exceeded. If this parameter and retention_duration_days are left blank at the same time, the backups will be retained permanently. Minimum value: 1. Maximum value: 99999. Default value: -1 Minimum: **-1** Maximum: **99999**

Parameter	Type	Description
month_backups	Integer	Maximum number of retained monthly backups. The latest backup of each month is saved in the long term. This parameter is not affected by the maximum number of retained backup. The value ranges from 0 to 100 If this parameter is specified, timezone must be configured. Minimum value: 0. Maximum value: 100 Minimum: **0** Maximum: **100**
retention_duration_days	Integer	Duration of retaining a backup, in days. The maximum value is 99999. If the value is set to -1, backups will not be cleared even though the configured retention duration is exceeded. If this parameter and max_backups are left blank at the same time, the backups will be retained permanently. Minimum value: 1. Maximum value: 99999. Default value: -1 Minimum: **-1** Maximum: **99999**
timezone	String	Time zone where the user is located, for example, UTC+08:00. Set this parameter only after you have configured any of the parameters day_backups, week_backups, month_backups, and year_backups. Minimum: **0** Maximum: **256**
week_backups	Integer	Maximum number of retained weekly backups. The latest backup of each week is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by max_backups. The value ranges from 0 to 100. If this parameter is specified, timezone must be configured. Minimum: **0** Maximum: **100**

Parameter	Type	Description
year_backups	Integer	Maximum number of retained yearly backups. The latest backup of each year is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by max_backups. The value ranges from 0 to 100. If this parameter is specified, timezone must be configured. Minimum value: 0. Maximum value: 100 Minimum: **0** Maximum: **100**

Table 3-123 BackupTriggerInfo

Parameter	Type	Description
id	String	Scheduler ID Minimum: **0** Maximum: **256**
name	String	Scheduler name Minimum: **0** Maximum: **256**
type	String	Scheduler type. Currently, only time can be configured. Minimum: **0** Maximum: **256**
properties	**BackupTriggerPropertiesInfo** object	Scheduler attribute

Table 3-124 BackupTriggerPropertiesInfo

Parameter	Type	Description
pattern	Array of strings	Scheduling policy. The value contains a maximum of 10,240 characters and complies with iCalendar RFC 2445. However, only FREQ, BYDAY, BYHOUR, and BYMINUTE are supported. FREQ can be set to only WEEKLY or DAILY. BYDAY can be set to the seven days in a week (MO, TU, WE, TH, FR, SA and SU). BYHOUR can be set to 0 to 23 hours. BYMINUTE can be set to 0 to 59 minutes. The interval between time points cannot be less than one hour. Multiple backup time points can be set in a backup policy, and up to 24 time points can be set for a day. Minimum: **0** Maximum: **256** Array Length: **0 - 24**
start_time	String	Scheduler start time. Example: 2020-01-08 09:59:49 Minimum: **0** Maximum: **256**

Example Requests

This API is used to query the backup policy associated with the vault.

```
GET https://{endpoint}/v5/{project_id}/backup/policy
```

Example Responses

Status code: 200

Backup policy information

```
{
  "enabled" : true,
  "id" : "af4d08ad-2b60-4916-a5cf-8d6a23956dda",
  "name" : "HSS_84b5266c14ae489fa6549827f032dc62",
  "operation_type" : "backup",
  "operation_definition" : {
    "day_backups" : 0,
    "max_backups" : "-1",
    "month_backups" : 0,
    "retention_duration_days" : 5,
    "timezone" : "UTC+08:00",
    "week_backups" : 0,
    "year_backups" : 0
  },
  "trigger" : {
    "properties" : {
      "pattern" : [ "FREQ=DAILY;INTERVAL=2;BYHOUR=14;BYMINUTE=00" ]
    }
```



```
 }
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ShowBackupPolicyInfoSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowBackupPolicyInfoRequest request = new ShowBackupPolicyInfoRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        try {
            ShowBackupPolicyInfoResponse response = client.showBackupPolicyInfo(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *
```



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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ShowBackupPolicyInfoRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        response = client.show_backup_policy_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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowBackupPolicyInfoRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    response, err := client.ShowBackupPolicyInfo(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	Backup policy information

Error Codes

See **Error Codes**.

3.2.7 Modifying the Backup Policy Bound to Vault

Function

This API is used to modify the backup policy associated with the vault.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v5/{project_id}/backup/policy

Table 3-125 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-126 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**

Request Parameters

Table 3-127 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Table 3-128 Request body parameters

Parameter	Mandatory	Type	Description
enabled	No	Boolean	Whether the policy is enabled. The default value is true.
policy_id	Yes	String	Backup policy ID Minimum: **1** Maximum: **256**
operation_definition	No	**OperationDefinitionRequestInfo** object	Scheduling parameter.
trigger	No	**BackupTriggerRequestInfo** object	Time scheduling rule for the policy

Table 3-129 OperationDefinitionRequestInfo

Parameter	Mandatory	Type	Description
day_backups	No	Integer	Maximum number of retained daily backups. The latest backup of each day is saved in the long term. This parameter is not affected by the maximum number of retained backup. The value ranges from 0 to 100. If this parameter is specified, timezone must be configured. Minimum value: 0. Maximum value: 100 Minimum: **0** Maximum: **100**
max_backups	No	Integer	Maximum number of automated backups that can be retained for an object. The value can be -1 or ranges from 0 to 99999. If the value is set to -1, the backups will not be cleared even though the configured retained backup quantity limit is exceeded. If this parameter and retention_duration_days are left blank at the same time, the backups will be retained permanently. Minimum value: 1. Maximum value: 99999. Default value: -1 Minimum: **-1** Maximum: **99999**
month_backups	No	Integer	Maximum number of retained monthly backups. The latest backup of each month is saved in the long term. This parameter is not affected by the maximum number of retained backup. The value ranges from 0 to 100. If this parameter is specified, timezone must be configured. Minimum value: 0. Maximum value: 100 Minimum: **0** Maximum: **100**

Parameter	Mandatory	Type	Description
retention_duration_days	No	Integer	Duration of retaining a backup, in days. The maximum value is 99999. If the value is set to -1, backups will not be cleared even though the configured retention duration is exceeded. If this parameter and max_backups are left blank at the same time, the backups will be retained permanently. Minimum value: 1. Maximum value: 99999. Default value: -1 Minimum: **-1** Maximum: **99999**
timezone	No	String	Time zone where the user is located, for example, UTC +08:00. Set this parameter only after you have configured any of the parameters day_backups, week_backups, month_backups, and year_backups. Minimum: **0** Maximum: **256**
week_backups	No	Integer	Maximum number of retained weekly backups. The latest backup of each week is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by max_backups. The value ranges from 0 to 100. If this parameter is specified, timezone must be configured. Minimum: **0** Maximum: **100**

Parameter	Mandatory	Type	Description
year_backups	No	Integer	Maximum number of retained yearly backups. The latest backup of each year is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by max_backups. The value ranges from 0 to 100. If this parameter is specified, timezone must be configured. Minimum value: 0. Maximum value: 100 Minimum: **0** Maximum: **100**

Table 3-130 BackupTriggerRequestInfo

Parameter	Mandatory	Type	Description
properties	Yes	**BackupTriggerPropertiesRequestInfo** object	Time rule for the policy execution.

Table 3-131 BackupTriggerPropertiesRequestInfo

Parameter	Mandatory	Type	Description
pattern	Yes	Array of strings	Scheduling rule A maximum of 24 rules can be configured. The scheduling rule complies with iCalendar RFC 2445, but it supports only parameters FREQ, BYDAY, BYHOUR, BYMINUTE, and INTERVAL. FREQ can be set only to WEEKLY or DAILY. BYDAY can be set to MO, TU, WE, TH, FR, SA, or SU (seven days of a week). BYHOUR ranges from 0 to 23 hours. BYMINUTE ranges from 0 minutes to 59 minutes. The scheduling interval must not be less than 1 hour. A maximum of 24 time points are allowed in a day. For example, if the scheduling time is 14:00 from Monday to Sunday, set the scheduling rule as follows: FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;BYHOUR=14;BYMINUTE=00. To start scheduling at 14:00 every day, the rule is as follows: FREQ=DAILY;INTERVAL=1;BYHOUR=14;BYMINUTE=00'. Minimum: **1** Maximum: **256** Array Length: **0 - 24**

Response Parameters

None

Example Requests

Modify the backup policy. The target backup policy ID is af4d08ad-2b60-4916-a5cf-8d6a23956dda.

```
PUT https://{endpoint}/v5/{project_id}/backup/policy

{
  "enabled" : true,
  "policy_id" : "af4d08ad-2b60-4916-a5cf-8d6a23956dda",
  "operation_definition" : {
    "day_backups" : 0,
```



```
    "max_backups" : -1,
    "month_backups" : 0,
    "retention_duration_days" : 5,
    "timezone" : "UTC+08:00",
    "week_backups" : 0,
    "year_backups" : 0
  },
  "trigger" : {
    "properties" : {
      "pattern" : [ "FREQ=DAILY;INTERVAL=2;BYHOUR=14;BYMINUTE=00" ]
    }
  }
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Modify the backup policy. The target backup policy ID is af4d08ad-2b60-4916-a5cf-8d6a23956dda.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class UpdateBackupPolicyInfoSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        UpdateBackupPolicyInfoRequest request = new UpdateBackupPolicyInfoRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        UpdateBackupPolicyRequestInfo body = new UpdateBackupPolicyRequestInfo();
        List<String> listPropertiesPattern = new ArrayList<>();
        listPropertiesPattern.add("FREQ=DAILY;INTERVAL=2;BYHOUR=14;BYMINUTE=00");
        BackupTriggerPropertiesRequestInfo propertiesTrigger = new BackupTriggerPropertiesRequestInfo();
```



```
        propertiesTrigger.withPattern(listPropertiesPattern);
        BackupTriggerRequestInfo triggerbody = new BackupTriggerRequestInfo();
        triggerbody.withProperties(propertiesTrigger);
        OperationDefinitionRequestInfo operationDefinitionbody = new OperationDefinitionRequestInfo();
        operationDefinitionbody.withDayBackups(0)
            .withMaxBackups(-1)
            .withMonthBackups(0)
            .withRetentionDurationDays(5)
            .withTimezone("UTC+08:00")
            .withWeekBackups(0)
            .withYearBackups(0);
        body.withTrigger(triggerbody);
        body.withOperationDefinition(operationDefinitionbody);
        body.withPolicyId("af4d08ad-2b60-4916-a5cf-8d6a23956dda");
        body.withEnabled(true);
        request.withBody(body);
        try {
            UpdateBackupPolicyInfoResponse response = client.updateBackupPolicyInfo(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

Modify the backup policy. The target backup policy ID is af4d08ad-2b60-4916-a5cf-8d6a23956dda.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = UpdateBackupPolicyInfoRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        listPatternProperties = [
            "FREQ=DAILY;INTERVAL=2;BYHOUR=14;BYMINUTE=00"
        ]
        propertiesTrigger = BackupTriggerPropertiesRequestInfo(
            pattern=listPatternProperties
```



```
        )
        triggerbody = BackupTriggerRequestInfo(
            properties=propertiesTrigger
        )
        operationDefinitionbody = OperationDefinitionRequestInfo(
            day_backups=0,
            max_backups=-1,
            month_backups=0,
            retention_duration_days=5,
            timezone="UTC+08:00",
            week_backups=0,
            year_backups=0
        )
        request.body = UpdateBackupPolicyRequestInfo(
            trigger=triggerbody,
            operation_definition=operationDefinitionbody,
            policy_id="af4d08ad-2b60-4916-a5cf-8d6a23956dda",
            enabled=True
        )
        response = client.update_backup_policy_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

Modify the backup policy. The target backup policy ID is af4d08ad-2b60-4916-a5cf-8d6a23956dda.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.UpdateBackupPolicyInfoRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    var listPatternProperties = []string{
        "FREQ=DAILY;INTERVAL=2;BYHOUR=14;BYMINUTE=00",
    }
    propertiesTrigger := &model.BackupTriggerPropertiesRequestInfo{
```



```
        Pattern: listPatternProperties,
    }
    triggerbody := &model.BackupTriggerRequestInfo{
        Properties: propertiesTrigger,
    }
    dayBackupsOperationDefinition:= int32(0)
    maxBackupsOperationDefinition:= int32(-1)
    monthBackupsOperationDefinition:= int32(0)
    retentionDurationDaysOperationDefinition:= int32(5)
    timezoneOperationDefinition:= "UTC+08:00"
    weekBackupsOperationDefinition:= int32(0)
    yearBackupsOperationDefinition:= int32(0)
    operationDefinitionbody := &model.OperationDefinitionRequestInfo{
        DayBackups: &dayBackupsOperationDefinition,
        MaxBackups: &maxBackupsOperationDefinition,
        MonthBackups: &monthBackupsOperationDefinition,
        RetentionDurationDays: &retentionDurationDaysOperationDefinition,
        Timezone: &timezoneOperationDefinition,
        WeekBackups: &weekBackupsOperationDefinition,
        YearBackups: &yearBackupsOperationDefinition,
    }
    enabledUpdateBackupPolicyRequestInfo:= true
    request.Body = &model.UpdateBackupPolicyRequestInfo{
        Trigger: triggerbody,
        OperationDefinition: operationDefinitionbody,
        PolicyId: "af4d08ad-2b60-4916-a5cf-8d6a23956dda",
        Enabled: &enabledUpdateBackupPolicyRequestInfo,
    }
    response, err := client.UpdateBackupPolicyInfo(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	Modify a backup policy.

Error Codes

See **Error Codes**.

3.3 Baseline Management

3.3.1 Querying the Weak Password Detection Result List

Function

This API is used to query the list of weak password detection results.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/baseline/weak-password-users

Table 3-132 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **20** Maximum: **64**

Table 3-133 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID Minimum: **0** Maximum: **64**
host_name	No	String	Server name Minimum: **0** Maximum: **256**
host_ip	No	String	Server IP address Minimum: **0** Maximum: **256**
user_name	No	String	Name of the account using a weak password Minimum: **0** Maximum: **32**
host_id	No	String	Host ID. If this parameter is not specified, all hosts of a user are queried. Minimum: **0** Maximum: **64**

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records on each page Minimum: **0** Maximum: **200** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**

Request Parameters

Table 3-134 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. Minimum: **32** Maximum: **2097152**

Response Parameters

Status code: 200

Table 3-135 Response body parameters

Parameter	Type	Description
total_num	Long	Total number of weak passwords Minimum: **0** Maximum: **2147483647**

Parameter	Type	Description
data_list	Array of **WeakPwdListInfoResponseInfo** objects	Weak password list Array Length: **0 - 2147483647**

Table 3-136 WeakPwdListInfoResponseInfo

Parameter	Type	Description
host_id	String	Host ID Minimum: **0** Maximum: **64**
host_name	String	Server name Minimum: **0** Maximum: **256**
host_ip	String	Server IP address (private IP address). This field is not deleted for compatibility with users. Minimum: **0** Maximum: **256**
private_ip	String	Server private IP address Minimum: **0** Maximum: **256**
public_ip	String	Server public IP address Minimum: **0** Maximum: **256**
weak_pwd_accounts	Array of **WeakPwdAccountInfoResponseInfo** objects	List of accounts with weak passwords Array Length: **0 - 2147483647**

Table 3-137 WeakPwdAccountInfoResponseInfo

Parameter	Type	Description
user_name	String	Name of accounts with weak passwords Minimum: **0** Maximum: **32**

Parameter	Type	Description
service_type	String	Account type. The options are as follows: • system • mysql • redis Minimum: **0** Maximum: **32**
duration	Integer	Validity period of a weak password, in days. Minimum: **0** Maximum: **2147483647**

Example Requests

Query the weak password of servers whose enterprise project ID is xxx. Data on the first page (the first 10 records) is returned by default.

```
GET https://{endpoint}/v5/{project_id}/baseline/weak-password-users?enterprise_project_id=xxx
```

Example Responses

Status code: 200

Weak password check result

```
{
  "total_num" : 2,
  "data_list" : [ {
    "host_id" : "caa958adxxxxxxa481",
    "host_name" : "ubuntu1",
    "host_ip" : "192.168.0.8",
    "private_ip" : "192.168.0.8",
    "public_ip" : "100.85.85.85",
    "weak_pwd_accounts" : [ {
      "user_name" : "localhost1",
      "service_type" : "system",
      "duration" : 2147483647
    } ]
  }, {
    "host_id" : "caa958adxxxxxxa482",
    "host_name" : "ubuntu2",
    "host_ip" : "192.168.0.9",
    "private_ip" : "192.168.0.8",
    "public_ip" : "",
    "weak_pwd_accounts" : [ {
      "user_name" : "localhost2",
      "service_type" : "system",
      "duration" : 2147483647
    } ]
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListWeakPasswordUsersSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListWeakPasswordUsersRequest request = new ListWeakPasswordUsersRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withHostName("<host_name>");
        request.withHostIp("<host_ip>");
        request.withUserName("<user_name>");
        request.withHostId("<host_id>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        try {
            ListWeakPasswordUsersResponse response = client.listWeakPasswordUsers(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
```



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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListWeakPasswordUsersRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.host_name = "<host_name>"
        request.host_ip = "<host_ip>"
        request.user_name = "<user_name>"
        request.host_id = "<host_id>"
        request.limit = <limit>
        request.offset = <offset>
        response = client.list_weak_password_users(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListWeakPasswordUsersRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    hostIpRequest:= "<host_ip>"
```



```
    request.HostIp = &hostIpRequest
    userNameRequest:= "<user_name>"
    request.UserName = &userNameRequest
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    response, err := client.ListWeakPasswordUsers(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	Weak password check result

Error Codes

See **Error Codes**.

3.3.2 Querying the Password Complexity Policy Detection Report

Function

This API is used to query the password complexity policy detection report.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/baseline/password-complexity

Table 3-138 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-139 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID Minimum: **0** Maximum: **256**
host_name	No	String	Server name Minimum: **0** Maximum: **128**
host_ip	No	String	Server IP address Minimum: **0** Maximum: **128**
host_id	No	String	Host ID. If this parameter is not specified, all hosts of a user are queried. Minimum: **0** Maximum: **128**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **0** Maximum: **200** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**

Request Parameters

Table 3-140 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. Minimum: **1** Maximum: **32768**

Response Parameters

Status code: 200

Table 3-141 Response body parameters

Parameter	Type	Description
total_num	Long	Total number of password complexity policies Minimum: **0** Maximum: **2147483647**
data_list	Array of **PwdPolicyInfoResponseInfo** objects	List of password complexity policy detection Array Length: **0 - 2147483647**

Table 3-142 PwdPolicyInfoResponseInfo

Parameter	Type	Description
host_id	String	Host ID Minimum: **0** Maximum: **64**
host_name	String	Server name Minimum: **0** Maximum: **256**

Parameter	Type	Description
host_ip	String	Server IP address (private IP address). This field is not deleted for compatibility with users. Minimum: **0** Maximum: **256**
private_ip	String	Server private IP address Minimum: **0** Maximum: **256**
public_ip	String	Server public IP address Minimum: **0** Maximum: **256**
min_length	Boolean	Indicates whether the minimum password length meets the requirements. If the value is true, the minimum password length meets the requirements. If the value is false, the minimum password length does not meet the requirements.
uppercase_letter	Boolean	Indicates whether the uppercase letters meet the requirements. If the value is true, the uppercase letters meet the requirements. If the value is false, the uppercase letters do not meet the requirements.
lowercase_letter	Boolean	Indicates whether the lowercase letters meet the requirements. If the value is true, the lowercase letters meet the requirements. If the value is false, the lowercase letters do not meet the requirements.
number	Boolean	Indicates whether the number meets the requirements. If the value is true, the number meets the requirements. If the value is false, the number does not meet the requirements.
special_character	Boolean	Indicates whether the special character meets the requirements. If the value is true, the special character meets the requirements. If the value is false, the special character does not meet the requirements.
suggestion	String	Modification suggestion Minimum: **0** Maximum: **65534**

Example Requests

Query the password complexity of the server whose enterprise project ID is xxx. Data on the first page (the first 10 records) is returned by default.

```
GET https://{endpoint}/v5/{project_id}/baseline/password-complexity?enterprise_project_id=xxx
```

Example Responses

Status code: 200

Password complexity policy check report

```
{
  "total_num" : 1,
  "data_list" : [ {
    "host_id" : "76fa440a-5a08-43fa-ac11-d12183ab3a14",
    "host_ip" : "192.168.0.59",
    "private_ip" : "192.168.0.8",
    "public_ip" : "100.85.85.85",
    "host_name" : "ecs-6b96",
    "lowercase_letter" : false,
    "min_length" : true,
    "number" : false,
    "special_character" : false,
    "suggestion" : "The password should contain at least 3 of the following character types: uppercase letters, lowercase letters, digits, and special characters. ",
    "uppercase_letter" : false
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListPasswordComplexitySolution {

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

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

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



```
            .withRegion(HssRegion.valueOf("<YOUR REGION>"))
            .build();
        ListPasswordComplexityRequest request = new ListPasswordComplexityRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withHostName("<host_name>");
        request.withHostIp("<host_ip>");
        request.withHostId("<host_id>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        try {
            ListPasswordComplexityResponse response = client.listPasswordComplexity(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListPasswordComplexityRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.host_name = "<host_name>"
        request.host_ip = "<host_ip>"
        request.host_id = "<host_id>"
        request.limit = <limit>
        request.offset = <offset>
        response = client.list_password_complexity(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListPasswordComplexityRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    hostIpRequest:= "<host_ip>"
    request.HostIp = &hostIpRequest
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    response, err := client.ListPasswordComplexity(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	Password complexity policy check report

Error Codes

See **Error Codes**.

3.3.3 Querying the Result List of Server Security Configuration Check

Function

This API is used to query the result list of a user's server security configuration check.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/baseline/risk-configs

Table 3-143 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-144 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID Minimum: **0** Maximum: **256**
check_name	No	String	Baseline name, for example, SSH, CentOS 7, and Windows. Minimum: **0** Maximum: **256**
group_id	No	String	Indicates the policy group ID. Minimum: **0** Maximum: **128**

Parameter	Mandatory	Type	Description
severity	No	String	Risk level. Its value can be: • Security • Low • Medium • High Minimum: **1** Maximum: **32**
standard	No	String	Standard type. Its value can be: • cn_standard: DJCP MLPS compliance standard • hw_standard: Cloud security practice standard Minimum: **1** Maximum: **32**
host_id	No	String	Host ID Minimum: **0** Maximum: **128**
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **0** Maximum: **200** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**

Request Parameters

Table 3-145 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. Minimum: **1** Maximum: **32768**

Response Parameters

Status code: 200

Table 3-146 Response body parameters

Parameter	Type	Description
total_num	Long	Total number of records Minimum: **0** Maximum: **2147483647**
data_list	Array of **SecurityCheckInfoResponseInfo** objects	Server configuration check result list Array Length: **0 - 2147483647**

Table 3-147 SecurityCheckInfoResponseInfo

Parameter	Type	Description
severity	String	Risk level. Its value can be: • Low • Medium • High Minimum: **1** Maximum: **32**

Parameter	Type	Description
check_name	String	Baseline name, for example, SSH, CentOS 7, and Windows. Minimum: **0** Maximum: **256**
check_type	String	Baseline type. The values for check_type and check_name are the same for Linux servers. For example, they can both be set to SSH or CentOS 7. For Windows servers, the values for check_type and check_name are different. For example, check_type can be set to Windows Server 2019 R2 or Windows Server 2016 R2. Minimum: **0** Maximum: **256**
standard	String	Standard type. Its value can be: ● cn_standard: DJCP MLPS compliance standard ● hw_standard: Cloud security practice standard Minimum: **1** Maximum: **16**
check_rule_num	Integer	Indicates the total number of check items of the current configuration check (baseline) type. For example, if the standard type of the SSH baseline is hw_standard, server security provides 17 check items, but only five check items of the SSH baseline are detected on all servers. Therefore, the value of check_rule_num is 5. All check items are checked on a server. The value of check_rule_num is 17. Minimum: **0** Maximum: **2097152**
failed_rule_num	Integer	Number of failed check items. If a server fails to pass a check item in check_rule_num, the item is counted in failed_rule_num. Minimum: **0** Maximum: **2097152**
host_num	Integer	The number of servers on which the current baseline detection is performed. Minimum: **0** Maximum: **2097152**

Parameter	Type	Description
scan_time	Long	Latest detection time (ms) Minimum: **0** Maximum: **2097152**
check_type_desc	String	Description of the baseline type, including the standards for the check items and the issues that can be audited. Minimum: **0** Maximum: **65534**

Example Requests

This API is used to query the server baseline configuration check list whose enterprise project ID is xxx. Data on the first page (the first 10 records) is returned by default.

```
GET https://{endpoint}/v5/{project_id}/baseline/risk-configs?enterprise_project_id=xxx
```

Example Responses

Status code: 200

server security configuration check result

```
{
  "total_num" : 1,
  "data_list" : [ {
    "check_name" : "Docker",
    "check_rule_num" : 25,
    "check_type" : "Docker",
    "check_type_desc" : "Configuring security audit of Docker's host configurations and container-running-related contents based on Docker Container Security Specifications V1_0.",
    "failed_rule_num" : 20,
    "host_num" : 0,
    "scan_time" : 1661716860935,
    "severity" : "High",
    "standard" : "hw_standard"
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;
```



```
public class ListRiskConfigsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListRiskConfigsRequest request = new ListRiskConfigsRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withCheckName("<check_name>");
        request.withGroupId("<group_id>");
        request.withSeverity("<severity>");
        request.withStandard("<standard>");
        request.withHostId("<host_id>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        try {
            ListRiskConfigsResponse response = client.listRiskConfigs(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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



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

    try:
        request = ListRiskConfigsRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.check_name = "<check_name>"
        request.group_id = "<group_id>"
        request.severity = "<severity>"
        request.standard = "<standard>"
        request.host_id = "<host_id>"
        request.limit = <limit>
        request.offset = <offset>
        response = client.list_risk_configs(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListRiskConfigsRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    checkNameRequest:= "<check_name>"
    request.CheckName = &checkNameRequest
    groupIdRequest:= "<group_id>"
    request.GroupId = &groupIdRequest
    severityRequest:= "<severity>"
    request.Severity = &severityRequest
    standardRequest:= "<standard>"
    request.Standard = &standardRequest
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
```



```
    request.Offset = &offsetRequest
    response, err := client.ListRiskConfigs(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	server security configuration check result

Error Codes

See **Error Codes**.

3.3.4 Querying the Check Result of a Security Configuration Item

Function

This API is used to query the check result of a specified security configuration item.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/baseline/risk-config/{check_name}/detail

Table 3-148 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **20** Maximum: **64**

Parameter	Mandatory	Type	Description
check_name	Yes	String	Baseline name, for example, SSH, CentOS 7, and Windows. Minimum: **0** Maximum: **256**

Table 3-149 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **64**
standard	Yes	String	Standard type. Its value can be: • cn_standard: DJCP MLPS compliance standard • hw_standard: Cloud security practice standard Minimum: **0** Maximum: **32**
host_id	No	String	Server ID. If this parameter is not specified, all the servers of the user are queried. Minimum: **0** Maximum: **64**
limit	No	Integer	Number of records on each page. Minimum: **0** Maximum: **200** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**

Request Parameters

Table 3-150 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **32** Maximum: **2097152**

Response Parameters

Status code: 200

Table 3-151 Response body parameters

Parameter	Type	Description
severity	String	Risk level. Its value can be: • Low • Medium • High Minimum: **0** Maximum: **65534**
check_type	String	Configuration check (baseline) type, for example, SSH, CentOS 7, Windows Server 2019 R2, Windows Server 2016 R2 and MySQL5-Windows. Minimum: **0** Maximum: **256**
check_type_desc	String	Description of the baseline type, including the standards for the check items and the issues that can be audited. Minimum: **0** Maximum: **65534**

Parameter	Type	Description
check_rule_num	Integer	Indicates the total number of check items of the current configuration check (baseline) type. For example, if the standard type of the SSH baseline is hw_standard, server security provides 17 check items, but only five check items of the SSH baseline are detected on all servers. Therefore, the value of check_rule_num is 5. All check items are checked on a server. The value of check_rule_num is 17. Minimum: **0** Maximum: **2147483647**
failed_rule_num	Integer	Number of failed check items. If a server fails to pass a check item in check_rule_num, the item is counted in failed_rule_num. Minimum: **0** Maximum: **2147483647**
passed_rule_num	Integer	Number of passed check items. If a server passes a check item in check_rule_num, the check item is counted in passed_rule_num. Minimum: **0** Maximum: **2147483647**
ignored_rule_num	Integer	Number of ignored check items. If a server ignores a check item in check_rule_num, the check item is counted in ignored_rule_num. Minimum: **0** Maximum: **2147483647**
host_num	Long	The number of servers on which the current baseline detection is performed. Minimum: **0** Maximum: **2147483647**

Example Requests

This API is used to query the configuration check list whose baseline name is SSH, check standard is cloud security practice standard, and enterprise project ID is xxx.

```
GET https://{endpoint}/v5/{project_id}/baseline/risk-config/SSH/detail?
standard=hw_standard&enterprise_project_id=xxx
```

Example Responses

Status code: 200

Security configuration item check result


```
{
  "check_rule_num" : 17,
  "check_type_desc" : "This policy checks the basic security configuration items of the SSH service to improve the security of the SSH service.",
  "failed_rule_num" : 15,
  "host_num" : 2,
  "ignored_rule_num" : 1,
  "passed_rule_num" : 14,
  "severity" : "Medium"
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ShowRiskConfigDetailSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowRiskConfigDetailRequest request = new ShowRiskConfigDetailRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withStandard("<standard>");
        request.withHostId("<host_id>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        try {
            ShowRiskConfigDetailResponse response = client.showRiskConfigDetail(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
```



```
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ShowRiskConfigDetailRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.standard = "<standard>"
        request.host_id = "<host_id>"
        request.limit = <limit>
        request.offset = <offset>
        response = client.show_risk_config_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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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



```
    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowRiskConfigDetailRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    request.Standard = "<standard>"
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    response, err := client.ShowRiskConfigDetail(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	Security configuration item check result

Error Codes

See **Error Codes**.

3.3.5 Querying the Checklist of a Security Configuration Item

Function

This API is used to query the checklist of a specified security configuration item.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/baseline/risk-config/{check_name}/check-rules

Table 3-152 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **20** Maximum: **64**
check_name	Yes	String	Baseline name, for example, SSH, CentOS 7, and Windows. Minimum: **0** Maximum: **256**

Table 3-153 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **64**
standard	Yes	String	Standard type. Its value can be: • cn_standard: DJCP MLPS compliance standard • hw_standard: Cloud security practice standard Minimum: **0** Maximum: **32**
result_type	No	String	Result type. Its value can be: • safe: The item passed the check. • unhandled: The item failed the check and is not ignored. • ignored: The item failed the check but is ignored. Default: **unhandled** Minimum: **0** Maximum: **64**

Parameter	Mandatory	Type	Description
check_rule_name	No	String	Check item name. Fuzzy match is supported. Minimum: **0** Maximum: **2048**
severity	No	String	Risk level. Its value can be: • Security • Low • Medium • High • Critical Minimum: **0** Maximum: **255**
host_id	No	String	Server ID. If this parameter is not specified, all the servers of the user are queried. Minimum: **0** Maximum: **64**
limit	No	Integer	Number of items per page Minimum: **0** Maximum: **200** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**

Request Parameters

Table 3-154 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **32** Maximum: **2097152**

Response Parameters

Status code: 200

Table 3-155 Response body parameters

Parameter	Type	Description
total_num	Long	Total risks Minimum: **0** Maximum: **9223372036854775807**
data_list	Array of **CheckRuleRiskInfoResponseInfo** objects	Data list Array Length: **0 - 2147483647**

Table 3-156 CheckRuleRiskInfoResponseInfo

Parameter	Type	Description
severity	String	Risk level. Its value can be: • Low • Medium • High Minimum: **0** Maximum: **255**
check_name	String	Baseline name, for example, SSH, CentOS 7, and Windows. Minimum: **0** Maximum: **256**

Parameter	Type	Description
check_type	String	Baseline type. The values for check_type and check_name are the same for Linux servers. For example, they can both be set to SSH or CentOS 7. For Windows servers, the values for check_type and check_name are different. For example, check_type can be set to Windows Server 2019 R2 or Windows Server 2016 R2. Minimum: **0** Maximum: **256**
standard	String	Standard type. Its value can be: • cn_standard: DJCP MLPS compliance standard • hw_standard: Cloud security practice standard Minimum: **0** Maximum: **16**
check_rule_name	String	Check item name Minimum: **0** Maximum: **2048**
check_rule_id	String	Check item ID Minimum: **0** Maximum: **64**
host_num	Integer	The number of servers on which the current baseline detection is performed. Minimum: **0** Maximum: **2147483647**
scan_result	String	Detection result. Its value can be: • pass • failed Minimum: **0** Maximum: **64**

Parameter	Type	Description
status	String	Status. Its value can be: • safe • ignored • unhandled • fixing • fix-failed • verifying Minimum: **0** Maximum: **64**
enable_fix	Integer	Indicates whether one-click repair is supported. 1: yes; 0: no. Minimum: **0** Maximum: **2147483647**
enable_click	Boolean	Indicates whether the repair, ignore, and verify buttons of the check item can be clicked. true: The button can be clicked. false: The button cannot be clicked.
rule_params	Array of **CheckRuleFixParamInfo** objects	Range of parameters applicable to the check items that can be fixed by parameter transfer. This parameter is returned only for check items that support parameter transfer fix. Array Length: **0 - 2147483647**

Table 3-157 CheckRuleFixParamInfo

Parameter	Type	Description
rule_param_id	Integer	Check item parameter ID Minimum: **0** Maximum: **10**
rule_desc	String	Check item parameter description Minimum: **0** Maximum: **256**
default_value	Integer	Default values of check item parameters Minimum: **0** Maximum: **2147483647**
range_min	Integer	Minimum value of check item parameters Minimum: **0** Maximum: **2147483647**

Parameter	Type	Description
range_max	Integer	Minimum value of check item parameters Minimum: **0** Maximum: **2147483647**

Example Requests

This API is used to query the check items whose baseline name is SSH, check standard is cloud security practice standard, and enterprise project ID is xxx.

```
GET https://{endpoint}/v5/{project_id}/baseline/risk-config/SSH/check-rules?
standard=hw_standard&enterprise_project_id=xxx

{
  "standard" : "hw_standard"
}
```

Example Responses

Status code: 200

checklist of the specified security configuration item

```
{
  "total_num" : 1,
  "data_list" : [ {
    "check_rule_id" : "1.1",
    "check_rule_name" : "Rule:Ensure that permissions on /etc/ssh/sshd_config are configured.",
    "check_type" : "SSH",
    "host_num" : 2,
    "standard" : "hw_standard",
    "scan_result" : "failed",
    "severity" : "High",
    "status" : "unhandled",
    "enable_fix" : 1,
    "enable_click" : true,
    "rule_params" : [ {
      "rule_param_id" : 1,
      "rule_desc" : "Set the timeout duration.",
      "default_value" : 5,
      "range_min" : 1,
      "range_max" : 10
    }, {
      "rule_param_id" : 2,
      "rule_desc" : "Set the number of restarts.",
      "default_value" : 10,
      "range_min" : 1,
      "range_max" : 20
    } ]
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

This API is used to query the check items whose baseline name is SSH, check standard is cloud security practice standard, and enterprise project ID is xxx.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListRiskConfigCheckRulesSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListRiskConfigCheckRulesRequest request = new ListRiskConfigCheckRulesRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withStandard("<standard>");
        request.withResultType("<result_type>");
        request.withCheckRuleName("<check_rule_name>");
        request.withSeverity("<severity>");
        request.withHostId("<host_id>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        try {
            ListRiskConfigCheckRulesResponse response = client.listRiskConfigCheckRules(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

This API is used to query the check items whose baseline name is SSH, check standard is cloud security practice standard, and enterprise project ID is xxx.


```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListRiskConfigCheckRulesRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.standard = "<standard>"
        request.result_type = "<result_type>"
        request.check_rule_name = "<check_rule_name>"
        request.severity = "<severity>"
        request.host_id = "<host_id>"
        request.limit = <limit>
        request.offset = <offset>
        response = client.list_risk_config_check_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

This API is used to query the check items whose baseline name is SSH, check standard is cloud security practice standard, and enterprise project ID is xxx.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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



```
    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListRiskConfigCheckRulesRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    request.Standard = "<standard>"
    resultTypeRequest:= "<result_type>"
    request.ResultType = &resultTypeRequest
    checkRuleNameRequest:= "<check_rule_name>"
    request.CheckRuleName = &checkRuleNameRequest
    severityRequest:= "<severity>"
    request.Severity = &severityRequest
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    response, err := client.ListRiskConfigCheckRules(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	checklist of the specified security configuration item

Error Codes

See **Error Codes**.

3.3.6 Querying the List of Affected Servers of a Security Configuration Item

Function

This API is used to query the list of affected servers of a specified security configuration item.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/baseline/risk-config/{check_name}/hosts

Table 3-158 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **20** Maximum: **64**
check_name	Yes	String	Baseline name, for example, SSH, CentOS 7, and Windows. Minimum: **0** Maximum: **256**

Table 3-159 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **64**
standard	Yes	String	Standard type. Its value can be: • cn_standard: DJCP MLPS compliance standard • hw_standard: Cloud security practice standard Minimum: **0** Maximum: **32**
host_name	No	String	Server name Minimum: **0** Maximum: **256**
host_ip	No	String	Server IP address Minimum: **0** Maximum: **256**

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of items per page Minimum: **0** Maximum: **200** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**

Request Parameters

Table 3-160 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **32** Maximum: **2097152**

Response Parameters

Status code: 200

Table 3-161 Response body parameters

Parameter	Type	Description
total_num	Long	Total amount of data affected by configuration check Minimum: **0** Maximum: **2147483647**

Parameter	Type	Description
data_list	Array of **SecurityCheckHostInfoResponseInfo** objects	Data list Array Length: **0 - 2147483647**

Table 3-162 SecurityCheckHostInfoResponseInfo

Parameter	Type	Description
host_id	String	Host ID Minimum: **0** Maximum: **64**
host_name	String	Server name Minimum: **0** Maximum: **256**
host_public_ip	String	Server public IP address Minimum: **0** Maximum: **128**
host_private_ip	String	Server private IP address Minimum: **0** Maximum: **256**
scan_time	Long	Scan time (ms) Minimum: **0** Maximum: **9223372036854775807**
failed_num	Integer	Number of risk items Minimum: **0** Maximum: **2147483647**
passed_num	Integer	Number of passed items Minimum: **0** Maximum: **2147483647**

Example Requests

This API is used to query the list of affected servers whose baseline name is SSH, check standard is cloud security practice standard, and enterprise project ID is xxx.

```
GET https://{endpoint}/v5/{project_id}/baseline/risk-config/SSH/hosts?
standard=hw_standard&enterprise_project_id=xxx
```


Example Responses

Status code: 200

servers affected by the security configuration item

```
{
  "total_num" : 1,
  "data_list" : [ {
    "failed_num" : 6,
    "host_id" : "71a15ecc-049f-4cca-bd28-5e90aca1817f",
    "host_name" : "zhangxiaodong2",
    "host_private_ip" : "192.168.0.129",
    "host_public_ip" : "*.*.*.10",
    "passed_num" : 10,
    "scan_time" : 1661716860935
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListRiskConfigHostsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListRiskConfigHostsRequest request = new ListRiskConfigHostsRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withStandard("<standard>");
        request.withHostName("<host_name>");
        request.withHostIp("<host_ip>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        try {
            ListRiskConfigHostsResponse response = client.listRiskConfigHosts(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
```



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

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListRiskConfigHostsRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.standard = "<standard>"
        request.host_name = "<host_name>"
        request.host_ip = "<host_ip>"
        request.limit = <limit>
        request.offset = <offset>
        response = client.list_risk_config_hosts(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment
```



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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListRiskConfigHostsRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    request.Standard = "<standard>"
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    hostIpRequest:= "<host_ip>"
    request.HostIp = &hostIpRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    response, err := client.ListRiskConfigHosts(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	servers affected by the security configuration item

Error Codes

See **Error Codes**.

3.3.7 Querying the Report of a Check Item in a Security Configuration Check

Function

This API is used to query the report of a check item in a security configuration check.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/baseline/check-rule/detail

Table 3-163 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **20** Maximum: **64**

Table 3-164 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID Minimum: **0** Maximum: **64**
check_name	Yes	String	Baseline name, for example, SSH, CentOS 7, and Windows. Minimum: **0** Maximum: **255**
check_type	Yes	String	Baseline type. The values for check_type and check_name are the same for Linux servers. For example, they can both be set to SSH or CentOS 7. For Windows servers, the values for check_type and check_name are different. For example, check_type can be set to Windows Server 2019 R2 or Windows Server 2016 R2. Minimum: **0** Maximum: **255**

Parameter	Mandatory	Type	Description
check_rule_id	Yes	String	Check item ID, which can be obtained from the return data of this API: /v5/{project_id}/baseline/risk-config/{check_name}/check-rules Minimum: **0** Maximum: **255**
standard	Yes	String	Standard type. Its value can be: • cn_standard: DJCP MLPS compliance standard • hw_standard: Cloud security practice standard Minimum: **0** Maximum: **32**
host_id	No	String	Host ID Minimum: **0** Maximum: **64**

Request Parameters

Table 3-165 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token, which can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is the user token. Minimum: **32** Maximum: **2097152**

Response Parameters

Status code: 200

Table 3-166 Response body parameters

Parameter	Type	Description
description	String	Description of the current check item (detection rule). Minimum: **0** Maximum: **2048**
reference	String	Basis for the check item (rule) setting Minimum: **0** Maximum: **255**
audit	String	Audit description of the check item (rule) Minimum: **0** Maximum: **65534**
remediation	String	Modification suggestions for the check item (rule) Minimum: **0** Maximum: **65534**
check_info_list	Array of **CheckRuleCheckCaseResponseInfo** objects	Test cases Array Length: **0 - 2147483647**

Table 3-167 CheckRuleCheckCaseResponseInfo

Parameter	Type	Description
check_description	String	Test case description Minimum: **0** Maximum: **65534**
current_value	String	Current result Minimum: **0** Maximum: **65534**
suggest_value	String	Expected result Minimum: **0** Maximum: **65534**

Example Requests

This API is used to query the report of the configuration check items whose baseline name is SSH, check item ID is 1.12, check standard is cloud security practice standard, and enterprise project ID is xxx.

```
GET https://{endpoint}/v5/{project_id}/baseline/check-rule/detail?
standard=hw_standard&enterprise_project_id=xxx&check_name=SSH&check_type=SSH&check_rule_id=1.12
```

Example Responses

Status code: 200

Configuration item check report

```
{
  "audit" : "Run the following commands and verify that ClientAliveInterval is smaller than 300 and ClientAliveCountMax is 3 or less: \n#grep '^ClientAliveInterval' /etc/ssh/sshd_config\nClientAliveInterval 300(default is 0) \n#grep '^ClientAliveCountMax' /etc/ssh/sshd_config\nClientAliveCountMax 0(default is 3)",
  "description" : "The two options ClientAliveInterval and ClientAliveCountMax control the timeout of SSH sessions. The ClientAliveInterval parameter sets a timeout interval in seconds after which if no data has been received from the client, sshd will send a message through the encrypted channel to request a response from the client. The ClientAliveCountMax parameter sets the number of client alive messages which may be sent without sshd receiving any messages back from the client. For example, if the ClientAliveInterval is set to 15s and the ClientAliveCountMax is set to 3, unresponsive SSH clients will be disconnected after approximately 45s.",
  "reference" : "",
  "remediation" : "Edit the /etc/ssh/sshd_config file to set the parameter as follows: \nClientAliveInterval 300 \nClientAliveCountMax 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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ShowCheckRuleDetailSolution {

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

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

        HssClient client = HssClient.newBuilder()
```



```
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowCheckRuleDetailRequest request = new ShowCheckRuleDetailRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withCheckName("<check_name>");
        request.withCheckType("<check_type>");
        request.withCheckRuleId("<check_rule_id>");
        request.withStandard("<standard>");
        request.withHostId("<host_id>");
        try {
            ShowCheckRuleDetailResponse response = client.showCheckRuleDetail(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ShowCheckRuleDetailRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.check_name = "<check_name>"
        request.check_type = "<check_type>"
        request.check_rule_id = "<check_rule_id>"
        request.standard = "<standard>"
        request.host_id = "<host_id>"
        response = client.show_check_rule_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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowCheckRuleDetailRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    request.CheckName = "<check_name>"
    request.CheckType = "<check_type>"
    request.CheckRuleId = "<check_rule_id>"
    request.Standard = "<standard>"
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    response, err := client.ShowCheckRuleDetail(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	Configuration item check report

Error Codes

See **Error Codes**.

3.3.8 Ignoring, Unignoring, Repairing, or Verifying the Failed Configuration Check Items

Function

Ignore, unignore, repair, or verify the failed configuration check items.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v5/{project_id}/baseline/check-rule/action

Table 3-168 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **20** Maximum: **64**

Table 3-169 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **64**
host_id	No	String	Server ID. If this parameter is not specified, all the servers of the user are queried. Minimum: **0** Maximum: **64**

Parameter	Mandatory	Type	Description
action	Yes	String	Action. • ignore • unignore • fix • verify Default: **ignore** Minimum: **0** Maximum: **32**

Request Parameters

Table 3-170 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling an IAM API. The value of X-Subject-Token in the response header is the user token. Minimum: **32** Maximum: **2097152**

Table 3-171 Request body parameters

Parameter	Mandatory	Type	Description
check_rules	No	Array of **CheckRuleKeyInfoRequestInfo** objects	Check item ID list Array Length: **0 - 2147483647**

Table 3-172 CheckRuleKeyInfoRequestInfo

Parameter	Mandatory	Type	Description
check_name	No	String	Baseline name, for example, SSH, CentOS 7, and Windows. Minimum: **0** Maximum: **256**

Parameter	Mandatory	Type	Description
check_rule_id	No	String	Check item ID, which can be obtained from the return data of this API: /v5/{project_id}/baseline/risk-config/{check_name}/check-rules Minimum: **0** Maximum: **64**
standard	No	String	Baseline standards. The options are as follows: • cn_standard: DJCP MLPS compliance standard • hw_standard: Cloud security practice standard Minimum: **0** Maximum: **16**
fix_values	No	Array of **CheckRuleFixValuesInfo** objects	User-entered repair parameters of check items Array Length: **0 - 10000**

Table 3-173 CheckRuleFixValuesInfo

Parameter	Mandatory	Type	Description
rule_param_id	No	Integer	Parameter ID of the check item Minimum: **0** Maximum: **2147483647**
fix_value	No	Integer	Parameter value of the check item Minimum: **0** Maximum: **2147483647**

Response Parameters

None

Example Requests

- This API is used to ignore the configuration check items whose baseline name is SSH, check item ID is 1.11, check standard is cloud security practice standard, and enterprise project ID is xxx. This operation applies to all affected servers.


```
PUT https://{endpoint}/v5/{project_id}/baseline/check-rule/action?
enterprise_project_id=xxx&action=ignore

{
  "check_rules" : [ {
    "check_name" : "SSH",
    "check_rule_id" : "1.11",
    "standard" : "hw_standard"
  } ]
}
```

- This API is used to restore the configuration check items whose baseline name is SSH, check item ID is 1.11, check standard is cloud security practice standard, and enterprise project ID is xxx. This operation applies only to the server whose ID is xxx. The restoration parameters are as follows: Set the value of the repair item whose ID is 1 to 5 and the value of the repair item whose ID is 2 to 20.

```
PUT https://{endpoint}/v5/{project_id}/baseline/check-rule/action?
enterprise_project_id=xxx&host_id=xxx&action=fix

{
  "check_rules" : [ {
    "check_name" : "SSH",
    "check_rule_id" : "1.11",
    "standard" : "hw_standard",
    "fix_values" : [ {
      "rule_param_id" : 1,
      "fix_value" : 5
    }, {
      "rule_param_id" : 2,
      "fix_value" : 20
    } ]
  } ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

- This API is used to ignore the configuration check items whose baseline name is SSH, check item ID is 1.11, check standard is cloud security practice standard, and enterprise project ID is xxx. This operation applies to all affected servers.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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



```
public class ChangeCheckRuleActionSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ChangeCheckRuleActionRequest request = new ChangeCheckRuleActionRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withHostId("<host_id>");
        request.withAction("<action>");
        CheckRuleIdListRequestInfo body = new CheckRuleIdListRequestInfo();
        List<CheckRuleKeyInfoRequestInfo> listbodyCheckRules = new ArrayList<>();
        listbodyCheckRules.add(
            new CheckRuleKeyInfoRequestInfo()
                .withCheckName("SSH")
                .withCheckRuleId("1.11")
                .withStandard("hw_standard")
        );
        body.withCheckRules(listbodyCheckRules);
        request.withBody(body);
        try {
            ChangeCheckRuleActionResponse response = client.changeCheckRuleAction(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());
        }
    }
}
```

- This API is used to restore the configuration check items whose baseline name is SSH, check item ID is 1.11, check standard is cloud security practice standard, and enterprise project ID is xxx. This operation applies only to the server whose ID is xxx. The restoration parameters are as follows: Set the value of the repair item whose ID is 1 to 5 and the value of the repair item whose ID is 2 to 20.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;
```



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

public class ChangeCheckRuleActionSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ChangeCheckRuleActionRequest request = new ChangeCheckRuleActionRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withHostId("<host_id>");
        request.withAction("<action>");
        CheckRuleIdListRequestInfo body = new CheckRuleIdListRequestInfo();
        List<CheckRuleFixValuesInfo> listCheckRulesFixValues = new ArrayList<>();
        listCheckRulesFixValues.add(
            new CheckRuleFixValuesInfo()
                .withRuleParamId(1)
                .withFixValue(5)
        );
        listCheckRulesFixValues.add(
            new CheckRuleFixValuesInfo()
                .withRuleParamId(2)
                .withFixValue(20)
        );
        List<CheckRuleKeyInfoRequestInfo> listbodyCheckRules = new ArrayList<>();
        listbodyCheckRules.add(
            new CheckRuleKeyInfoRequestInfo()
                .withCheckName("SSH")
                .withCheckRuleId("1.11")
                .withStandard("hw_standard")
                .withFixValues(listCheckRulesFixValues)
        );
        body.withCheckRules(listbodyCheckRules);
        request.withBody(body);
        try {
            ChangeCheckRuleActionResponse response = client.changeCheckRuleAction(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

- This API is used to ignore the configuration check items whose baseline name is SSH, check item ID is 1.11, check standard is cloud security practice standard, and enterprise project ID is xxx. This operation applies to all affected servers.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ChangeCheckRuleActionRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.host_id = "<host_id>"
        request.action = "<action>"
        listCheckRulesbody = [
            CheckRuleKeyInfoRequestInfo(
                check_name="SSH",
                check_rule_id="1.11",
                standard="hw_standard"
            )
        ]
        request.body = CheckRuleIdListRequestInfo(
            check_rules=listCheckRulesbody
        )
        response = client.change_check_rule_action(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

- This API is used to restore the configuration check items whose baseline name is SSH, check item ID is 1.11, check standard is cloud security practice standard, and enterprise project ID is xxx. This operation applies only to the server whose ID is xxx. The restoration parameters are as follows: Set the value of the repair item whose ID is 1 to 5 and the value of the repair item whose ID is 2 to 20.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *
```



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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ChangeCheckRuleActionRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.host_id = "<host_id>"
        request.action = "<action>"
        listFixValuesCheckRules = [
            CheckRuleFixValuesInfo(
                rule_param_id=1,
                fix_value=5
            ),
            CheckRuleFixValuesInfo(
                rule_param_id=2,
                fix_value=20
            )
        ]
        listCheckRulesbody = [
            CheckRuleKeyInfoRequestInfo(
                check_name="SSH",
                check_rule_id="1.11",
                standard="hw_standard",
                fix_values=listFixValuesCheckRules
            )
        ]
        request.body = CheckRuleIdListRequestInfo(
            check_rules=listCheckRulesbody
        )
        response = client.change_check_rule_action(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

- This API is used to ignore the configuration check items whose baseline name is SSH, check item ID is 1.11, check standard is cloud security practice standard, and enterprise project ID is xxx. This operation applies to all affected servers.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

func main() {
```



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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ChangeCheckRuleActionRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    request.Action = "<action>"
    checkNameCheckRules:= "SSH"
    checkRuleIdCheckRules:= "1.11"
    standardCheckRules:= "hw_standard"
    var listCheckRulesbody = []model.CheckRuleKeyInfoRequestInfo{
        {
            CheckName: &checkNameCheckRules,
            CheckRuleId: &checkRuleIdCheckRules,
            Standard: &standardCheckRules,
        },
    }
    request.Body = &model.CheckRuleIdListRequestInfo{
        CheckRules: &listCheckRulesbody,
    }
    response, err := client.ChangeCheckRuleAction(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```

- This API is used to restore the configuration check items whose baseline name is SSH, check item ID is 1.11, check standard is cloud security practice standard, and enterprise project ID is xxx. This operation applies only to the server whose ID is xxx. The restoration parameters are as follows: Set the value of the repair item whose ID is 1 to 5 and the value of the repair item whose ID is 2 to 20.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

```
running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local
environment
    ak := os.Getenv("CLOUD_SDK_AK")
    sk := os.Getenv("CLOUD_SDK_SK")

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ChangeCheckRuleActionRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    request.Action = "<action>"
    ruleParamIdFixValues:= int32(1)
    fixValueFixValues:= int32(5)
    ruleParamIdFixValues1:= int32(2)
    fixValueFixValues1:= int32(20)
    var listFixValuesCheckRules = []model.CheckRuleFixValuesInfo{
        {
            RuleParamId: &ruleParamIdFixValues,
            FixValue: &fixValueFixValues,
        },
        {
            RuleParamId: &ruleParamIdFixValues1,
            FixValue: &fixValueFixValues1,
        },
    }
    checkNameCheckRules:= "SSH"
    checkRuleIdCheckRules:= "1.11"
    standardCheckRules:= "hw_standard"
    var listCheckRulesbody = []model.CheckRuleKeyInfoRequestInfo{
        {
            CheckName: &checkNameCheckRules,
            CheckRuleId: &checkRuleIdCheckRules,
            Standard: &standardCheckRules,
            FixValues: &listFixValuesCheckRules,
        },
    }
    request.Body = &model.CheckRuleIdListRequestInfo{
        CheckRules: &listCheckRulesbody,
    }
    response, err := client.ChangeCheckRuleAction(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	Execution complete

Error Codes

See **Error Codes**.

3.4 Quota Management

3.4.1 Querying Quota Information

Function

This API is used to query quota information.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/billing/quotas

Table 3-174 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **128**

Table 3-175 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**

Parameter	Mandatory	Type	Description
version	No	String	HSS edition. Its value can be: • hss.version.null • hss.version.basic: basic edition • hss.version.advanced: professional edition • hss.version.enterprise: enterprise edition • hss.version.premium: premium edition • hss.version.wtp: WTP edition • hss.version.container.enterprise: container edition Minimum: **1** Maximum: **64**
charging_mode	No	String	Billing mode. Its value can be: • packet_cycle: yearly/monthly • on_demand: pay-per-use Minimum: **1** Maximum: **32**

Request Parameters

Table 3-176 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **32** Maximum: **4096**
region	No	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-177 Response body parameters

Parameter	Type	Description
data_list	Array of **ResourceQuotasInfo** objects	Quota statistics list Array Length: **0 - 200**

Table 3-178 ResourceQuotasInfo

Parameter	Type	Description
version	String	HSS edition. Its value can be: • hss.version.null • hss.version.basic: basic edition • hss.version.advanced: professional edition • hss.version.enterprise: enterprise edition • hss.version.premium: premium edition • hss.version.wtp: WTP edition • hss.version.container.enterprise: container edition Minimum: **1** Maximum: **64**
total_num	Integer	Total quotas Minimum: **0** Maximum: **2000000**
used_num	Integer	Used quotas Minimum: **0** Maximum: **2000000**
available_num	Integer	Total quotas Minimum: **0** Maximum: **2000000**
available_resources_list	Array of **AvailableResourceIdsInfo** objects	Available resource list Array Length: **0 - 200**

Table 3-179 AvailableResourceIdsInfo

Parameter	Type	Description
resource_id	String	Resource ID Minimum: **1** Maximum: **256**
current_time	String	Current time Minimum: **1** Maximum: **64**
shared_quota	String	Whether quotas are shared. Its value can be: • shared • unshared Minimum: **1** Maximum: **64**

Example Requests

This API is used to query quotas of the basic edition in all enterprise projects.

```
GET https://{endpoint}/v5/{project_id}/billing/quotas?
version=hss.version.basic&enterprise_project_id=all_granted_eps
```

Example Responses

Status code: 200

Quota statistics list

```
{
  "data_list" : [ {
    "available_num" : 1,
    "available_resources_list" : [ {
      "current_time" : "2022-09-17T17:00:24Z",
      "resource_id" : "9ecb83a7-8b03-4e37-a26d-c3e90ca97eea",
      "shared_quota" : "shared"
    } ],
    "total_num" : 2,
    "used_num" : 1,
    "version" : "hss.version.basic"
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ShowResourceQuotasSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowResourceQuotasRequest request = new ShowResourceQuotasRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withVersion("<version>");
        request.withChargingMode("<charging_mode>");
        try {
            ShowResourceQuotasResponse response = client.showResourceQuotas(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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



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

    try:
        request = ShowResourceQuotasRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.version = "<version>"
        request.charging_mode = "<charging_mode>"
        response = client.show_resource_quotas(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowResourceQuotasRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    versionRequest:= "<version>"
    request.Version = &versionRequest
    chargingModeRequest:= "<charging_mode>"
    request.ChargingMode = &chargingModeRequest
    response, err := client.ShowResourceQuotas(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	Quota statistics list

Error Codes

See **Error Codes**.

3.4.2 Querying Quota Details

Function

This API is used to query quota details.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/billing/quotas-detail

Table 3-180 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-181 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**

Parameter	Mandatory	Type	Description
version	No	String	HSS edition. Its value can be: • hss.version.null • hss.version.basic: basic edition • hss.version.advanced: professional edition • hss.version.enterprise: enterprise edition • hss.version.premium: premium edition • hss.version.wtp: WTP edition • hss.version.container.enterprise: container edition Minimum: **1** Maximum: **64**
category	No	String	Type. Its value can be: • host_resource • container_resource Minimum: **1** Maximum: **64**
quota_status	No	String	Quota status. It can be: • QUOTA_STATUS_NORMAL – QUOTA_STATUS_EXPIRED – QUOTA_STATUS_FREEZE Minimum: **1** Maximum: **64**
used_status	No	String	Usage status. It can be: • USED_STATUS_IDLE • USED_STATUS_USED Minimum: **1** Maximum: **64**
host_name	No	String	Server name Minimum: **0** Maximum: **128**

Parameter	Mandatory	Type	Description
resource_id	No	String	Specifies the resource ID of the HSS quota. Minimum: **0** Maximum: **128**
charging_mode	No	String	Billing mode. Its value can be: • packet_cycle: yearly/monthly • on_demand: pay-per-use Minimum: **1** Maximum: **32**
limit	No	Integer	Number of items per page Minimum: **10** Maximum: **200** Default: **10**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**

Request Parameters

Table 3-182 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **32** Maximum: **4096**
region	No	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-183 Response body parameters

Parameter	Type	Description
packet_cycle_num	Integer	Yearly/Monthly quotas Minimum: **0** Maximum: **10000000**
on_demand_num	Integer	Pay-per-Use quotas Minimum: **0** Maximum: **10000000**
used_num	Integer	Used quotas Minimum: **0** Maximum: **10000000**
idle_num	Integer	Idle quotas Minimum: **0** Maximum: **10000000**
normal_num	Integer	Normal quotas Minimum: **0** Maximum: **10000000**
expired_num	Integer	Expired quotas Minimum: **0** Maximum: **10000000**
freeze_num	Integer	Frozen quotas Minimum: **0** Maximum: **10000000**
quota_statistics_list	Array of **QuotaStatisticsResponseInfo** objects	Quota statistics list Array Length: **0 - 200**
total_num	Integer	Total quotas Minimum: **0** Maximum: **10000000**
data_list	Array of **QuotaResourcesResponseInfo** objects	Quota list Array Length: **0 - 200**

Table 3-184 QuotaStatisticsResponseInfo

Parameter	Type	Description
version	String	Resource flavor. Its value can be: • hss.version.basic: basic edition • hss.version.advanced: professional edition • hss.version.enterprise: enterprise edition • hss.version.premium: premium edition • hss.version.wtp: WTP edition • hss.version.container: container edition Minimum: **1** Maximum: **64**
total_num	Integer	Total quotas Minimum: **0** Maximum: **10000000**

Table 3-185 QuotaResourcesResponseInfo

Parameter	Type	Description
resource_id	String	Resource ID of an HSS quota Minimum: **0** Maximum: **256**
version	String	Resource flavor. Its value can be: • hss.version.basic: basic edition • hss.version.advanced: professional edition • hss.version.enterprise: enterprise edition • hss.version.premium: premium edition • hss.version.wtp: WTP edition • hss.version.container: container edition Minimum: **1** Maximum: **64**
quota_status	String	Quota status. It can be: • normal • expired • freeze Minimum: **1** Maximum: **64**

Parameter	Type	Description
used_status	String	Usage status. Its value can be: • idle • used Minimum: **1** Maximum: **64**
host_id	String	Host ID Minimum: **1** Maximum: **64**
host_name	String	Server name Minimum: **1** Maximum: **128**
charging_mode	String	Billing mode. Its value can be: • packet_cycle: yearly/monthly • on_demand: pay-per-use Minimum: **1** Maximum: **64**
tags	Array of **TagInfo** objects	Tag Array Length: **0 - 2097152**
expire_time	Long	Expiration time. The value -1 indicates that the resource will not expire. Minimum: **0** Maximum: **2147483647**
shared_quota	String	Whether quotas are shared. Its value can be: • shared • unshared Minimum: **1** Maximum: **64**
enterprise_project_id	String	Enterprise project ID Minimum: **0** Maximum: **256**
enterprise_project_name	String	Enterprise project name Minimum: **0** Maximum: **256**

Table 3-186 TagInfo

Parameter	Type	Description
key	String	Key. It can contain up to 128 Unicode characters. The key cannot be left blank. Minimum: **1** Maximum: **128**
value	String	Value. Each tag value can contain a maximum of 255 Unicode characters. Minimum: **1** Maximum: **255**

Example Requests

This API is used to query quotas details in all enterprise projects.

```
GET https://{endpoint}/v5/{project_id}/billing/quotas-detail?
offset=0&limit=100&version=hss.version.basic&enterprise_project_id=all_granted_eps
```

Example Responses

Status code: 200

Quota details

```
{
  "data_list" : [ {
    "charging_mode" : "packet_cycle",
    "expire_time" : -1,
    "host_id" : "71a15ecc-049f-4cca-bd28-5e90aca1817f",
    "host_name" : "zhangxiaodong2",
    "quota_status" : "normal",
    "resource_id" : "af4d08ad-2b60-4916-a5cf-8d6a23956dda",
    "shared_quota" : "shared",
    "tags" : [ {
      "key" : "Service",
      "value" : "HSS"
    } ],
    "used_status" : "used",
    "version" : "hss.version.wtp"
  } ],
  "expired_num" : 0,
  "freeze_num" : 0,
  "idle_num" : 20,
  "normal_num" : 60,
  "on_demand_num" : 0,
  "packet_cycle_num" : 60,
  "quota_statistics_list" : [ {
    "total_num" : 8,
    "version" : "hss.version.basic"
  } ],
  "total_num" : 60,
  "used_num" : 40
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListQuotasDetailSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListQuotasDetailRequest request = new ListQuotasDetailRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withVersion("<version>");
        request.withCategory("<category>");
        request.withQuotaStatus("<quota_status>");
        request.withUsedStatus("<used_status>");
        request.withHostName("<host_name>");
        request.withResourceId("<resource_id>");
        request.withChargingMode("<charging_mode>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        try {
            ListQuotasDetailResponse response = client.listQuotasDetail(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *
```



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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListQuotasDetailRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.version = "<version>"
        request.category = "<category>"
        request.quota_status = "<quota_status>"
        request.used_status = "<used_status>"
        request.host_name = "<host_name>"
        request.resource_id = "<resource_id>"
        request.charging_mode = "<charging_mode>"
        request.limit = <limit>
        request.offset = <offset>
        response = client.list_quotas_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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())
```



```
    request := &model.ListQuotasDetailRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    versionRequest:= "<version>"
    request.Version = &versionRequest
    categoryRequest:= "<category>"
    request.Category = &categoryRequest
    quotaStatusRequest:= "<quota_status>"
    request.QuotaStatus = &quotaStatusRequest
    usedStatusRequest:= "<used_status>"
    request.UsedStatus = &usedStatusRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    resourceIdRequest:= "<resource_id>"
    request.ResourceId = &resourceIdRequest
    chargingModeRequest:= "<charging_mode>"
    request.ChargingMode = &chargingModeRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    response, err := client.ListQuotasDetail(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	Quota details

Error Codes

See **Error Codes**.

3.4.3 Creating an Order Quota by HSS

Function

The billing mode can only be yearly/monthly when an order quota is created by HSS.

Calling Method

For details, see **Calling APIs**.

URI

POST /v5/{project_id}/quotas/orders

Table 3-187 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. Minimum: **0** Maximum: **512**

Table 3-188 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **128**

Request Parameters

Table 3-189 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **0** Maximum: **4096**
Content-Type	No	String	Default value: application/json; charset=utf-8 Minimum: **0** Maximum: **128**
region	Yes	String	Region ID Minimum: **0** Maximum: **32**

Table 3-190 Request body parameters

Parameter	Mandatory	Type	Description
resource_spec_code	Yes	String	Specifications • hss.version.basic: basic edition • hss.version.advanced: professional edition • hss.version.enterprise: enterprise edition • hss.version.premium: premium edition • hss.version.wtp: WTP edition • hss.version.container.enterprise: container edition Minimum: **0** Maximum: **128**
period_type	Yes	Integer	Subscription period type. • **2**: month • **3**: year Minimum: **0** Maximum: **100**
period_num	Yes	Integer	Number of subscription periods Minimum: **0** Maximum: **1000**
is_auto_renew	No	Boolean	whether to support auto renewal. The options are true (yes) and false (no). The default value is false.
is_auto_pay	No	Boolean	whether to support automatic payment. The options are true (yes) and false (no). The default value is false.
subscription_num	Yes	Integer	Subscription quantity Minimum: **0** Maximum: **500**

Response Parameters

Status code: 200

Table 3-191 Response body parameters

Parameter	Type	Description
order_id	String	Order ID Minimum: **0** Maximum: **256**

Example Requests

Create an order of HSS enterprise edition quota. The order information is as follows. The billing mode is yearly/monthly. The quantity is 1. The subscription period is 1. The subscription period type is monthly. Automatic renewal is disabled. The order will be automatically paid.

```
POST https://{endpoint}/v5/{project_id}/quotas/orders

{
  "resource_spec_code" : "hss.version.enterprise",
  "subscription_num" : 1,
  "period_num" : 1,
  "period_type" : 2,
  "is_auto_renew" : 0,
  "is_auto_pay" : 1
}
```

Example Responses

Status code: 200

Ordering Information

```
{
  "order_id" : "CS2404171733"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Create an order of HSS enterprise edition quota. The order information is as follows. The billing mode is yearly/monthly. The quantity is 1. The subscription period is 1. The subscription period type is monthly. Automatic renewal is disabled. The order will be automatically paid.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;
```



```
public class CreateQuotasOrderSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateQuotasOrderRequest request = new CreateQuotasOrderRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        CreateQuotasOrderRequestInfo body = new CreateQuotasOrderRequestInfo();
        body.withSubscriptionNum(1);
        body.withIsAutoPay(1);
        body.withIsAutoRenew(0);
        body.withPeriodNum(1);
        body.withPeriodType(2);
        body.withResourceSpecCode("hss.version.enterprise");
        request.withBody(body);
        try {
            CreateQuotasOrderResponse response = client.createQuotasOrder(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

Create an order of HSS enterprise edition quota. The order information is as follows. The billing mode is yearly/monthly. The quantity is 1. The subscription period is 1. The subscription period type is monthly. Automatic renewal is disabled. The order will be automatically paid.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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



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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = CreateQuotasOrderRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.body = CreateQuotasOrderRequestInfo(
            subscription_num=1,
            is_auto_pay=1,
            is_auto_renew=0,
            period_num=1,
            period_type=2,
            resource_spec_code="hss.version.enterprise"
        )
        response = client.create_quotas_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

Create an order of HSS enterprise edition quota. The order information is as follows. The billing mode is yearly/monthly. The quantity is 1. The subscription period is 1. The subscription period type is monthly. Automatic renewal is disabled. The order will be automatically paid.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateQuotasOrderRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
```



```
    isAutoPayCreateQuotasOrderRequestInfo:= 1
    isAutoRenewCreateQuotasOrderRequestInfo:= 0
    request.Body = &model.CreateQuotasOrderRequestInfo{
        SubscriptionNum: int32(1),
        IsAutoPay: &isAutoPayCreateQuotasOrderRequestInfo,
        IsAutoRenew: &isAutoRenewCreateQuotasOrderRequestInfo,
        PeriodNum: int32(1),
        PeriodType: int32(2),
        ResourceSpecCode: "hss.version.enterprise",
    }
    response, err := client.CreateQuotasOrder(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	Ordering Information

Error Codes

See **Error Codes**.

3.4.4 Querying Product and Offering Information

Function

This API is used to query product and offering information.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/product/productdata/offering-infos

Table 3-192 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **128**

Table 3-193 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**
site_code	No	String	Site information. • HWC_CN: Chinese mainland • HWC_HK: international • HWC_EU: Europe Default: **HWC_CN** Minimum: **1** Maximum: **256**

Request Parameters

Table 3-194 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**

Parameter	Mandatory	Type	Description
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-195 Response body parameters

Parameter	Type	Description
[items]	Array of **ResourceProductDataObjectInfo** objects	Offering Data List

Table 3-196 ResourceProductDataObjectInfo

Parameter	Type	Description
charging_mode	String	Billing modes • packet_cycle: yearly/monthly • on_demand: pay-per-use Minimum: **1** Maximum: **32**
is_auto_renew	Boolean	Whether to enable automatic renewal.
version_info	Map<String,Array<**ShowPeriodResponseInfo**>>	Edition information. The value of key is the HSS edition. Its value can be: • hss.version.basic: basic edition • hss.version.advanced: professional edition • hss.version.enterprise: enterprise edition • hss.version.premium: premium edition • hss.version.wtp: WTP edition • hss.version.container.enterprise: container edition

Table 3-197 ShowPeriodResponseInfo

Parameter	Type	Description
period_vals	String	Value string of the required duration. Multiple values are separated by commas (,). For example: 1,2,3,4,5,6,7,8,9 Minimum: **1** Maximum: **32**
period_unit	String	Required duration unit • year: • month • day: Minimum: **1** Maximum: **32**

Example Requests

None

Example Responses

Status code: 200

success response

```
{
  "data_list" : [ {
    "charging_mode" : "packet_cycle",
    "is_auto_renew" : false,
    "version_info" : {
      "hss.version.enterprise" : [ {
        "period_vals" : "1,2,3,4,5,6,7,8,9",
        "period_unit" : "month"
      }, {
        "period_vals" : "1,2,3,5",
        "period_unit" : "year"
      } ],
      "hss.version.premium" : [ {
        "period_vals" : "1,2,3,4,5,6,7,8,9",
        "period_unit" : "month"
      }, {
        "period_vals" : "1,2,3,5",
        "period_unit" : "year"
      } ]
    }
  }, {
    "charging_mode" : "on_demand",
    "is_auto_renew" : false,
    "version_info" : {
      "hss.version.enterprise" : [ {
        "period_vals" : "1,2,3,4,5,6,7,8,9",
        "period_unit" : "month"
      }, {
        "period_vals" : "1,2,3,5",
        "period_unit" : "year"
      } ]
```



```
    }
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ShowProductdataOfferingInfosSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowProductdataOfferingInfosRequest request = new ShowProductdataOfferingInfosRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withSiteCode("<site_code>");
        try {
            ShowProductdataOfferingInfosResponse response = client.showProductdataOfferingInfos(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
```



```
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ShowProductdataOfferingInfosRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.site_code = "<site_code>"
        response = client.show_productdata_offering_infos(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowProductdataOfferingInfosRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    siteCodeRequest:= "<site_code>"
    request.SiteCode = &siteCodeRequest
    response, err := client.ShowProductdataOfferingInfos(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	success response

Error Codes

See **Error Codes**.

3.5 Container Management

3.5.1 Querying the Container Node List

Function

This API is used to query the container node list.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/container/nodes

Table 3-198 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Tenant project ID Minimum: **1** Maximum: **256**

Table 3-199 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**
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**. Minimum: **0** Maximum: **2000000** Default: **0**
limit	No	Integer	Number of records displayed on each page. Minimum: **10** Maximum: **200** Default: **10**
host_name	No	String	Node name. Minimum: **0** Maximum: **128**
agent_status	No	String	Agent status. It can be: • not_installed: • online • offline Minimum: **1** Maximum: **32**
protect_status	No	String	Protection status. Its value can be: • closed • opened Minimum: **1** Maximum: **32**

Parameter	Mandatory	Type	Description
container_tags	No	String	Label, which is used to identify CCE container and self-built nodes. • cce: CCE nodes • self: self-built nodes • other: other nodes Minimum: **1** Maximum: **32**

Request Parameters

Table 3-200 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-201 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number of container nodes Minimum: **0** Maximum: **65535**
data_list	Array of **ContainerNodeInfo** objects	Container node list Array Length: **0 - 65535**

Table 3-202 ContainerNodeInfo

Parameter	Type	Description
agent_id	String	Agent ID Minimum: **0** Maximum: **64**
host_id	String	Server ID Minimum: **0** Maximum: **128**
host_name	String	Node name Minimum: **0** Maximum: **128**
host_status	String	Server status. The options are as follows: • ACTIVE • SHUTOFF • BUILDING • ERROR Minimum: **1** Maximum: **32**
agent_status	String	Agent status. It can be: • not_installed • online • offline Minimum: **1** Maximum: **32**
protect_status	String	Protection status. Its value can be: • closed • opened Minimum: **1** Maximum: **32**
protect_interrupt	Boolean	Whether protection is interrupted
container_tags	String	Label, which is used to identify CCE container and self-built nodes. • cce: CCE nodes • self: self-built nodes • other: other nodes Minimum: **1** Maximum: **32**

Parameter	Type	Description
private_ip	String	Private IP address Minimum: **0** Maximum: **128**
public_ip	String	Elastic IP Address (EIP) Minimum: **0** Maximum: **128**
resource_id	String	HSS quota ID (UUID) Minimum: **0** Maximum: **128**
group_name	String	Server group ID Minimum: **1** Maximum: **128**
enterprise_project_name	String	Enterprise project name Minimum: **0** Maximum: **256**
detect_result	String	Server scan result. The options are as follows: • undetected • clean: No risk is detected. • risk: Risks are detected. • scanning Minimum: **1** Maximum: **32**
asset	Integer	Asset risks Minimum: **0** Maximum: **2097152**
vulnerability	Integer	Vulnerabilities Minimum: **0** Maximum: **2097152**
intrusion	Integer	Intrusion risks Minimum: **0** Maximum: **2097152**
policy_group_id	String	Policy group ID Minimum: **1** Maximum: **128**

Parameter	Type	Description
policy_group_name	String	Policy group name Minimum: **1** Maximum: **128**

Example Requests

This API is used to query the container node list. If the limit parameter is not set, 10 records are returned by default.

```
GET https://{endpoint}/v5/{project_id}/container/nodes
```

Example Responses

Status code: 200

success response

```
{
  "total_num" : 1,
  "data_list" : [ {
    "agent_id" : "2d0fe7824005bf001220ad9d892e86f8af44XXXXXXXXXX",
    "agent_status" : "online",
    "host_id" : "host_id",
    "host_name" : "host_name",
    "host_status" : "ACTIVE",
    "protect_status" : "opened",
    "protect_interrupt" : false,
    "private_ip" : "192.168.0.114",
    "public_ip" : "100.85.218.122",
    "resource_id" : "ef5eb4fd-7376-48ac-886f-16fd057776f3",
    "group_name" : "as(All projects)",
    "enterprise_project_name" : "default",
    "detect_result" : "risk",
    "asset" : 0,
    "vulnerability" : 14,
    "intrusion" : 0,
    "policy_group_id" : "ce4d5e95-0cbf-4102-9c77-ef1bcb6b35aa",
    "policy_group_name" : "tenant_linux_enterprise_default_policy_group (All projects)"
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;
```



```
public class ListContainerNodesSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListContainerNodesRequest request = new ListContainerNodesRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withOffset(<offset>);
        request.withLimit(<limit>);
        request.withHostName("<host_name>");
        request.withAgentStatus("<agent_status>");
        request.withProtectStatus("<protect_status>");
        request.withContainerTags("<container_tags>");
        try {
            ListContainerNodesResponse response = client.listContainerNodes(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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



```
    try:
        request = ListContainerNodesRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.offset = <offset>
        request.limit = <limit>
        request.host_name = "<host_name>"
        request.agent_status = "<agent_status>"
        request.protect_status = "<protect_status>"
        request.container_tags = "<container_tags>"
        response = client.list_container_nodes(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListContainerNodesRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    agentStatusRequest:= "<agent_status>"
    request.AgentStatus = &agentStatusRequest
    protectStatusRequest:= "<protect_status>"
    request.ProtectStatus = &protectStatusRequest
    containerTagsRequest:= "<container_tags>"
    request.ContainerTags = &containerTagsRequest
    response, err := client.ListContainerNodes(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	success response

Error Codes

See **Error Codes**.

3.6 Event Management

3.6.1 Querying the List of Blocked IP Addresses

Function

This API is used to query the list of blocked IP addresses.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/event/blocked-ip

Table 3-203 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **20** Maximum: **64**

Table 3-204 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to all_granted_eps. Minimum: **0** Maximum: **64**
last_days	No	Integer	Number of days to be queried. This parameter is manually exclusive with **begin_time** and **end_time**. Minimum: **1** Maximum: **30**
host_name	No	String	Server name Minimum: **1** Maximum: **64**
src_ip	No	String	Attack source IP address
intercept_status	No	String	Interception status. The options are as follows: • intercepted • canceled (unblocked) • cancelling Minimum: **0** Maximum: **32**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**
limit	No	Integer	Number of records displayed on each page. Minimum: **10** Maximum: **1000** Default: **10**

Request Parameters

Table 3-205 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-206 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number
data_list	Array of **BlockedIpResponseInfo** objects	Blocked IP address details Array Length: **0 - 100**

Table 3-207 BlockedIpResponseInfo

Parameter	Type	Description
host_id	String	Host ID
host_name	String	Server name
src_ip	String	Attack source IP address
login_type	String	Login type. The options are as follows: • "mysql" # MySQL service • "rdp" # RDP service • "ssh" # SSH service • "vsftp" # vsftp service

Parameter	Type	Description
intercept_num	Integer	Blocks Minimum: **0** Maximum: **2147483647**
intercept_status	String	Interception status. The options are as follows: • intercepted • canceled (unblocked) • cancelling
block_time	Long	Interception start time, in milliseconds. Minimum: **0** Maximum: **9223372036854775807**
latest_time	Long	Latest interception time, in milliseconds. Minimum: **0** Maximum: **9223372036854775807**

Example Requests

Query the first 10 blocked IP addresses.

```
GET https://{endpoint}/v5/{project_id}/event/blocked-ip?limit=10&offset=0&enterprise_project_id=xxx
```

Example Responses

Status code: 200

Blocked IP address list

```
{
  "data_list" : [ {
    "block_time" : 1698715135407,
    "host_id" : "1c62fe52-0c84-4ee4-8dba-d892c5ad0ab0",
    "host_name" : "dfx-a00607964-0011",
    "intercept_num" : 230,
    "intercept_status" : "canceled",
    "latest_time" : 1698715296786,
    "login_type" : "ssh",
    "src_ip" : "100.85.239.180"
  } ],
  "total_num" : 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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListBlockedIpSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListBlockedIpRequest request = new ListBlockedIpRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withLastDays(<last_days>);
        request.withHostName("<host_name>");
        request.withSrcIp("<src_ip>");
        request.withInterceptStatus("<intercept_status>");
        request.withOffset(<offset>);
        request.withLimit(<limit>);
        try {
            ListBlockedIpResponse response = client.listBlockedIp(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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



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

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

    try:
        request = ListBlockedIpRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.last_days = <last_days>
        request.host_name = "<host_name>"
        request.src_ip = "<src_ip>"
        request.intercept_status = "<intercept_status>"
        request.offset = <offset>
        request.limit = <limit>
        response = client.list_blocked_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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListBlockedIpRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    lastDaysRequest:= int32(<last_days>)
    request.LastDays = &lastDaysRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    srcIpRequest:= "<src_ip>"
    request.SrcIp = &srcIpRequest
    interceptStatusRequest:= "<intercept_status>"
    request.InterceptStatus = &interceptStatusRequest
    offsetRequest:= int32(<offset>)
```



```
    request.Offset = &offsetRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    response, err := client.ListBlockedIp(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	Blocked IP address list

Error Codes

See **Error Codes**.

3.6.2 Unblocking a Blocked IP Address

Function

This API is used to unblock a blocked IP address.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v5/{project_id}/event/blocked-ip

Table 3-208 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **20** Maximum: **64**

Table 3-209 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to all_granted_eps. Minimum: **0** Maximum: **64**

Request Parameters

Table 3-210 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Table 3-211 Request body parameters

Parameter	Mandatory	Type	Description
data_list	No	Array of **BlockedIpRequestInfo** objects	List of IP addresses to be unblocked Array Length: **1 - 100**

Table 3-212 BlockedIpRequestInfo

Parameter	Mandatory	Type	Description
host_id	Yes	String	Host ID
src_ip	Yes	String	Attack source IP address

Parameter	Mandatory	Type	Description
login_type	Yes	String	Login type. The options are as follows: • "mysql" # MySQL service • "rdp" # RDP service • "ssh" # SSH service • "vsftp" # vsftp service

Response Parameters

None

Example Requests

Remove the blocked IP address 192.168.1.6 of the host af423efds-214432fgsdaf-gfdsaggbvf in SSH mode.

```
PUT https://{endpoint}/v5/{project_id}/event/blocked-ip

{
  "data_list" : [ {
    "host_id" : "af423efds-214432fgsdaf-gfdsaggbvf",
    "src_ip" : "192.168.1.6",
    "login_type" : "ssh"
  } ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Remove the blocked IP address 192.168.1.6 of the host af423efds-214432fgsdaf-gfdsaggbvf in SSH mode.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class ChangeBlockedIpSolution {
```



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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ChangeBlockedIpRequest request = new ChangeBlockedIpRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        ChangeBlockedIpRequestInfo body = new ChangeBlockedIpRequestInfo();
        List<BlockedIpRequestInfo> listbodyDataList = new ArrayList<>();
        listbodyDataList.add(
            new BlockedIpRequestInfo()
                .withHostId("af423efds-214432fgsdaf-gfdsaggbvf")
                .withSrcIp("192.168.1.6")
                .withLoginType("ssh")
        );
        body.withDataList(listbodyDataList);
        request.withBody(body);
        try {
            ChangeBlockedIpResponse response = client.changeBlockedIp(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

Remove the blocked IP address 192.168.1.6 of the host af423efds-214432fgsdaf-gfdsaggbvf in SSH mode.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

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



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

try:
    request = ChangeBlockedIpRequest()
    request.enterprise_project_id = "<enterprise_project_id>"
    listDataListbody = [
        BlockedIpRequestInfo(
            host_id="af423efds-214432fgsdaf-gfdsaggbvf",
            src_ip="192.168.1.6",
            login_type="ssh"
        )
    ]
    request.body = ChangeBlockedIpRequestInfo(
        data_list=listDataListbody
    )
    response = client.change_blocked_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

Remove the blocked IP address 192.168.1.6 of the host af423efds-214432fgsdaf-gfdsaggbvf in SSH mode.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ChangeBlockedIpRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    var listDataListbody = []model.BlockedIpRequestInfo{
        {
            HostId: "af423efds-214432fgsdaf-gfdsaggbvf",
            SrcIp: "192.168.1.6",
```



```
            LoginType: "ssh",
        },
    }
    request.Body = &model.ChangeBlockedIpRequestInfo{
        DataList: &listDataListbody,
    }
    response, err := client.ChangeBlockedIp(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	successful response

Error Codes

See **Error Codes**.

3.6.3 Querying the List of Isolated Files

Function

This API is used to query the list of isolated files.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/event/isolated-file

Table 3-213 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **20** Maximum: **64**

Table 3-214 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to all_granted_eps. Minimum: **0** Maximum: **64**
file_path	No	String	File path
host_name	No	String	Server name Minimum: **1** Maximum: **64**
private_ip	No	String	Server private IP address Minimum: **1** Maximum: **256**
public_ip	No	String	Server public IP address Minimum: **1** Maximum: **256**
file_hash	No	String	The hash value calculated using the SHA256 algorithm.
asset_value	No	String	Asset importance. The options are as follows: • important • common • test Minimum: **0** Maximum: **128**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**
limit	No	Integer	Number of records displayed on each page. Minimum: **10** Maximum: **1000** Default: **10**

Request Parameters

Table 3-215 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-216 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number
data_list	Array of **IsolatedFileResponseInfo** objects	Isolated file details Array Length: **0 - 100**

Table 3-217 IsolatedFileResponseInfo

Parameter	Type	Description
os_type	String	OS type. Its value can be: • Linux • Windows
host_id	String	Host ID
host_name	String	Server name
file_hash	String	File hash
file_path	String	File path

Parameter	Type	Description
file_attr	String	File attribute
isolation_status	String	Isolation status. The options are as follows: • isolated • restored • isolating • restoring
private_ip	String	Server private IP address
public_ip	String	Elastic IP address
asset_value	String	Asset importance
update_time	Integer	Time when the event whitelist is updated, in milliseconds.
agent_version	String	Agent version
isolate_source	String	Isolation source. The options are as follows: • event: security alarm event • antivirus: virus scanning and removal
event_name	String	Event name
agent_event_info	**IsolateEventResponseInfo** object	Isolation event details
antivirus_result_info	**AntivirusResultDetailInfo** object	Results of virus scanning and removal

Table 3-218 IsolateEventResponseInfo

Parameter	Type	Description
event_id	String	Event ID

Parameter	Type	Description
event_class_id	String	Event category. Its value can be: • container_1001: Container namespace • container_1002: Container open port • container_1003: Container security option • container_1004: Container mount directory • containerescape_0001: High-risk system call • containerescape_0002: Shocker attack • containerescape_0003: Dirty Cow attack • containerescape_0004: Container file escape • dockerfile_001: Modification of user-defined protected container file • dockerfile_002: Modification of executable files in the container file system • dockerproc_001: Abnormal container process • fileprotect_0001: File privilege escalation • fileprotect_0002: Key file change • fileprotect_0003: AuthorizedKeysFile path change • fileprotect_0004: File directory change • login_0001: Brute-force attack attempt • login_0002: Brute-force attack succeeded • login_1001: Succeeded login • login_1002: Remote login • login_1003: Weak password • malware_0001: Shell change • malware_0002: Reverse shell • malware_1001: Malicious program • procdet_0001: Abnormal process behavior • procdet_0002: Process privilege escalation • procreport_0001: High-risk command • user_1001: Account change • user_1002: Unsafe account • vmescape_0001: Sensitive command executed on VM • vmescape_0002: Sensitive file accessed by virtualization process • vmescape_0003: Abnormal VM port access • webshell_0001: Web shell • network_1001: Mining

Parameter	Type	Description
		• network_1002: DDoS attacks • network_1003: Malicious scanning • network_1004: Attack in sensitive areas • ransomware_0001: ransomware attack • ransomware_0002: ransomware attack • ransomware_0003: ransomware attack • fileless_0001: process injection • fileless_0002: dynamic library injection • fileless_0003: key configuration change • fileless_0004: environment variable change • fileless_0005: memory file process • fileless_0006: VDSO hijacking • crontab_1001: suspicious crontab task • vul_exploit_0001: Redis vulnerability exploit • vul_exploit_0002: Hadoop vulnerability exploit • vul_exploit_0003: MySQL vulnerability exploit • rootkit_0001: suspicious rootkit file • rootkit_0002: suspicious kernel module • RASP_0004: web shell upload • RASP_0018: fileless web shell • blockexec_001: known ransomware attack • hips_0001: Windows Defender disabled • hips_0002: suspicious hacker tool • hips_0003: suspicious ransomware encryption behavior • hips_0004: hidden account creation • hips_0005: user password and credential reading • hips_0006: suspicious SAM file export • hips_0007: suspicious shadow copy deletion • hips_0008: backup file deletion • hips_0009: registry of suspicious ransomware • hips_0010: suspicious abnormal process • hips_0011: suspicious scan • hips_0012: suspicious ransomware script running

Parameter	Type	Description
		• hips_0013: suspicious mining command execution • hips_0014: suspicious windows security center disabling • hips_0015: suspicious behavior of disabling the firewall service • hips_0016: suspicious system automatic recovery disabling • hips_0017: executable file execution in Office • hips_0018: abnormal file creation with macros in Office • hips_0019: suspicious registry operation • hips_0020: Confluence remote code execution • hips_0021: MSDT remote code execution • portscan_0001: common port scan • portscan_0002: secret port scan • k8s_1001: Kubernetes event deletion • k8s_1002: privileged pod creations • k8s_1003: interactive shell used in pod • k8s_1004: pod created with sensitive directory • k8s_1005: pod created with server network • k8s_1006: pod created with host PID space • k8s_1007: authentication failure when common pods access API server • k8s_1008: API server access from common pod using cURL • k8s_1009: exec in system management space • k8s_1010: pod created in management space • k8s_1011: static pod creation • k8s_1012: DaemonSet creation • k8s_1013: scheduled cluster task creation • k8s_1014: operation on secrets • k8s_1015: allowed operation enumeration • k8s_1016: high privilege RoleBinding or ClusterRoleBinding • k8s_1017: ServiceAccount creation • k8s_1018: Cronjob creation

Parameter	Type	Description
		• k8s_1019: interactive shell used for exec in pods • k8s_1020: unauthorized access to API server • k8s_1021: access to API server with curl • k8s_1022: Ingress vulnerability • k8s_1023: man-in-the-middle (MITM) attack • k8s_1024: worm, mining, or Trojan • k8s_1025: K8s event deletion • k8s_1026: SelfSubjectRulesReview • imgblock_0001: image blocking based on whitelist • imgblock_0002: image blocking based on blacklist • imgblock_0003: image tag blocking based on whitelist • imgblock_0004: image tag blocking based on blacklist • imgblock_0005: container creation blocked based on whitelist • imgblock_0006: container creation blocked based on blacklist • imgblock_0007: container mount proc blocking • imgblock_0008: container seccomp unconfined blocking • imgblock_0009: container privilege blocking • imgblock_0010: container capabilities blocking

Parameter	Type	Description
event_type	Integer	Event type. Its value can be: • 1001: common malware • 1002: virus • 1003: worm • 1004: Trojan • 1005: botnet • 1006: backdoor • 1010 : Rootkit • 1011: ransomware • 1012: hacker tool • 1015 : web shell • 1016: mining • 1017: reverse shell • 2001: common vulnerability exploit • 2012: remote code execution • 2047: Redis vulnerability exploit • 2048: Hadoop vulnerability exploit • 2049: MySQL vulnerability exploit • 3002: file privilege escalation • 3003: process privilege escalation • 3004: critical file change • 3005: file/directory change • 3007: abnormal process behavior • 3015: high-risk command execution • 3018: abnormal shell • 3027: suspicious crontab task • 3029: system protection disabled • 3030: backup deletion • 3031: suspicious registry operations • 3036: container image blocking • 4002: brute-force attack • 4004: abnormal login • 4006: invalid accounts • 4014: account added • 4020: password theft • 6002: port scan • 6003: server scan • 13001: Kubernetes event deletion • 13002: abnormal pod behavior

Parameter	Type	Description
		• 13003: enumerating user information • 13004: cluster role binding
event_name	String	Event name
severity	String	Threat level. Its value can be: • Security • Low • Medium • High • Critical
container_name	String	Container instance name. This API is available only for container alarms.
image_name	String	Image name. This API is available only for container alarms.
host_name	String	Server name
host_id	String	Host ID
private_ip	String	Server private IP address
public_ip	String	Elastic IP address
os_type	String	OS type. Its value can be: • Linux • Windows
host_status	String	Server status. The options are as follows: • ACTIVE • SHUTOFF • BUILDING • ERROR Minimum: **1** Maximum: **32**
agent_status	String	Agent status. Its value can be: • installed • not_installed: • online • offline • install_failed • installing Minimum: **1** Maximum: **32**

Parameter	Type	Description
protect_status	String	Protection status. Its value can be: • closed • opened Minimum: **1** Maximum: **32**
asset_value	String	Asset importance. The options are as follows: • important • common • test Minimum: **0** Maximum: **128**
attack_phase	String	Attack phase. Its value can be: • reconnaissance • weaponization • delivery • exploit • installation • command_and_control • actions
attack_tag	String	Attack tag. Its value can be: • attack_success • attack_attempt • attack_blocked • abnormal_behavior • collapsible_host • system_vulnerability
occur_time	Integer	Occurrence time, accurate to milliseconds.
handle_time	Integer	Handling time, in milliseconds. This API is available only for handled alarms.
handle_status	String	Processing status. Its value can be: • unhandled • handled

Parameter	Type	Description
handle_method	String	Handling method. This API is available only for handled alarms. The options are as follows: • mark_as_handled • ignore • add_to_alarm_whitelist • add_to_login_whitelist • isolate_and_kill
handler	String	Remarks. This API is available only for handled alarms.
recommendation	String	Handling suggestion
description	String	Alarm description Minimum: **0** Maximum: **1024**
event_abstract	String	Alarm summary Minimum: **0** Maximum: **512**
event_count	Integer	Event occurrences Minimum: **0** Maximum: **2147483647**

Table 3-219 AntivirusResultDetailInfo

Parameter	Type	Description
result_id	String	The result ID of virus scanning and removal
malware_name	String	Virus name
file_path	String	File path
file_hash	String	File hash
file_size	Integer	File size
file_owner	String	File owner
file_attr	String	File attribute
file_ctime	Integer	File creation time
file_mtime	Integer	File update time

Parameter	Type	Description
update_time	Integer	Time when the event whitelist is updated, in milliseconds.
agent_id	String	Agent ID

Example Requests

Query the first 10 isolated files.

```
GET https://{endpoint}/v5/{project_id}/event/isolated-file?limit=10&offset=0&enterprise_project_id=xxx
```

Example Responses

Status code: 200

Isolated files list


```
{
  "data_list" : [ {
    "file_attr" : "0",
    "file_hash" : "58693382bc0c9f60ef86e5b37cf3c2f3a9c9ec46936901eaa9131f7ee4a09bde",
    "file_path" : "C:\\Users\\Public\\Public Docker\\system32.exe",
    "os_type" : "Linux",
    "host_id" : "5a41ca47-8ea7-4a65-a8fb-950d03d8638e",
    "host_name" : "ecs-wi-800211",
    "isolation_status" : "isolated",
    "private_ip" : "127.0.0.2",
    "public_ip" : "127.0.0.1",
    "asset_value" : "common",
    "update_time" : 1698304933717,
    "agent_version" : "3.2.10",
    "isolate_source" : "event",
    "event_name" : "Spyware",
    "antivirus_result_info" : {
      "result_id" : "5a41ca47-8ea7-4a65-a8fb-950d03d8638e",
      "malware_name" : "Win32.Virus.Hidrag",
      "file_attr" : "0",
      "file_hash" : "58693382bc0c9f60ef86e5b37cf3c2f3a9c9ec46936901eaa9131f7ee4a09bde",
      "file_path" : "C:\\Users\\Public\\Public Docker\\system32.exe",
      "file_size" : 58460,
      "file_owner" : "Administrators",
      "file_ctime" : 1700039800,
      "file_mtime" : 1700039800,
      "update_time" : 1698304933717,
      "agent_id" : "5a41ca47-8ea7-4a65-a8fb-950d03d8638e"
    },
    "agent_event_info" : {
      "attack_phase" : "exploit",
      "attack_tag" : "abnormal_behavior",
      "event_class_id" : "lgin_1002",
      "event_id" : "d8a12cf7-6a43-4cd6-92b4-aabf1e917",
      "event_name" : "different locations",
      "event_type" : 4004,
      "handle_status" : "unhandled",
      "host_name" : "xxx",
      "occur_time" : 1661593036627,
      "private_ip" : "127.0.0.1",
      "severity" : "Medium",
      "os_type" : "Linux",
      "agent_status" : "online",
      "asset_value" : "common",
```



```
    "protect_status" : "opened",
    "host_status" : "ACTIVE",
    "description" : "",
    "event_abstract" : "",
    "image_name" : "image",
    "container_name" : "test",
    "host_id" : "5a41ca47-8ea7-4a65-a8fb-950d03d8638e",
    "public_ip" : "127.0.0.2",
    "handle_time" : 1698304933717,
    "handle_method" : "ignore",
    "recommendation" : "Handling suggestion",
    "event_count" : 1
   }
  } ],
  "total_num" : 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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListIsolatedFileSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListIsolatedFileRequest request = new ListIsolatedFileRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withFilePath("<file_path>");
        request.withHostName("<host_name>");
        request.withPrivateIp("<private_ip>");
        request.withPublicIp("<public_ip>");
        request.withFileHash("<file_hash>");
        request.withAssetValue("<asset_value>");
        request.withOffset(<offset>);
        request.withLimit(<limit>);
        try {
            ListIsolatedFileResponse response = client.listIsolatedFile(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
```



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

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListIsolatedFileRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.file_path = "<file_path>"
        request.host_name = "<host_name>"
        request.private_ip = "<private_ip>"
        request.public_ip = "<public_ip>"
        request.file_hash = "<file_hash>"
        request.asset_value = "<asset_value>"
        request.offset = <offset>
        request.limit = <limit>
        response = client.list_isolated_file(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)
```



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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListIsolatedFileRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    filePathRequest:= "<file_path>"
    request.FilePath = &filePathRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    privateIpRequest:= "<private_ip>"
    request.PrivateIp = &privateIpRequest
    publicIpRequest:= "<public_ip>"
    request.PublicIp = &publicIpRequest
    fileHashRequest:= "<file_hash>"
    request.FileHash = &fileHashRequest
    assetValueRequest:= "<asset_value>"
    request.AssetValue = &assetValueRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    response, err := client.ListIsolatedFile(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	Isolated files list

Error Codes

See **Error Codes**.

3.6.4 Restoring Isolated Files

Function

This API is used to restore isolated files.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v5/{project_id}/event/isolated-file

Table 3-220 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **20** Maximum: **64**

Table 3-221 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to all_granted_eps. Minimum: **0** Maximum: **64**

Request Parameters

Table 3-222 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**

Parameter	Mandatory	Type	Description
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Table 3-223 Request body parameters

Parameter	Mandatory	Type	Description
data_list	No	Array of **IsolatedFileRequestInfo** objects	List of files to be restored Array Length: **0 - 100**

Table 3-224 IsolatedFileRequestInfo

Parameter	Mandatory	Type	Description
host_id	No	String	Host ID
file_hash	No	String	File hash
file_path	No	String	File path
file_attr	No	String	File attribute

Response Parameters

None

Example Requests

Cancel the isolation of the file C:\Users\Public\test.exe on host 5a41ca47-8ea7-4a65-a8fb-950d03d8638e.

```
PUT https://{endpoint}/v5/{project_id}/event/isolated-file

{
  "data_list" : [ {
    "file_attr" : "0",
    "file_hash" : "58693382bc0c9f60ef86e5b37cf3c2f3a9c9ec46936901eaa9131f7ee4a09bde",
    "file_path" : "C:\\Users\\Public\\test.exe",
    "host_id" : "5a41ca47-8ea7-4a65-a8fb-950d03d8638e"
  } ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Cancel the isolation of the file C:\Users\Public\test.exe on host 5a41ca47-8ea7-4a65-a8fb-950d03d8638e.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class ChangeIsolatedFileSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ChangeIsolatedFileRequest request = new ChangeIsolatedFileRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        ChangeIsolatedFileRequestInfo body = new ChangeIsolatedFileRequestInfo();
        List<IsolatedFileRequestInfo> listbodyDataList = new ArrayList<>();
        listbodyDataList.add(
            new IsolatedFileRequestInfo()
                .withHostId("5a41ca47-8ea7-4a65-a8fb-950d03d8638e")
                .withFileHash("58693382bc0c9f60ef86e5b37cf3c2f3a9c9ec46936901eaa9131f7ee4a09bde")
                .withFilePath("C:\Users\Public\test.exe")
                .withFileAttr("0")
        );
        body.withDataList(listbodyDataList);
        request.withBody(body);
        try {
            ChangeIsolatedFileResponse response = client.changeIsolatedFile(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

Cancel the isolation of the file C:\Users\Public\test.exe on host 5a41ca47-8ea7-4a65-a8fb-950d03d8638e.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ChangeIsolatedFileRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        listDataListbody = [
            IsolatedFileRequestInfo(
                host_id="5a41ca47-8ea7-4a65-a8fb-950d03d8638e",
                file_hash="58693382bc0c9f60ef86e5b37cf3c2f3a9c9ec46936901eaa9131f7ee4a09bde",
                file_path="C:\Users\Public\test.exe",
                file_attr="0"
            )
        ]
        request.body = ChangeIsolatedFileRequestInfo(
            data_list=listDataListbody
        )
        response = client.change_isolated_file(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

Cancel the isolation of the file C:\Users\Public\test.exe on host 5a41ca47-8ea7-4a65-a8fb-950d03d8638e.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
```



```
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ChangeIsolatedFileRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    hostIdDataList:= "5a41ca47-8ea7-4a65-a8fb-950d03d8638e"
    fileHashDataList:= "58693382bc0c9f60ef86e5b37cf3c2f3a9c9ec46936901eaa9131f7ee4a09bde"
    filePathDataList:= "C:\Users\Public\test.exe"
    fileAttrDataList:= "0"
    var listDataListbody = []model.IsolatedFileRequestInfo{
        {
            HostId: &hostIdDataList,
            FileHash: &fileHashDataList,
            FilePath: &filePathDataList,
            FileAttr: &fileAttrDataList,
        },
    }
    request.Body = &model.ChangeIsolatedFileRequestInfo{
        DataList: &listDataListbody,
    }
    response, err := client.ChangeIsolatedFile(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	successful response

Error Codes

See **Error Codes**.

3.7 Intrusion Detection

3.7.1 Handling Alarm Events

Function

This API is used to handle alarm events.

Calling Method

For details, see **Calling APIs**.

URI

POST /v5/{project_id}/event/operate

Table 3-225 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **20** Maximum: **64**

Table 3-226 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **64**
container_name	No	String	Container instance name
container_id	No	String	Container ID

Request Parameters

Table 3-227 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Table 3-228 Request body parameters

Parameter	Mandatory	Type	Description
operate_type	Yes	String	Handling method. Its value can be: • mark_as_handled • ignore • add_to_alarm_whitelist • add_to_login_whitelist • isolate_and_kill • unhandle • do_not_ignore • remove_from_alarm_whitelist • remove_from_login_whitelist • do_not_isolate_or_kill
handler	No	String	Remarks. This API is available only for handled alarms.
operate_event_list	Yes	Array of **OperateEventRequestInfo** objects	Operated event list Array Length: **0 - 100**

Parameter	Mandatory	Type	Description
event_white_rule_list	No	Array of **EventWhiteRuleListRequestInfo** objects	User-defined alarm whitelist Array Length: **0 - 100**

Table 3-229 OperateEventRequestInfo

Parameter	Mandatory	Type	Description
event_class_id	Yes	String	Event category. Its value can be: • container_1001: Container namespace • container_1002: Container open port • container_1003: Container security option • container_1004: Container mount directory • containerescape_0001: High-risk system call • containerescape_0002: Shocker attack • containerescape_0003: Dirty Cow attack • containerescape_0004: Container file escape • dockerfile_001: Modification of user-defined protected container file • dockerfile_002: Modification of executable files in the container file system • dockerproc_001: Abnormal container process • fileprotect_0001: File privilege escalation • fileprotect_0002: Key file change • fileprotect_0003: AuthorizedKeysFile path change • fileprotect_0004: File directory change • login_0001: Brute-force attack attempt • login_0002: Brute-force attack succeeded • login_1001: Succeeded login

Parameter	Mandatory	Type	Description
			• login_1002: Remote login • login_1003: Weak password • malware_0001: Shell change • malware_0002: Reverse shell • malware_1001: Malicious program • procdet_0001: Abnormal process behavior • procdet_0002: Process privilege escalation • procreport_0001: High-risk command • user_1001: Account change • user_1002: Unsafe account • vmescape_0001: Sensitive command executed on VM • vmescape_0002: Sensitive file accessed by virtualization process • vmescape_0003: Abnormal VM port access • webshell_0001: Web shell • network_1001: Mining • network_1002: DDoS attacks • network_1003: Malicious scanning • network_1004: Attack in sensitive areas • ransomware_0001: ransomware attack • ransomware_0002: ransomware attack • ransomware_0003: ransomware attack • fileless_0001: process injection • fileless_0002: dynamic library injection • fileless_0003: key configuration change

Parameter	Mandatory	Type	Description
			• fileless_0004: environment variable change • fileless_0005: memory file process • fileless_0006: VDSO hijacking • crontab_1001: suspicious crontab task • vul_exploit_0001: Redis vulnerability exploit • vul_exploit_0002: Hadoop vulnerability exploit • vul_exploit_0003: MySQL vulnerability exploit • rootkit_0001: suspicious rootkit file • rootkit_0002: suspicious kernel module • RASP_0004: web shell upload • RASP_0018: fileless web shell • blockexec_001: known ransomware attack • hips_0001: Windows Defender disabled • hips_0002: suspicious hacker tool • hips_0003: suspicious ransomware encryption behavior • hips_0004: hidden account creation • hips_0005: user password and credential reading • hips_0006: suspicious SAM file export • hips_0007: suspicious shadow copy deletion • hips_0008: backup file deletion • hips_0009: registry of suspicious ransomware

Parameter	Mandatory	Type	Description
			• hips_0010: suspicious abnormal process • hips_0011: suspicious scan • hips_0012: suspicious ransomware script running • hips_0013: suspicious mining command execution • hips_0014: suspicious windows security center disabling • hips_0015: suspicious behavior of disabling the firewall service • hips_0016: suspicious system automatic recovery disabling • hips_0017: executable file execution in Office • hips_0018: abnormal file creation with macros in Office • hips_0019: suspicious registry operation • hips_0020: Confluence remote code execution • hips_0021: MSDT remote code execution • portscan_0001: common port scan • portscan_0002: secret port scan • k8s_1001: Kubernetes event deletion • k8s_1002: privileged pod creations • k8s_1003: interactive shell used in pod • k8s_1004: pod created with sensitive directory • k8s_1005: pod created with server network • k8s_1006: pod created with host PID space

Parameter	Mandatory	Type	Description
			• k8s_1007: authentication failure when common pods access API server • k8s_1008: API server access from common pod using cURL • k8s_1009: exec in system management space • k8s_1010: pod created in management space • k8s_1011: static pod creation • k8s_1012: DaemonSet creation • k8s_1013: scheduled cluster task creation • k8s_1014: operation on secrets • k8s_1015: allowed operation enumeration • k8s_1016: high privilege RoleBinding or ClusterRoleBinding • k8s_1017: ServiceAccount creation • k8s_1018: Cronjob creation • k8s_1019: interactive shell used for exec in pods • k8s_1020: unauthorized access to API server • k8s_1021: access to API server with curl • k8s_1022: Ingress vulnerability • k8s_1023: man-in-the-middle (MITM) attack • k8s_1024: worm, mining, or Trojan • k8s_1025: K8s event deletion • k8s_1026: SelfSubjectRules-Review • imgblock_0001: image blocking based on whitelist

Parameter	Mandatory	Type	Description
			• imgblock_0002: image blocking based on blacklist • imgblock_0003: image tag blocking based on whitelist • imgblock_0004: image tag blocking based on blacklist • imgblock_0005: container creation blocked based on whitelist • imgblock_0006: container creation blocked based on blacklist • imgblock_0007: container mount proc blocking • imgblock_0008: container seccomp unconfined blocking • imgblock_0009: container privilege blocking • imgblock_0010: container capabilities blocking
event_id	Yes	String	Event ID

Parameter	Mandatory	Type	Description
event_type	Yes	Integer	Event type. Its value can be: • 1001: common malware • 1002: virus • 1003: worm • 1004: Trojan • 1005: botnet • 1006: backdoor • 1010 : Rootkit • 1011: ransomware • 1012: hacker tool • 1015 : web shell • 1016: mining • 1017: reverse shell • 2001: common vulnerability exploit • 2012: remote code execution • 2047: Redis vulnerability exploit • 2048: Hadoop vulnerability exploit • 2049: MySQL vulnerability exploit • 3002: file privilege escalation • 3003: process privilege escalation • 3004: critical file change • 3005: file/directory change • 3007: abnormal process behavior • 3015: high-risk command execution • 3018: abnormal shell • 3027: suspicious crontab task • 3029: system protection disabled • 3030: backup deletion • 3031: suspicious registry operations

Parameter	Mandatory	Type	Description
			• 3036: container image blocking • 4002: brute-force attack • 4004: abnormal login • 4006: invalid accounts • 4014: account added • 4020: password theft • 6002: port scan • 6003: server scan • 13001: Kubernetes event deletion • 13002: abnormal pod behavior • 13003: enumerating user information • 13004: cluster role binding
occur_time	Yes	Integer	Occurrence time, accurate to milliseconds.
operate_detail_list	Yes	Array of **EventDetailRequestInfo** objects	Operation details list. If operate_type is set to add_to_alarm_whitelist or remove_from_alarm_whitelist, keyword and hash are mandatory. If operate_type is set to add_to_login_whitelist or remove_from_login_whitelist, the login_ip, private_ip, and login_user_name parameters are mandatory. If operate_type is set to isolate_and_kill or do_not_isolate_or_kill, the agent_id, file_hash, file_path, and process_pid parameters are mandatory. In other cases, the parameters are optional. Array Length: **0 - 100**

Table 3-230 EventDetailRequestInfo

Parameter	Mandatory	Type	Description
agent_id	No	String	Agent ID

Parameter	Mandatory	Type	Description
process_pid	No	Integer	Process ID
file_hash	No	String	File hash
file_path	No	String	File path
file_attr	No	String	File attribute
keyword	No	String	Alarm event keyword, which is used only for the alarm whitelist.
hash	No	String	Alarm event hash, which is used only for the alarm whitelist.
private_ip	No	String	Server private IP address
login_ip	No	String	Login source IP address
login_user_name	No	String	Login username
container_id	No	String	Container ID Minimum: **64** Maximum: **64**
container_name	No	String	Container name Minimum: **1** Maximum: **128**

Table 3-231 EventWhiteRuleListRequestInfo

Parameter	Mandatory	Type	Description
event_type	Yes	Integer	Event type. Its value can be: • 1001: common malware • 1002: virus • 1003: worm • 1004: Trojan • 1005: botnet • 1006: backdoor • 1010 : Rootkit • 1011: ransomware • 1012: hacker tool • 1015 : web shell • 1016: mining • 1017: reverse shell • 2001: common vulnerability exploit • 2012: remote code execution • 2047: Redis vulnerability exploit • 2048: Hadoop vulnerability exploit • 2049: MySQL vulnerability exploit • 3002: file privilege escalation • 3003: process privilege escalation • 3004: critical file change • 3005: file/directory change • 3007: abnormal process behavior • 3015: high-risk command execution • 3018: abnormal shell • 3027: suspicious crontab task • 3029: system protection disabled • 3030: backup deletion • 3031: suspicious registry operations

Parameter	Mandatory	Type	Description
			• 3036: container image blocking • 4002: brute-force attack • 4004: abnormal login • 4006: invalid accounts • 4014: account added • 4020: password theft • 6002: port scan • 6003: server scan • 13001: Kubernetes event deletion • 13002: abnormal pod behavior • 13003: enumerating user information • 13004: cluster role binding
field_key	Yes	String	Whitelist fields. The options are as follows: • "file/process hash" # process/file hash • "file_path" • "process_path" • "login_ip": login IP address • "reg_key": registry key • "process_cmdline": process command line • "username" Minimum: **1** Maximum: **20**
field_value	Yes	String	Whitelist field value Minimum: **1** Maximum: **128**
judge_type	Yes	String	Wildcard. The options are as follows: • "equal" • "contain" Minimum: **1** Maximum: **10**

Response Parameters

None

Example Requests

Manually handle the intrusion alarms whose alarm event type is Rootkit and alarm event ID is 2a71e1e2-60f4-4d56-b314-2038fdc39de6.

```
POST https://{endpoint}/v5/{project_id}/event/operate?enterprise_project_id=xxx

{
  "operate_type" : "mark_as_handled",
  "handler" : "test",
  "operate_event_list" : [ {
    "event_class_id" : "rootkit_0001",
    "event_id" : "2a71e1e2-60f4-4d56-b314-2038fdc39de6",
    "occur_time" : 1672046760353,
    "event_type" : 1010,
    "operate_detail_list" : [ {
      "agent_id" : "c9bed5397db449ebdfba15e85fcfc36accee125c68954daf5cab0528bab59bd8",
      "file_hash" : "e8b50f0b91e3dce0885ccc5902846b139d28108a0a7976c9b8d43154c5dbc44d",
      "file_path" : "/usr/test",
      "process_pid" : 3123,
      "file_attr" : 33261,
      "keyword" : "file_path=/usr/test",
      "hash" : "e8b50f0b91e3dce0885ccc5902846b139d28108a0a7976c9b8d43154c5dbc44d",
      "login_ip" : "127.0.0.1",
      "private_ip" : "127.0.0.2",
      "login_user_name" : "root",
      "container_id" : "containerid",
      "container_name" : "/test"
    } ]
  } ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Manually handle the intrusion alarms whose alarm event type is Rootkit and alarm event ID is 2a71e1e2-60f4-4d56-b314-2038fdc39de6.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class ChangeEventSolution {
```



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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ChangeEventRequest request = new ChangeEventRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withContainerName("<container_name>");
        request.withContainerId("<container_id>");
        ChangeEventRequestInfo body = new ChangeEventRequestInfo();
        List<EventDetailRequestInfo> listOperateEventListOperateDetailList = new ArrayList<>();
        listOperateEventListOperateDetailList.add(
            new EventDetailRequestInfo()
                .withAgentId("c9bed5397db449ebdfba15e85fcfc36accee125c68954daf5cab0528bab59bd8")
                .withProcessPid(3123)
                .withFileHash("e8b50f0b91e3dce0885ccc5902846b139d28108a0a7976c9b8d43154c5dbc44d")
                .withFilePath("/usr/test")
                .withFileAttr("33261")
                .withKeyword("file_path=/usr/test")
                .withHash("e8b50f0b91e3dce0885ccc5902846b139d28108a0a7976c9b8d43154c5dbc44d")
                .withPrivateIp("127.0.0.2")
                .withLoginIp("127.0.0.1")
                .withLoginUserName("root")
                .withContainerId("containerid")
                .withContainerName("/test")
        );
        List<OperateEventRequestInfo> listbodyOperateEventList = new ArrayList<>();
        listbodyOperateEventList.add(
            new OperateEventRequestInfo()
                .withEventClassId("rootkit_0001")
                .withEventId("2a71e1e2-60f4-4d56-b314-2038fdc39de6")
                .withEventType(1010)
                .withOccurTime(1672046760353L)
                .withOperateDetailList(listOperateEventListOperateDetailList)
        );
        body.withOperateEventList(listbodyOperateEventList);
        body.withHandler("test");
        body.withOperateType("mark_as_handled");
        request.withBody(body);
        try {
            ChangeEventResponse response = client.changeEvent(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

Manually handle the intrusion alarms whose alarm event type is Rootkit and alarm event ID is 2a71e1e2-60f4-4d56-b314-2038fdc39de6.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ChangeEventRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.container_name = "<container_name>"
        request.container_id = "<container_id>"
        listOperateDetailListOperateEventList = [
            EventDetailRequestInfo(
                agent_id="c9bed5397db449ebdfba15e85fcfc36accee125c68954daf5cab0528bab59bd8",
                process_pid=3123,
                file_hash="e8b50f0b91e3dce0885ccc5902846b139d28108a0a7976c9b8d43154c5dbc44d",
                file_path="/usr/test",
                file_attr="33261",
                keyword="file_path=/usr/test",
                hash="e8b50f0b91e3dce0885ccc5902846b139d28108a0a7976c9b8d43154c5dbc44d",
                private_ip="127.0.0.2",
                login_ip="127.0.0.1",
                login_user_name="root",
                container_id="containerid",
                container_name="/test"
            )
        ]
        listOperateEventListbody = [
            OperateEventRequestInfo(
                event_class_id="rootkit_0001",
                event_id="2a71e1e2-60f4-4d56-b314-2038fdc39de6",
                event_type=1010,
                occur_time=1672046760353,
                operate_detail_list=listOperateDetailListOperateEventList
            )
        ]
        request.body = ChangeEventRequestInfo(
            operate_event_list=listOperateEventListbody,
            handler="test",
            operate_type="mark_as_handled"
        )
        response = client.change_event(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

Manually handle the intrusion alarms whose alarm event type is Rootkit and alarm event ID is 2a71e1e2-60f4-4d56-b314-2038fdc39de6.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ChangeEventRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    containerNameRequest:= "<container_name>"
    request.ContainerName = &containerNameRequest
    containerIdRequest:= "<container_id>"
    request.ContainerId = &containerIdRequest
    agentIdOperateDetailList:= "c9bed5397db449ebdfba15e85fcfc36accee125c68954daf5cab0528bab59bd8"
    processPidOperateDetailList:= int32(3123)
    fileHashOperateDetailList:=
"e8b50f0b91e3dce0885ccc5902846b139d28108a0a7976c9b8d43154c5dbc44d"
    filePathOperateDetailList:= "/usr/test"
    fileAttrOperateDetailList:= "33261"
    keywordOperateDetailList:= "file_path=/usr/test"
    hashOperateDetailList:= "e8b50f0b91e3dce0885ccc5902846b139d28108a0a7976c9b8d43154c5dbc44d"
    privateIpOperateDetailList:= "127.0.0.2"
    loginIpOperateDetailList:= "127.0.0.1"
    loginUserNameOperateDetailList:= "root"
    containerIdOperateDetailList:= "containerid"
    containerNameOperateDetailList:= "/test"
    var listOperateDetailListOperateEventList = []model.EventDetailRequestInfo{
        {
            AgentId: &agentIdOperateDetailList,
            ProcessPid: &processPidOperateDetailList,
            FileHash: &fileHashOperateDetailList,
            FilePath: &filePathOperateDetailList,
            FileAttr: &fileAttrOperateDetailList,
            Keyword: &keywordOperateDetailList,
            Hash: &hashOperateDetailList,
            PrivateIp: &privateIpOperateDetailList,
            LoginIp: &loginIpOperateDetailList,
```



```
            LoginUserName: &loginUserNameOperateDetailList,
            ContainerId: &containerIdOperateDetailList,
            ContainerName: &containerNameOperateDetailList,
        },
    }
    var listOperateEventListbody = []model.OperateEventRequestInfo{
        {
            EventClassId: "rootkit_0001",
            EventId: "2a71e1e2-60f4-4d56-b314-2038fdc39de6",
            EventType: int32(1010),
            OccurTime: int64(1672046760353),
            OperateDetailList: listOperateDetailListOperateEventList,
        },
    }
    handlerChangeEventRequestInfo:= "test"
    request.Body = &model.ChangeEventRequestInfo{
        OperateEventList: listOperateEventListbody,
        Handler: &handlerChangeEventRequestInfo,
        OperateType: "mark_as_handled",
    }
    response, err := client.ChangeEvent(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	success
400	Invalid parameter.
401	Authentication failed.
403	Insufficient permission.
404	Resource not found.
500	System error.

Error Codes

See **Error Codes**.

3.7.2 Querying the Detected Intrusion List

Function

This API is used to query the detected intrusion list.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/event/events

Table 3-232 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **20** Maximum: **64**

Table 3-233 Query Parameters

Parameter	Mandatory	Type	Description
category	Yes	String	Event category. Its value can be: • host: host security event • container: container security event Minimum: **0** Maximum: **32**
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **64**
last_days	No	Integer	Number of days to be queried. This parameter is mutually exclusive with **begin_time** and **end_time**. Minimum: **1** Maximum: **30**
host_name	No	String	Server name Minimum: **1** Maximum: **64**
host_id	No	String	Host ID Minimum: **0** Maximum: **64**

Parameter	Mandatory	Type	Description
private_ip	No	String	Server IP address Minimum: **1** Maximum: **256**
public_ip	No	String	Server public IP address Minimum: **1** Maximum: **256**
container_name	No	String	Container instance name
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**
limit	No	Integer	Number of records displayed on each page Minimum: **10** Maximum: **1000** Default: **10**

Parameter	Mandatory	Type	Description
event_types	No	Array	Event type. Its value can be: • 1001: common malware • 1002: virus • 1003: worm • 1004: Trojan • 1005: botnet • 1006: backdoor • 1010 :Rootkit • 1011: ransomware • 1012: hacker tool • 1015 : web shell • 1016: mining • 1017: reverse shell • 2001: common vulnerability exploit • 2012: remote code execution • 2047: Redis vulnerability exploit • 2048: Hadoop vulnerability exploit • 2049: MySQL vulnerability exploit • 3002: file privilege escalation • 3003: process privilege escalation • 3004: critical file change • 3005: file/directory change • 3007: abnormal process behavior • 3015: high-risk command execution • 3018: abnormal shell • 3026: crontab privilege escalation • 3027: suspicious crontab task • 3029: system protection disabled • 3030: backup deletion

Parameter	Mandatory	Type	Description
			• 3031: suspicious registry operations • 3036: container image blocking • 4002: brute-force attack • 4004: abnormal login • 4006: invalid accounts • 4014: account added • 4020: password theft • 6002: port scan • 6003: server scan • 13001: Kubernetes event deletion • 13002: abnormal pod behavior • 13003: enumerating user information • 13004: cluster role binding Minimum: **1000** Maximum: **30000** Array Length: **1 - 500**
handle_status	No	String	Status. Its value can be: • unhandled • handled Minimum: **1** Maximum: **32**
severity	No	String	Threat level. Its value can be: • Security • Low • Medium • High • Critical Minimum: **1** Maximum: **32**

Parameter	Mandatory	Type	Description
begin_time	No	String	Customized start time of a segment. The timestamp is accurate to seconds. The **begin_time** should be no more than two days earlier than the **end_time**. This parameter is mutually exclusive with the queried duration. Minimum: **13** Maximum: **13**
end_time	No	String	Customized end time of a segment. The timestamp is accurate to seconds. The **begin_time** should be no more than two days earlier than the **end_time**. This parameter is mutually exclusive with the queried duration. Minimum: **13** Maximum: **13**

Parameter	Mandatory	Type	Description
event_class_ids	No	Array	Event ID. Its value can be: • container_1001: container namespace • container_1002: container port enabled • container_1003: container security options • container_1004: container mount directory • containerescape_0001: high-risk system call • containerescape_0002: shocker attack • containerescape_0003: Dirty Cow attack • containerescape_0004: container file escape • dockerfile_001: modification of user-defined protected container file • dockerfile_002: modification of executable files in the container file system • dockerproc_001: abnormal container process • fileprotect_0001: file privilege escalation • fileprotect_0002: key file change • fileprotect_0003: key file path change • fileprotect_0004: file/directory change • av_1002: virus • av_1003: worm • av_1004: Trojan • av_1005: botnet • av_1006: backdoor • av_1007: spyware • av_1008: malicious adware • av_1009: phishing

Parameter	Mandatory	Type	Description
			• av_1010 : Rootkit • av_1011: ransomware • av_1012: hacker tool • av_1013: grayware • av_1015 : web shell • av_1016: mining software • login_0001: brute-force cracking • login_0002: successful cracking • login_1001: successful login • login_1002: remote login • login_1003: weak password • malware_0001: shell change report • malware_0002: reverse shell report • malware_1001: malicious program • procdet_0001: abnormal process behavior detection • procdet_0002: process privilege escalation • crontab_0001: crontab script privilege escalation • crontab_0002: malicious path privilege escalation • procreport_0001: risky commands • user_1001: account change • user_1002: risky account • vmescape_0001: VM sensitive command execution • vmescape_0002: access from virtualization process to sensitive file • vmescape_0003: abnormal VM port access • webshell_0001: web shell • network_1001: malicious mining

Parameter	Mandatory	Type	Description
			• network_1002: DDoS attacks • network_1003: malicious scan • network_1004: attack in sensitive areas • ransomware_0001: ransomware attack • ransomware_0002: ransomware attack • ransomware_0003: ransomware attack • fileless_0001: process injection • fileless_0002: dynamic library injection • fileless_0003: key configuration change • fileless_0004: environment variable change • fileless_0005: memory file process • fileless_0006: VDSO hijacking • crontab_1001: suspicious crontab task • vul_exploit_0001: Redis vulnerability exploit • vul_exploit_0002: Hadoop vulnerability exploit • vul_exploit_0003: MySQL vulnerability exploit • rootkit_0001: suspicious rootkit file • rootkit_0002: suspicious kernel module • RASP_0004: web shell upload • RASP_0018: fileless web shell • blockexec_001: known ransomware attack • hips_0001: Windows Defender disabled

Parameter	Mandatory	Type	Description
			• hips_0002: suspicious hacker tool • hips_0003: suspicious ransomware encryption behavior • hips_0004: hidden account creation • hips_0005: user password and credential reading • hips_0006: suspicious SAM file export • hips_0007: suspicious shadow copy deletion • hips_0008: backup file deletion • hips_0009: registry of suspicious ransomware • hips_0010: suspicious abnormal process • hips_0011: suspicious scan • hips_0012: suspicious ransomware script running • hips_0013: suspicious mining command execution • hips_0014: suspicious windows security center disabling • hips_0015: suspicious behavior of disabling the firewall service • hips_0016: suspicious system automatic recovery disabling • hips_0017: executable file execution in Office • hips_0018: abnormal file creation with macros in Office • hips_0019: suspicious registry operation • hips_0020: Confluence remote code execution • hips_0021: MSDT remote code execution

Parameter	Mandatory	Type	Description
			• portscan_0001: common port scan • portscan_0002: secret port scan • k8s_1001: Kubernetes event deletion • k8s_1002: privileged pod creations • k8s_1003: interactive shell used in pod • k8s_1004: pod created with sensitive directory • k8s_1005: pod created with server network • k8s_1006: pod created with host PID space • k8s_1007: authentication failure when common pods access API server • k8s_1008: API server access from common pod using cURL • k8s_1009: exec in system management space • k8s_1010: pod created in management space • k8s_1011: static pod creation • k8s_1012: DaemonSet creation • k8s_1013: scheduled cluster task creation • k8s_1014: operation on secrets • k8s_1015: allowed operation enumeration • k8s_1016: high privilege RoleBinding or ClusterRoleBinding • k8s_1017: ServiceAccount creation • k8s_1018: Cronjob creation • k8s_1019: interactive shell used for exec in pods

Parameter	Mandatory	Type	Description
			• k8s_1020: unauthorized access to API server • k8s_1021: access to API server with curl • k8s_1022: Ingress vulnerability • k8s_1023: man-in-the-middle (MITM) attack • k8s_1024: worm, mining, or Trojan • k8s_1025: K8s event deletion • k8s_1026: SelfSubjectRules-Review • imgblock_0001: image blocking based on whitelist • imgblock_0002: image blocking based on blacklist • imgblock_0003: image tag blocking based on whitelist • imgblock_0004: image tag blocking based on blacklist • imgblock_0005: container creation blocked based on whitelist • imgblock_0006: container creation blocked based on blacklist • imgblock_0007: container mount proc blocking • imgblock_0008: container seccomp unconfined blocking • imgblock_0009: container privilege blocking • imgblock_0010: container capabilities blocking Array Length: **1 - 200**

Parameter	Mandatory	Type	Description
severity_list	No	Array	Threat level. The options are as follows: • Security • Low • Medium • High • Critical Minimum: **0** Maximum: **32** Array Length: **0 - 5**
attack_tag	No	String	Indicates the attack flag. The options are as follows: • attack_success: attack success • attack_attempt: attack attempt • attack_blocked: blocked attack • abnormal_behavior: abnormal behavior • collapsible_host: compromised host • system_vulnerability: system vulnerability Minimum: **0** Maximum: **32**
asset_value	No	String	Asset importance. The options are as follows: • important • common • test Minimum: **0** Maximum: **128**
tag_list	No	Array	Event tag list, for example, ["hot event"]. Minimum: **0** Maximum: **10** Array Length: **0 - 20**

Parameter	Mandatory	Type	Description
att_ck	No	String	ATT&CK attack stage, including: • Reconnaissance: • Initial Access: • Execution: • Persistence: • Privilege Escalation: • Defense Evasion: defense bypass • Credential Access: • Command and Control: • Impact: Damage is affected. Minimum: **0** Maximum: **32**
event_name	No	String	Alarm name Minimum: **1** Maximum: **128**

Request Parameters

Table 3-234 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-235 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number of alarm events Minimum: **0** Maximum: **2147483647**
data_list	Array of **EventManagementResponseInfo** objects	Event list Array Length: **0 - 1000**

Table 3-236 EventManagementResponseInfo

Parameter	Type	Description
event_id	String	Event ID

Parameter	Type	Description
event_class_id	String	Event category. Its value can be: • container_1001: Container namespace • container_1002: Container open port • container_1003: Container security option • container_1004: Container mount directory • containerescape_0001: High-risk system call • containerescape_0002: Shocker attack • containerescape_0003: Dirty Cow attack • containerescape_0004: Container file escape • dockerfile_001: Modification of user-defined protected container file • dockerfile_002: Modification of executable files in the container file system • dockerproc_001: Abnormal container process • fileprotect_0001: File privilege escalation • fileprotect_0002: Key file change • fileprotect_0003: AuthorizedKeysFile path change • fileprotect_0004: File directory change • login_0001: Brute-force attack attempt • login_0002: Brute-force attack succeeded • login_1001: Succeeded login • login_1002: Remote login • login_1003: Weak password • malware_0001: Shell change • malware_0002: Reverse shell • malware_1001: Malicious program • procdet_0001: Abnormal process behavior • procdet_0002: Process privilege escalation • procreport_0001: High-risk command • user_1001: Account change • user_1002: Unsafe account • vmescape_0001: Sensitive command executed on VM • vmescape_0002: Sensitive file accessed by virtualization process • vmescape_0003: Abnormal VM port access • webshell_0001: Web shell • network_1001: Mining

Parameter	Type	Description
		• network_1002: DDoS attacks • network_1003: Malicious scanning • network_1004: Attack in sensitive areas • ransomware_0001: ransomware attack • ransomware_0002: ransomware attack • ransomware_0003: ransomware attack • fileless_0001: process injection • fileless_0002: dynamic library injection • fileless_0003: key configuration change • fileless_0004: environment variable change • fileless_0005: memory file process • fileless_0006: VDSO hijacking • crontab_1001: suspicious crontab task • vul_exploit_0001: Redis vulnerability exploit • vul_exploit_0002: Hadoop vulnerability exploit • vul_exploit_0003: MySQL vulnerability exploit • rootkit_0001: suspicious rootkit file • rootkit_0002: suspicious kernel module • RASP_0004: web shell upload • RASP_0018: fileless web shell • blockexec_001: known ransomware attack • hips_0001: Windows Defender disabled • hips_0002: suspicious hacker tool • hips_0003: suspicious ransomware encryption behavior • hips_0004: hidden account creation • hips_0005: user password and credential reading • hips_0006: suspicious SAM file export • hips_0007: suspicious shadow copy deletion • hips_0008: backup file deletion • hips_0009: registry of suspicious ransomware • hips_0010: suspicious abnormal process • hips_0011: suspicious scan • hips_0012: suspicious ransomware script running

Parameter	Type	Description
		• hips_0013: suspicious mining command execution • hips_0014: suspicious windows security center disabling • hips_0015: suspicious behavior of disabling the firewall service • hips_0016: suspicious system automatic recovery disabling • hips_0017: executable file execution in Office • hips_0018: abnormal file creation with macros in Office • hips_0019: suspicious registry operation • hips_0020: Confluence remote code execution • hips_0021: MSDT remote code execution • portscan_0001: common port scan • portscan_0002: secret port scan • k8s_1001: Kubernetes event deletion • k8s_1002: privileged pod creations • k8s_1003: interactive shell used in pod • k8s_1004: pod created with sensitive directory • k8s_1005: pod created with server network • k8s_1006: pod created with host PID space • k8s_1007: authentication failure when common pods access API server • k8s_1008: API server access from common pod using cURL • k8s_1009: exec in system management space • k8s_1010: pod created in management space • k8s_1011: static pod creation • k8s_1012: DaemonSet creation • k8s_1013: scheduled cluster task creation • k8s_1014: operation on secrets • k8s_1015: allowed operation enumeration • k8s_1016: high privilege RoleBinding or ClusterRoleBinding • k8s_1017: ServiceAccount creation • k8s_1018: Cronjob creation

Parameter	Type	Description
		• k8s_1019: interactive shell used for exec in pods • k8s_1020: unauthorized access to API server • k8s_1021: access to API server with curl • k8s_1022: Ingress vulnerability • k8s_1023: man-in-the-middle (MITM) attack • k8s_1024: worm, mining, or Trojan • k8s_1025: K8s event deletion • k8s_1026: SelfSubjectRulesReview • imgblock_0001: image blocking based on whitelist • imgblock_0002: image blocking based on blacklist • imgblock_0003: image tag blocking based on whitelist • imgblock_0004: image tag blocking based on blacklist • imgblock_0005: container creation blocked based on whitelist • imgblock_0006: container creation blocked based on blacklist • imgblock_0007: container mount proc blocking • imgblock_0008: container seccomp unconfined blocking • imgblock_0009: container privilege blocking • imgblock_0010: container capabilities blocking

Parameter	Type	Description
event_type	Integer	Event type. Its value can be: • 1001: common malware • 1002: virus • 1003: worm • 1004: Trojan • 1005: botnet • 1006: backdoor • 1010 : Rootkit • 1011: ransomware • 1012: hacker tool • 1015 : web shell • 1016: mining • 1017: reverse shell • 2001: common vulnerability exploit • 2012: remote code execution • 2047: Redis vulnerability exploit • 2048: Hadoop vulnerability exploit • 2049: MySQL vulnerability exploit • 3002: file privilege escalation • 3003: process privilege escalation • 3004: critical file change • 3005: file/directory change • 3007: abnormal process behavior • 3015: high-risk command execution • 3018: abnormal shell • 3027: suspicious crontab task • 3029: system protection disabled • 3030: backup deletion • 3031: suspicious registry operations • 3036: container image blocking • 4002: brute-force attack • 4004: abnormal login • 4006: invalid accounts • 4014: account added • 4020: password theft • 6002: port scan • 6003: server scan • 13001: Kubernetes event deletion • 13002: abnormal pod behavior

Parameter	Type	Description
		• 13003: enumerating user information • 13004: cluster role binding
event_name	String	Event name
severity	String	Threat level. Its value can be: • Security • Low • Medium • High • Critical
container_name	String	Container instance name. This API is available only for container alarms.
image_name	String	Image name. This API is available only for container alarms.
host_name	String	Server name
host_id	String	Host ID
private_ip	String	Server private IP address
public_ip	String	Elastic IP address
os_type	String	OS type. Its value can be: • Linux • Windows
host_status	String	Server status. The options are as follows: • ACTIVE • SHUTOFF • BUILDING • ERROR Minimum: **1** Maximum: **32**
agent_status	String	Agent status. Its value can be: • installed • not_installed • online • offline • install_failed • installing Minimum: **1** Maximum: **32**

Parameter	Type	Description
protect_status	String	Protection status. Its value can be: • closed • opened Minimum: **1** Maximum: **32**
asset_value	String	Asset importance. The options are as follows: • important • common • test Minimum: **0** Maximum: **128**
attack_phase	String	Attack phase. Its value can be: • reconnaissance • weaponization • delivery • exploit • installation • command_and_control • actions
attack_tag	String	Attack tag. Its value can be: • attack_success • attack_attempt • attack_blocked • abnormal_behavior • collapsible_host • system_vulnerability
occur_time	Integer	Occurrence time, accurate to milliseconds.
handle_time	Integer	Handling time, in milliseconds. This API is available only for handled alarms.
handle_status	String	Processing status. Its value can be: • unhandled • handled

Parameter	Type	Description
handle_method	String	Handling method. This API is available only for handled alarms. The options are as follows: • mark_as_handled • ignore • add_to_alarm_whitelist • add_to_login_whitelist • isolate_and_kill
handler	String	Remarks. This API is available only for handled alarms.
operate_accept_list	Array of strings	Supported processing operation
operate_detail_list	Array of **EventDetailResponseInfo** objects	Operation details list (not displayed on the page) Array Length: **0 - 100**
forensic_info	Object	Attack information, in JSON format.
resource_info	**EventResourceResponseInfo** object	Resource information
geo_info	Object	Geographical location, in JSON format.
malware_info	Object	Malware information, in JSON format.
network_info	Object	Network information, in JSON format.
app_info	Object	Application information, in JSON format.
system_info	Object	System information, in JSON format.
extend_info	Object	Extended event information, in JSON format
recommendation	String	Handling suggestions
description	String	Alarm description Minimum: **0** Maximum: **1024**
event_abstract	String	Event abstract Minimum: **0** Maximum: **512**
process_info_list	Array of **EventProcessResponseInfo** objects	Process information list Array Length: **0 - 100**

Parameter	Type	Description
user_info_list	Array of **EventUserResponseInfo** objects	User information list Array Length: **0 - 100**
file_info_list	Array of **EventFileResponseInfo** objects	File information list Array Length: **0 - 100**
event_details	String	Brief description of the event. Minimum: **0** Maximum: **204800**
tag_list	Array of strings	Tags Minimum: **0** Maximum: **10** Array Length: **0 - 20**
event_count	Integer	Event occurrences Minimum: **0** Maximum: **2147483647**

Table 3-237 EventDetailResponseInfo

Parameter	Type	Description
agent_id	String	Agent ID
process_pid	Integer	Process ID
is_parent	Boolean	Whether a process is a parent process
file_hash	String	File hash
file_path	String	File path
file_attr	String	File attribute
private_ip	String	Server private IP address
login_ip	String	Login source IP address
login_user_name	String	Login username
keyword	String	Alarm event keyword, which is used only for the alarm whitelist.
hash	String	Alarm event hash, which is used only for the alarm whitelist.

Table 3-238 EventResourceResponseInfo

Parameter	Type	Description
domain_id	String	User account ID
project_id	String	Project ID
enterprise_project_id	String	Enterprise project ID
region_name	String	Region name
vpc_id	String	VPC ID
cloud_id	String	ECS ID
vm_name	String	VM name
vm_uuid	String	Specifies the VM UUID, that is, the host ID.
container_id	String	Container ID
container_status	String	Container status
pod_uid	String	pod uid
pod_name	String	pod name
namespace	String	namespace
cluster_id	String	Cluster ID
cluster_name	String	Cluster name
image_id	String	Image ID
image_name	String	Image name
host_attr	String	Host attribute
service	String	Service
micro_service	String	Microservice
sys_arch	String	System CPU architecture
os_bit	String	OS bit version
os_type	String	OS type
os_name	String	OS name
os_version	String	OS version

Table 3-239 EventProcessResponseInfo

Parameter	Type	Description
process_name	String	Process name
process_path	String	Process file path
process_pid	Integer	Process ID Minimum: **0** Maximum: **2147483647**
process_uid	Integer	Process user ID Minimum: **0** Maximum: **2147483647**
process_username	String	Process username
process_cmdline	String	Process file command line
process_filename	String	Process file name
process_start_time	Long	Process start time Minimum: **0** Maximum: **9223372036854775807**
process_gid	Integer	Process group ID Minimum: **0** Maximum: **2147483647**
process_egid	Integer	Valid process group ID Minimum: **0** Maximum: **2147483647**
process_euid	Integer	Valid process user ID Minimum: **0** Maximum: **2147483647**
ancestor_process_path	String	Grandparent process file path
ancestor_process_pid	Integer	Grandfather process ID Minimum: **0** Maximum: **2147483647**
ancestor_process_cmdline	String	Grandparent process file command line
parent_process_name	String	Parent process name

Parameter	Type	Description
parent_process_path	String	Parent process file path
parent_process_pid	Integer	Parent process ID Minimum: **0** Maximum: **2147483647**
parent_process_uid	Integer	Parent process user ID Minimum: **0** Maximum: **2147483647**
parent_process_cmdline	String	Parent process file command line
parent_process_filename	String	Parent process file name
parent_process_start_time	Long	Parent process start time Minimum: **0** Maximum: **9223372036854775807**
parent_process_gid	Integer	Parent process group ID Minimum: **0** Maximum: **2147483647**
parent_process_egid	Integer	Valid parent process group ID Minimum: **0** Maximum: **2147483647**
parent_process_euid	Integer	Valid parent process user ID Minimum: **0** Maximum: **2147483647**
child_process_name	String	Subprocess name
child_process_path	String	Subprocess file path
child_process_pid	Integer	Subprocess ID Minimum: **0** Maximum: **2147483647**
child_process_uid	Integer	Subprocess user ID Minimum: **0** Maximum: **2147483647**
child_process_cmdline	String	Subprocess file command line

Parameter	Type	Description
child_process_filename	String	Subprocess file name
child_process_start_time	Long	Subprocess start time Minimum: **0** Maximum: **9223372036854775807**
child_process_gid	Integer	Subprocess group ID Minimum: **0** Maximum: **2147483647**
child_process_egid	Integer	Valid subprocess group ID Minimum: **0** Maximum: **2147483647**
child_process_euid	Integer	Valid subprocess user ID Minimum: **0** Maximum: **2147483647**
virt_cmd	String	Virtualization command
virt_process_name	String	Virtualization process name
escape_mode	String	Escape mode
escape_cmd	String	Commands executed after escape
process_hash	String	Process startup file hash
process_file_hash	String	Process file hash
parent_process_file_hash	String	Parent process file hash
block	Integer	Indicates whether the blocking is successful. 1: yes 0: no Minimum: **0** Maximum: **1**

Table 3-240 EventUserResponseInfo

Parameter	Type	Description
user_id	Integer	User UID Minimum: **0** Maximum: **2147483647**

Parameter	Type	Description
user_gid	Integer	User GID Minimum: **0** Maximum: **2147483647**
user_name	String	User name
user_group_name	String	User group name
user_home_dir	String	User home directory
login_ip	String	User login IP address
service_type	String	Service type. The options are as follows: • system • mysql • redis
service_port	Integer	Login service port Minimum: **0** Maximum: **2147483647**
login_mode	Integer	Login mode Minimum: **0** Maximum: **2147483647**
login_last_time	Long	Last login time Minimum: **0** Maximum: **9223372036854775807**
login_fail_count	Integer	Number of failed login attempts Minimum: **0** Maximum: **2147483647**
pwd_hash	String	Password hash
pwd_with_fuzzing	String	Masked password
pwd_used_days	Integer	Password age (days) Minimum: **0** Maximum: **2147483647**
pwd_min_days	Integer	Minimum password validity period Minimum: **0** Maximum: **2147483647**

Parameter	Type	Description
pwd_max_days	Integer	Maximum password validity period Minimum: **0** Maximum: **2147483647**
pwd_warn_left_days	Integer	Advance warning of password expiration (days) Minimum: **0** Maximum: **2147483647**

Table 3-241 EventFileResponseInfo

Parameter	Type	Description
file_path	String	File path
file_alias	String	File alias
file_size	Integer	File size Minimum: **0** Maximum: **2147483647**
file_mtime	Long	Time when a file was last modified Minimum: **0** Maximum: **9223372036854775807**
file_atime	Long	Time when a file was last accessed Minimum: **0** Maximum: **9223372036854775807**
file_ctime	Long	Time when the status of a file was last changed Minimum: **0** Maximum: **9223372036854775807**
file_hash	String	The hash value calculated using the SHA256 algorithm.
file_md5	String	File MD5
file_sha256	String	File SHA256
file_type	String	File type
file_content	String	File content
file_attr	String	File attribute

Parameter	Type	Description
file_operation	Integer	File operation type Minimum: **0** Maximum: **2147483647**
file_action	String	File action
file_change_attr	String	Old/New attribute
file_new_path	String	New file path
file_desc	String	File description
file_key_word	String	File keyword
is_dir	Boolean	Whether it is a directory
fd_info	String	File handle information
fd_count	Integer	Number of file handles Minimum: **0** Maximum: **2147483647**

Example Requests

Query the first 50 unprocessed server events whose enterprise project is xxx.

```
GET https://{endpoint}/v5/{project_id}/event/events?
offset=0&limit=50&handle_status=unhandled&category=host&enterprise_project_id=xxx
```

Example Responses

Status code: 200

Intrusion list


```
{
  "total_num" : 1,
  "data_list" : [ {
    "attack_phase" : "exploit",
    "attack_tag" : "abnormal_behavior",
    "event_class_id" : "lgin_1002",
    "event_id" : "d8a12cf7-6a43-4cd6-92b4-aabf1e917",
    "event_name" : "different locations",
    "event_type" : 4004,
    "forensic_info" : {
      "country" : "China",
      "city" : "Lanzhou",
      "ip" : "127.0.0.1",
      "user" : "zhangsan",
      "sub_division" : "Gansu",
      "city_id" : 3110
    },
    "handle_status" : "unhandled",
    "host_name" : "xxx",
    "occur_time" : 1661593036627,
    "operate_accept_list" : [ "ignore" ],
```



```
  "operate_detail_list" : [ {
    "agent_id" : "c9bed5397db449ebdfba15e85fcfc36accee125c68954daf5cab0528bab59bd8",
    "file_hash" : "e8b50f0b91e3dce0885ccc5902846b139d28108a0a7976c9b8d43154c5dbc44d",
    "file_path" : "/usr/test",
    "process_pid" : 3123,
    "file_attr" : 33261,
    "keyword" : "file_path=/usr/test",
    "hash" : "e8b50f0b91e3dce0885ccc5902846b139d28108a0a7976c9b8d43154c5dbc44d",
    "login_ip" : "127.0.0.1",
    "private_ip" : "127.0.0.2",
    "login_user_name" : "root",
    "is_parent" : false
  } ],
  "private_ip" : "127.0.0.1",
  "resource_info" : {
    "region_name" : "",
    "project_id" : "",
    "enterprise_project_id" : "0",
    "os_type" : "Linux",
    "os_version" : "2.5",
    "vm_name" : "",
    "vm_uuid" : "71a15ecc",
    "cloud_id" : "",
    "container_id" : "",
    "container_status" : "running / terminated",
    "image_id" : "",
    "pod_uid" : "",
    "pod_name" : "",
    "namespace" : "",
    "cluster_id" : "",
    "cluster_name" : ""
  },
  "severity" : "Medium",
  "extend_info" : "",
  "os_type" : "Linux",
  "agent_status" : "online",
  "asset_value" : "common",
  "protect_status" : "opened",
  "host_status" : "ACTIVE",
  "event_details" : "file_path:/root/test",
  "user_info_list" : [ {
    "login_ip" : "",
    "service_port" : 22,
    "service_type" : "ssh",
    "user_name" : "zhangsan",
    "login_mode" : 0,
    "login_last_time" : 1661593024,
    "login_fail_count" : 0
  } ],
  "process_info_list" : [ {
    "process_path" : "/root/test",
    "process_name" : "test",
    "process_cmdline" : "/bin/bash",
    "process_hash" : "e8b50f0b91e3dce0885ccc5902846b139d28108a0a7976c9b8d43154c5dbc44d",
    "process_filename" : "test",
    "process_file_hash" : "e8b50f0b91e3dce0885ccc5902846b139d28108a0a7976c9b8d43154c5dbc44d",
    "process_username" : "root",
    "process_pid" : 372612,
    "process_uid" : 10000,
    "process_gid" : 10000,
    "process_egid" : 10000,
    "process_euid" : 10000,
    "process_start_time" : 1661593024,
    "block" : 0,
    "parent_process_path" : "/usr/bin/bash",
    "parent_process_name" : "test",
    "parent_process_cmdline" : "/bin/bash",
    "parent_process_filename" : "test",
    "parent_process_file_hash" :
```

```
"e8b50f0b91e3dce0885ccc5902846b139d28108a0a7976c9b8d43154c5dbc44d",
      "parent_process_pid" : 372612,
      "parent_process_uid" : 10000,
      "parent_process_gid" : 10000,
      "parent_process_egid" : 10000,
      "parent_process_euid" : 10000,
      "parent_process_start_time" : 1661593024,
      "child_process_path" : "/usr/bin/bash",
      "child_process_name" : "test",
      "child_process_cmdline" : "/bin/bash",
      "child_process_filename" : "test",
      "child_process_pid" : 372612,
      "child_process_uid" : 10000,
      "child_process_gid" : 10000,
      "child_process_egid" : 10000,
      "child_process_euid" : 10000,
      "child_process_start_time" : 1661593024,
      "virt_process_name" : "test",
      "virt_cmd" : "/bin/bash",
      "escape_cmd" : "/bin/bash",
      "escape_mode" : "0",
      "ancestor_process_pid" : 372612,
      "ancestor_process_cmdline" : "/bin/bash",
      "ancestor_process_path" : "/usr/bin/bash"
    } ],
    "description" : "",
    "event_abstract" : "",
    "tag_list" : [ "Hot Event" ]
  } ]
}
```


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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class ListSecurityEventsSolution {

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

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

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

```
            .withRegion(HssRegion.valueOf("<YOUR REGION>"))
            .build();
        ListSecurityEventsRequest request = new ListSecurityEventsRequest();
        request.withCategory("<category>");
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withLastDays(<last_days>);
        request.withHostName("<host_name>");
        request.withHostId("<host_id>");
        request.withPrivateIp("<private_ip>");
        request.withPublicIp("<public_ip>");
        request.withContainerName("<container_name>");
        request.withOffset(<offset>);
        request.withLimit(<limit>);
        request.withEventTypes();
        request.withHandleStatus("<handle_status>");
        request.withSeverity("<severity>");
        request.withBeginTime("<begin_time>");
        request.withEndTime("<end_time>");
        request.withEventClassIds();
        request.withSeverityList();
        request.withAttackTag("<attack_tag>");
        request.withAssetValue("<asset_value>");
        request.withTagList();
        request.withAttCk("<att_ck>");
        request.withEventName("<event_name>");
        try {
            ListSecurityEventsResponse response = client.listSecurityEvents(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListSecurityEventsRequest()
```



```
        request.category = "<category>"
        request.enterprise_project_id = "<enterprise_project_id>"
        request.last_days = <last_days>
        request.host_name = "<host_name>"
        request.host_id = "<host_id>"
        request.private_ip = "<private_ip>"
        request.public_ip = "<public_ip>"
        request.container_name = "<container_name>"
        request.offset = <offset>
        request.limit = <limit>
        request.event_types =
        request.handle_status = "<handle_status>"
        request.severity = "<severity>"
        request.begin_time = "<begin_time>"
        request.end_time = "<end_time>"
        request.event_class_ids =
        request.severity_list =
        request.attack_tag = "<attack_tag>"
        request.asset_value = "<asset_value>"
        request.tag_list =
        request.att_ck = "<att_ck>"
        request.event_name = "<event_name>"
        response = client.list_security_events(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListSecurityEventsRequest{}
    request.Category = "<category>"
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    lastDaysRequest:= int32(<last_days>)
    request.LastDays = &lastDaysRequest
    hostNameRequest:= "<host_name>"
```



```
    request.HostName = &hostNameRequest
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    privateIpRequest:= "<private_ip>"
    request.PrivateIp = &privateIpRequest
    publicIpRequest:= "<public_ip>"
    request.PublicIp = &publicIpRequest
    containerNameRequest:= "<container_name>"
    request.ContainerName = &containerNameRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    handleStatusRequest:= "<handle_status>"
    request.HandleStatus = &handleStatusRequest
    severityRequest:= "<severity>"
    request.Severity = &severityRequest
    beginTimeRequest:= "<begin_time>"
    request.BeginTime = &beginTimeRequest
    endTimeRequest:= "<end_time>"
    request.EndTime = &endTimeRequest
    attackTagRequest:= "<attack_tag>"
    request.AttackTag = &attackTagRequest
    assetValueRequest:= "<asset_value>"
    request.AssetValue = &assetValueRequest
    attCkRequest:= "<att_ck>"
    request.AttCk = &attCkRequest
    eventNameRequest:= "<event_name>"
    request.EventName = &eventNameRequest
    response, err := client.ListSecurityEvents(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	Intrusion list

Error Codes

See **Error Codes**.

3.7.3 Querying the Alarm Whitelist

Function

This API is used to query the alarm whitelist.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/event/white-list/alarm

Table 3-242 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **20** Maximum: **64**

Table 3-243 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **64**
hash	No	String	Hash value of the event whitelist description (SHA256 algorithm) Minimum: **64** Maximum: **64**

Parameter	Mandatory	Type	Description
event_type	No	Integer	Event type. Its value can be: • 1001: common malware • 1002: virus • 1003: worm • 1004: Trojan • 1005: botnet • 1006: backdoor • 1010 : Rootkit • 1011: ransomware • 1012: hacker tool • 1015: Web shell • 1016: mining • 1017: reverse shell • 2001: common vulnerability exploit • 2012: remote code execution • 2047: Redis vulnerability exploit • 2048: Hadoop vulnerability exploit • 2049: MySQL vulnerability exploit • 3002: file privilege escalation • 3003: process privilege escalation • 3004: critical file change • 3005: file/directory change • 3007: abnormal process behavior • 3015: high-risk command execution • 3018: abnormal shell • 3027: suspicious crontab task • 3029: system protection disabled • 3030: backup deletion • 3031: suspicious registry operations • 4002: brute-force attack

Parameter	Mandatory	Type	Description
			• 4004: abnormal login • 4006: invalid system account • 4014: account added • 4020: password theft • 6003: server scan Minimum: **1000** Maximum: **30000**
offset	No	Integer	Offset, which specifies the start position of the record to be returned. The value must be a number. Minimum: **0** Maximum: **2000000** Default: **0**
limit	No	Integer	Number of records displayed on each page. Minimum: **10** Maximum: **1000** Default: **10**

Request Parameters

Table 3-244 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-245 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number
event_type_list	Array of integers	Types of events that can be filtered Minimum: **0** Maximum: **2147483647** Array Length: **0 - 30000**
data_list	Array of **AlarmWhiteListResponseInfo** objects	Alarm whitelist details Array Length: **0 - 100**

Table 3-246 AlarmWhiteListResponseInfo

Parameter	Type	Description
enterprise_project_name	String	Enterprise project name
hash	String	Hash value of the event whitelist description (SHA256 algorithm)
description	String	Description

Parameter	Type	Description
event_type	Integer	Event type. Its value can be: • 1001: common malware • 1002: virus • 1003: worm • 1004: Trojan • 1005: botnet • 1006: backdoor • 1010 : Rootkit • 1011: ransomware • 1012: hacker tool • 1015 : web shell • 1016: mining • 1017: reverse shell • 2001: common vulnerability exploit • 2012: remote code execution • 2047: Redis vulnerability exploit • 2048: Hadoop vulnerability exploit • 2049: MySQL vulnerability exploit • 3002: file privilege escalation • 3003: process privilege escalation • 3004: critical file change • 3005: file/directory change • 3007: abnormal process behavior • 3015: high-risk command execution • 3018: abnormal shell • 3027: suspicious crontab task • 3029: system protection disabled • 3030: backup deletion • 3031: suspicious registry operations • 3036: container image blocking • 4002: brute-force attack • 4004: abnormal login • 4006: invalid accounts • 4014: account added • 4020: password theft • 6002: port scan • 6003: server scan • 13001: Kubernetes event deletion • 13002: abnormal pod behavior

Parameter	Type	Description
		• 13003: enumerating user information • 13004: cluster role binding
white_field	String	Whitelist fields. The options are as follows: • "file/process hash" # process/file hash • "file_path" • "process_path" • "login_ip" # login IP address • "reg_key" # registry key • "process_cmdline" # process command line • "username" Minimum: **1** Maximum: **20**
field_value	String	Whitelist fields value Minimum: **1** Maximum: **128**
judge_type	String	Wildcard. The options are as follows: • "equal" • "contain" Minimum: **1** Maximum: **10**
update_time	Long	Time when the event whitelist is updated, in milliseconds. Minimum: **0** Maximum: **9223372036854775807**

Example Requests

Query the first 10 alarm whitelists whose enterprise project is xxx.

```
GET https://{endpoint}/v5/{project_id}/event/white-list/alarm?limit=10&offset=0&enterprise_project_id=xxx
```

Example Responses

Status code: 200

Alarm whitelist

```
{
  "data_list" : [ {
    "enterprise_project_name" : "All projects",
    "event_type" : 1001,
    "hash" : "9ab079e5398cba3a368ccffbd478f54c5ec3edadf6284ec049a73c36419f1178",
    "description" : "/opt/cloud/3rdComponent/install/jre-8u201/bin/java",
    "update_time" : 1665715677307,
```



```
    "white_field" : "process/file hash",
    "judge_type" : "contain",
    "field_value" : "abcd12345612311112212323"
  } ],
  "event_type_list" : [ 1001 ],
  "total_num" : 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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.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");

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListAlarmWhiteListRequest request = new ListAlarmWhiteListRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withHash("<hash>");
        request.withEventType(<event_type>);
        request.withOffset(<offset>);
        request.withLimit(<limit>);
        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

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListAlarmWhiteListRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.hash = "<hash>"
        request.event_type = <event_type>
        request.offset = <offset>
        request.limit = <limit>
        response = client.list_alarm_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)
```

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
```



```
        WithCredential(auth).
        Build())

    request := &model.ListAlarmWhiteListRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    hashRequest:= "<hash>"
    request.Hash = &hashRequest
    eventTypeRequest:= int32(<event_type>)
    request.EventType = &eventTypeRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    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	Alarm whitelist

Error Codes

See **Error Codes**.

3.8 Server Management

3.8.1 Querying ECSs

Function

This API is used to query ECSs.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/host-management/hosts

Table 3-247 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-248 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID Default: **0** Minimum: **1** Maximum: **256**
version	No	String	HSS edition. Its value can be: • hss.version.null • hss.version.basic: basic edition • hss.version.advanced: professional edition • hss.version.enterprise: enterprise edition • hss.version.premium: premium edition • hss.version.wtp: WTP edition • hss.version.container.enterprise: container edition Minimum: **1** Maximum: **64**

Parameter	Mandatory	Type	Description
agent_status	No	String	Agent status. Its value can be: • not_ installed • online • offline • install_failed • installing • not_online: All status except **online**, which is used only as a query condition. Minimum: **1** Maximum: **20**
detect_result	No	String	Detection result. Its value can be: • undetected • clean • risk • scanning Minimum: **1** Maximum: **32**
host_name	No	String	Server name
host_id	No	String	Server ID
host_status	No	String	Host status. Its value can be: • ACTIVE • SHUTOFF • BUILDING • ERROR Minimum: **1** Maximum: **32**
os_type	No	String	OS type. Its value can be: • Linux • Windows Minimum: **0** Maximum: **64**
private_ip	No	String	Server private IP address
public_ip	No	String	Server public IP address
ip_addr	No	String	Public or private IP address

Parameter	Mandatory	Type	Description
protect_status	No	String	Protection status. Its value can be: • closed • opened Minimum: **1** Maximum: **32**
group_id	No	String	Server group ID
group_name	No	String	Server group name Minimum: **1** Maximum: **64**
has_intrusion	No	Boolean	Alarms exist.
policy_group_id	No	String	Policy group ID Minimum: **0** Maximum: **128**
policy_group_name	No	String	Policy group name Minimum: **0** Maximum: **256**
charging_mode	No	String	Billing mode. Its value can be: • packet_cycle: yearly/monthly • on_demand: pay-per-use Minimum: **1** Maximum: **32**
refresh	No	Boolean	Whether to forcibly synchronize servers from ECSs
above_version	No	Boolean	Whether to return all the versions later than the current version
outside_host	No	Boolean	Whether a server is a Huawei Cloud server
asset_value	No	String	Asset importance. Its value can be: • important • common • test Minimum: **0** Maximum: **128**

Parameter	Mandatory	Type	Description
label	No	String	Asset tag Minimum: **1** Maximum: **64**
server_group	No	String	Asset server group Minimum: **1** Maximum: **64**
agent_upgradable	No	Boolean	Whether the agent can be upgraded
limit	No	Integer	Number of records displayed on each page. The default value is **10**. Minimum: **0** Maximum: **200** Default: **10**
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**. Minimum: **0** Maximum: **2000000** Default: **0**

Request Parameters

Table 3-249 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. Minimum: **1** Maximum: **32768**
region	No	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-250 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number of records Minimum: **0** Maximum: **2097152**
data_list	Array of **Host** objects	Query on the cloud server status and list Array Length: **0 - 10241**

Table 3-251 Host

Parameter	Type	Description
host_name	String	Server name Minimum: **0** Maximum: **128**
host_id	String	Server ID Minimum: **0** Maximum: **128**
agent_id	String	Agent ID Minimum: **0** Maximum: **128**
private_ip	String	Private IP address Minimum: **0** Maximum: **128**
public_ip	String	Elastic IP address Minimum: **0** Maximum: **128**
enterprise_project_id	String	Enterprise project ID Minimum: **0** Maximum: **256**
enterprise_project_name	String	Enterprise project name Minimum: **0** Maximum: **256**

Parameter	Type	Description
host_status	String	Server status. Its value can be: • ACTIVE • SHUTOFF • BUILDING • ERROR Minimum: **1** Maximum: **32**
agent_status	String	Agent status. Its value can be: • not_ installed • online • offline • install_failed • installing Minimum: **1** Maximum: **32**
install_result_code	String	Installation result. Its value can be: • install_succeed • network_access_timeout: Connection timed out. Network error. • invalid_port • auth_failed: The authentication failed due to incorrect password. • permission_denied: Insufficient permissions. • no_available_vpc: There are no servers with an online agent in the current VPC. • install_exception • invalid_param • install_failed • package_unavailable • os_type_not_support: Incorrect OS type • os_arch_not_support: Incorrect OS architecture Minimum: **1** Maximum: **32**

Parameter	Type	Description
version	String	HSS edition. Its value can be: • hss.version.null: none • hss.version.basic: basic edition • hss.version.enterprise: enterprise edition • hss.version.premium: premium edition • hss.version.wtp: WTP edition • hss.version.container.enterprise: container edition Minimum: **1** Maximum: **32**
protect_status	String	Protection status. Its value can be: • closed • opened Minimum: **1** Maximum: **32**
os_image	String	System disk image Minimum: **0** Maximum: **128**
os_type	String	OS type. Its value can be: • Linux • Windows Minimum: **0** Maximum: **128**
os_bit	String	OS bit version Minimum: **0** Maximum: **128**
detect_result	String	Server scan result. Its value can be: • undetected • clean • risk • scanning Minimum: **1** Maximum: **32**

Parameter	Type	Description
expire_time	Long	Expiration time of the trial version. (The value **-1** indicates that the quota is non-trial version. If the value is not **-1**, the value indicates the expiration time of the trial version.) Minimum: **0** Maximum: **4824695185000**
charging_mode	String	Billing mode. Its value can be: • packet_cycle: yearly/monthly • on_demand: pay-per-use Minimum: **1** Maximum: **32**
resource_id	String	Cloud service resource instance ID (UUID) Minimum: **0** Maximum: **128**
outside_host	Boolean	Whether a server is a non-Huawei Cloud server
group_id	String	Server group ID Minimum: **1** Maximum: **128**
group_name	String	Server group name Minimum: **1** Maximum: **128**
policy_group_id	String	Policy group ID Minimum: **1** Maximum: **128**
policy_group_name	String	Policy group name Minimum: **1** Maximum: **128**
asset	Integer	Asset risk Minimum: **0** Maximum: **2097152**
vulnerability	Integer	Total number of vulnerability risks, including Linux software vulnerabilities, Windows system vulnerabilities, Web-CMS vulnerabilities, and application vulnerabilities. Minimum: **0** Maximum: **2097152**

Parameter	Type	Description
baseline	Integer	Total number of baseline risks, including configuration risks and weak passwords. Minimum: **0** Maximum: **2097152**
intrusion	Integer	Total intrusion risks Minimum: **0** Maximum: **2097152**
asset_value	String	Asset importance. Its value can be: • important • common • test Minimum: **0** Maximum: **128**
labels	Array of strings	Tag list Minimum: **0** Maximum: **64** Array Length: **0 - 100**
agent_create_time	Long	Agent installation time, which is a timestamp. The default unit is milliseconds. Minimum: **0** Maximum: **4824695185000**
agent_update_time	Long	Time when the agent status is changed. This is a timestamp. The default unit is milliseconds. Minimum: **0** Maximum: **4824695185000**
agent_version	String	Agent version Minimum: **1** Maximum: **32**
upgrade_status	String	Upgrade status. Its value can be: • not_upgrade: Not upgraded. This is the default status. The customer has not delivered any upgrade command to the server. • upgrading: The upgrade is in progress. • upgrade_failed: The upgrade failed. • upgrade_succeed Minimum: **1** Maximum: **32**

Parameter	Type	Description
upgrade_result_code	String	Upgrade failure cause. This parameter is displayed only if upgrade_status is upgrade_failed. Its value can be: • package_unavailable: The upgrade package fails to be parsed because the upgrade file is incorrect. • network_access_timeout: Failed to download the upgrade package because the network is abnormal. • agent_offline: The agent is offline. • hostguard_abnormal: The agent process is abnormal. • insufficient_disk_space: The disk space is insufficient. • failed_to_replace_file: Failed to replace the file. Minimum: **1** Maximum: **32**
upgradable	Boolean	Whether the agent of the server can be upgraded
open_time	Long	Time when the protection is enabled. This is a timestamp. The default unit is milliseconds. Minimum: **0** Maximum: **4824695185000**
protect_interrupt	Boolean	Whether protection is interrupted

Example Requests

Query the 10 Linux servers in all enterprise projects whose agent status is online.

```
GET https://{endpoint}/v5/{project_id}/host-management/hosts?
limit=10&offset=0&agent_status=online&os_type=Linux&enterprise_project_id=all_granted_eps
```

Example Responses

Status code: 200

Cloud server list

```
{
  "total_num" : 1,
  "data_list" : [ {
    "agent_id" : "2758d2a61598fd9144cfa6b201049e7c0af8c3f1280cd24e3ec95a2f0811a2a2",
    "agent_status" : "online",
    "asset" : 0,
    "asset_value" : "common",
```



```
    "baseline" : 0,
    "charging_mode" : "packet_cycle",
    "detect_result" : "risk",
    "enterprise_project_id" : "all_granted_eps",
    "enterprise_project_name" : "default",
    "group_id" : "7c659ea3-006f-4687-9f1c-6d975d955f37",
    "group_name" : "default",
    "host_id" : "caa958ad-a481-4d46-b51e-6861b8864515",
    "host_name" : "ecs-r00431580-ubuntu",
    "host_status" : "ACTIVE",
    "intrusion" : 0,
    "expire_time" : -1,
    "os_bit" : "64",
    "os_type" : "Linux",
    "outside_host" : false,
    "policy_group_id" : "2758d2a61598fd9144cfa6b201049e7c0af8c3f1280cd24e3ec95a2f0811a2a2",
    "policy_group_name" : "wtp_ecs-r00431580-ubuntu(default)",
    "private_ip" : "192.168.0.182",
    "protect_status" : "opened",
    "protect_interrupt" : false,
    "public_ip" : "100.85.123.9",
    "resource_id" : "60f08ea4-c74e-4a45-be1c-3c057e373af2",
    "version" : "hss.version.wtp",
    "vulnerability" : 97,
    "labels" : [ "" ],
    "agent_create_time" : 0,
    "agent_update_time" : 0,
    "open_time" : 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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListHostStatusSolution {

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

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

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



```
        ListHostStatusRequest request = new ListHostStatusRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withVersion("<version>");
        request.withAgentStatus("<agent_status>");
        request.withDetectResult("<detect_result>");
        request.withHostName("<host_name>");
        request.withHostId("<host_id>");
        request.withHostStatus("<host_status>");
        request.withOsType("<os_type>");
        request.withPrivateIp("<private_ip>");
        request.withPublicIp("<public_ip>");
        request.withIpAddr("<ip_addr>");
        request.withProtectStatus("<protect_status>");
        request.withGroupId("<group_id>");
        request.withGroupName("<group_name>");
        request.withHasIntrusion(<has_intrusion>);
        request.withPolicyGroupId("<policy_group_id>");
        request.withPolicyGroupName("<policy_group_name>");
        request.withChargingMode("<charging_mode>");
        request.withRefresh(<refresh>);
        request.withAboveVersion(<above_version>);
        request.withOutsideHost(<outside_host>);
        request.withAssetValue("<asset_value>");
        request.withLabel("<label>");
        request.withServerGroup("<server_group>");
        request.withAgentUpgradable(<agent_upgradable>);
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        try {
            ListHostStatusResponse response = client.listHostStatus(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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



```
    try:
        request = ListHostStatusRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.version = "<version>"
        request.agent_status = "<agent_status>"
        request.detect_result = "<detect_result>"
        request.host_name = "<host_name>"
        request.host_id = "<host_id>"
        request.host_status = "<host_status>"
        request.os_type = "<os_type>"
        request.private_ip = "<private_ip>"
        request.public_ip = "<public_ip>"
        request.ip_addr = "<ip_addr>"
        request.protect_status = "<protect_status>"
        request.group_id = "<group_id>"
        request.group_name = "<group_name>"
        request.has_intrusion = <HasIntrusion>
        request.policy_group_id = "<policy_group_id>"
        request.policy_group_name = "<policy_group_name>"
        request.charging_mode = "<charging_mode>"
        request.refresh = <Refresh>
        request.above_version = <AboveVersion>
        request.outside_host = <OutsideHost>
        request.asset_value = "<asset_value>"
        request.label = "<label>"
        request.server_group = "<server_group>"
        request.agent_upgradable = <AgentUpgradable>
        request.limit = <limit>
        request.offset = <offset>
        response = client.list_host_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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())
```



```
    request := &model.ListHostStatusRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    versionRequest:= "<version>"
    request.Version = &versionRequest
    agentStatusRequest:= "<agent_status>"
    request.AgentStatus = &agentStatusRequest
    detectResultRequest:= "<detect_result>"
    request.DetectResult = &detectResultRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    hostStatusRequest:= "<host_status>"
    request.HostStatus = &hostStatusRequest
    osTypeRequest:= "<os_type>"
    request.OsType = &osTypeRequest
    privateIpRequest:= "<private_ip>"
    request.PrivateIp = &privateIpRequest
    publicIpRequest:= "<public_ip>"
    request.PublicIp = &publicIpRequest
    ipAddrRequest:= "<ip_addr>"
    request.IpAddr = &ipAddrRequest
    protectStatusRequest:= "<protect_status>"
    request.ProtectStatus = &protectStatusRequest
    groupIdRequest:= "<group_id>"
    request.GroupId = &groupIdRequest
    groupNameRequest:= "<group_name>"
    request.GroupName = &groupNameRequest
    hasIntrusionRequest:= <has_intrusion>
    request.HasIntrusion = &hasIntrusionRequest
    policyGroupIdRequest:= "<policy_group_id>"
    request.PolicyGroupId = &policyGroupIdRequest
    policyGroupNameRequest:= "<policy_group_name>"
    request.PolicyGroupName = &policyGroupNameRequest
    chargingModeRequest:= "<charging_mode>"
    request.ChargingMode = &chargingModeRequest
    refreshRequest:= <refresh>
    request.Refresh = &refreshRequest
    aboveVersionRequest:= <above_version>
    request.AboveVersion = &aboveVersionRequest
    outsideHostRequest:= <outside_host>
    request.OutsideHost = &outsideHostRequest
    assetValueRequest:= "<asset_value>"
    request.AssetValue = &assetValueRequest
    labelRequest:= "<label>"
    request.Label = &labelRequest
    serverGroupRequest:= "<server_group>"
    request.ServerGroup = &serverGroupRequest
    agentUpgradableRequest:= <agent_upgradable>
    request.AgentUpgradable = &agentUpgradableRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    response, err := client.ListHostStatus(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	Cloud server list

Error Codes

See **Error Codes**.

3.8.2 Changing the Protection Status

Function

This API is used to change the protection status.

Calling Method

For details, see **Calling APIs**.

URI

POST /v5/{project_id}/host-management/protection

Table 3-252 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-253 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**

Request Parameters

Table 3-254 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Table 3-255 Request body parameters

Parameter	Mandatory	Type	Description
version	Yes	String	HSS edition. Its value can be: • hss.version.null: protection disabled • hss.version.basic: basic edition • hss.version.advanced: professional edition • hss.version.enterprise: enterprise edition • hss.version.premium: premium edition • hss.version.wtp: WTP edition Minimum: **1** Maximum: **128**
charging_mode	No	String	Payment mode. This parameter is mandatory when version is not set to hss.version.null. • packet_cycle: yearly/monthly • on_demand: on-demand Minimum: **1** Maximum: **64**

Parameter	Mandatory	Type	Description
resource_id	No	String	HSS quota ID. If this parameter is not specified, the quota of the corresponding version is randomly selected. Minimum: **1** Maximum: **128**
host_id_list	Yes	Array of strings	Server list Minimum: **1** Maximum: **128** Array Length: **0 - 2097152**
tags	No	Array of **TagInfo** objects	Resource tag list Array Length: **0 - 2097152**

Table 3-256 TagInfo

Parameter	Mandatory	Type	Description
key	No	String	Key. It can contain up to 128 Unicode characters. The key cannot be left blank. Minimum: **1** Maximum: **128**
value	No	String	Value. Each tag value can contain a maximum of 255 Unicode characters. Minimum: **1** Maximum: **255**

Response Parameters

None

Example Requests

Switch the protection edition of the server whose ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f to the enterprise edition.

```
{
  "version" : "hss.version.enterprise",
  "charging_mode" : "packet_cycle",
  "resource_id" : "af4d08ad-2b60-4916-a5cf-8d6a23956dda",
  "host_id_list" : [ "71a15ecc-049f-4cca-bd28-5e90aca1817f" ],
  "tags" : [ {
    "key" : "Service",
```



```
    "value" : "hss"
  } ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Switch the protection edition of the server whose ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f to the enterprise edition.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class SwitchHostsProtectStatusSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        SwitchHostsProtectStatusRequest request = new SwitchHostsProtectStatusRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        SwitchHostsProtectStatusRequestInfo body = new SwitchHostsProtectStatusRequestInfo();
        List<TagInfo> listbodyTags = new ArrayList<>();
        listbodyTags.add(
            new TagInfo()
                .withKey("Service")
                .withValue("hss")
        );
        List<String> listbodyHostIdList = new ArrayList<>();
        listbodyHostIdList.add("71a15ecc-049f-4cca-bd28-5e90aca1817f");
        body.withTags(listbodyTags);
        body.withHostIdList(listbodyHostIdList);
        body.withResourceId("af4d08ad-2b60-4916-a5cf-8d6a23956dda");
        body.withChargingMode("packet_cycle");
        body.withVersion("hss.version.enterprise");
```



```
        request.withBody(body);
        try {
            SwitchHostsProtectStatusResponse response = client.switchHostsProtectStatus(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

Switch the protection edition of the server whose ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f to the enterprise edition.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = SwitchHostsProtectStatusRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        listTagsbody = [
            TagInfo(
                key="Service",
                value="hss"
            )
        ]
        listHostIdListbody = [
            "71a15ecc-049f-4cca-bd28-5e90aca1817f"
        ]
        request.body = SwitchHostsProtectStatusRequestInfo(
            tags=listTagsbody,
            host_id_list=listHostIdListbody,
            resource_id="af4d08ad-2b60-4916-a5cf-8d6a23956dda",
            charging_mode="packet_cycle",
            version="hss.version.enterprise"
        )
        response = client.switch_hosts_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

Switch the protection edition of the server whose ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f to the enterprise edition.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.SwitchHostsProtectStatusRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    keyTags:= "Service"
    valueTags:= "hss"
    var listTagsbody = []model.TagInfo{
        {
            Key: &keyTags,
            Value: &valueTags,
        },
    }
    var listHostIdListbody = []string{
        "71a15ecc-049f-4cca-bd28-5e90aca1817f",
    }
    resourceIdSwitchHostsProtectStatusRequestInfo:= "af4d08ad-2b60-4916-a5cf-8d6a23956dda"
    chargingModeSwitchHostsProtectStatusRequestInfo:= "packet_cycle"
    request.Body = &model.SwitchHostsProtectStatusRequestInfo{
        Tags: &listTagsbody,
        HostIdList: listHostIdListbody,
        ResourceId: &resourceIdSwitchHostsProtectStatusRequestInfo,
        ChargingMode: &chargingModeSwitchHostsProtectStatusRequestInfo,
        Version: "hss.version.enterprise",
    }
    response, err := client.SwitchHostsProtectStatus(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	successful response

Error Codes

See **Error Codes**.

3.8.3 Querying Server Groups

Function

This API is used to query server groups.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/host-management/groups

Table 3-257 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-258 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**
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**. Minimum: **0** Maximum: **2000000** Default: **0**
limit	No	Integer	Number of records displayed on each page. Minimum: **10** Maximum: **200** Default: **10**
group_name	No	String	Server group name Minimum: **1** Maximum: **64**

Request Parameters

Table 3-259 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-260 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number
data_list	Array of HostGroupItem objects	Server group list Array Length: **0 - 100**

Table 3-261 HostGroupItem

Parameter	Type	Description
group_id	String	Server group ID
group_name	String	Server group name
host_num	Integer	Number of associated servers
risk_host_num	Integer	Number of unsafe servers
unprotect_host_num	Integer	Number of unprotected servers
host_id_list	Array of strings	Server ID list
is_outside	Boolean	Indicates whether the server group is an on-premises data center server group.

Example Requests

Query the server group whose name is test.

```
GET https://{endpoint}/v5/{project_id}/host-management/groups?
offset=0&limit=200&enterprise_project_id=all_granted_eps&&group_name=test
```

Example Responses

Status code: 200

Server group list

```
{
  "data_list" : [ {
    "group_id" : "36e59701-e2e7-4d56-b229-0db3bcf4e6e8",
    "group_name" : "test",
    "host_id_list" : [ "71a15ecc-049f-4cca-bd28-5e90aca1817f" ],
    "host_num" : 1,
    "risk_host_num" : 1,
    "unprotect_host_num" : 0
```



```
 } ],
 "total_num" : 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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListHostGroupsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListHostGroupsRequest request = new ListHostGroupsRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withOffset(<offset>);
        request.withLimit(<limit>);
        request.withGroupName("<group_name>");
        try {
            ListHostGroupsResponse response = client.listHostGroups(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

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



```
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListHostGroupsRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.offset = <offset>
        request.limit = <limit>
        request.group_name = "<group_name>"
        response = client.list_host_groups(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListHostGroupsRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
```



```
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    groupNameRequest:= "<group_name>"
    request.GroupName = &groupNameRequest
    response, err := client.ListHostGroups(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	Server group list

Error Codes

See **Error Codes**.

3.8.4 Creating a Server Group

Function

This API is used to create a server group.

Calling Method

For details, see **Calling APIs**.

URI

POST /v5/{project_id}/host-management/groups

Table 3-262 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-263 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**

Request Parameters

Table 3-264 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**
Content-Type	No	String	Default value: application/json; charset=utf-8 Minimum: **0** Maximum: **128**

Table 3-265 Request body parameters

Parameter	Mandatory	Type	Description
group_name	Yes	String	Server group name Minimum: **1** Maximum: **128**
host_id_list	Yes	Array of strings	Server ID list Minimum: **1** Maximum: **128** Array Length: **1 - 10000**

Response Parameters

None

Example Requests

Create a server group named test. The ID of the server in the server group is 15dac7fe-d81b-43bc-a4a7-4710fe673972.

```
POST https://{endpoint}/v5/{project_id}/host-management/groups

{
  "group_name" : "test",
  "host_id_list" : [ "15dac7fe-d81b-43bc-a4a7-4710fe673972" ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Create a server group named test. The ID of the server in the server group is 15dac7fe-d81b-43bc-a4a7-4710fe673972.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class AddHostsGroupSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        AddHostsGroupRequest request = new AddHostsGroupRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
```



```
        AddHostsGroupRequestInfo body = new AddHostsGroupRequestInfo();
        List<String> listbodyHostIdList = new ArrayList<>();
        listbodyHostIdList.add("15dac7fe-d81b-43bc-a4a7-4710fe673972");
        body.withHostIdList(listbodyHostIdList);
        body.withGroupName("test");
        request.withBody(body);
        try {
            AddHostsGroupResponse response = client.addHostsGroup(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

Create a server group named test. The ID of the server in the server group is 15dac7fe-d81b-43bc-a4a7-4710fe673972.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = AddHostsGroupRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        listHostIdListbody = [
            "15dac7fe-d81b-43bc-a4a7-4710fe673972"
        ]
        request.body = AddHostsGroupRequestInfo(
            host_id_list=listHostIdListbody,
            group_name="test"
        )
        response = client.add_hosts_group(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

Create a server group named test. The ID of the server in the server group is 15dac7fe-d81b-43bc-a4a7-4710fe673972.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.AddHostsGroupRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    var listHostIdListbody = []string{
        "15dac7fe-d81b-43bc-a4a7-4710fe673972",
    }
    request.Body = &model.AddHostsGroupRequestInfo{
        HostIdList: listHostIdListbody,
        GroupName: "test",
    }
    response, err := client.AddHostsGroup(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	success

Status Code	Description
400	Invalid parameter.
401	Authentication failed.
403	Insufficient permission.
404	Resource not found.
500	System error.

Error Codes

See **Error Codes**.

3.8.5 Editing a Server Group

Function

This API is used to edit a server group.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v5/{project_id}/host-management/groups

Table 3-266 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-267 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**

Request Parameters

Table 3-268 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**
Content-Type	No	String	Default value: application/json; charset=utf-8 Minimum: **0** Maximum: **128**

Table 3-269 Request body parameters

Parameter	Mandatory	Type	Description
group_name	No	String	Server group name
group_id	Yes	String	Server group ID
host_id_list	No	Array of strings	Server ID list

Response Parameters

None

Example Requests

Edit the server group named test. The server group ID is eca40dbe-27f7-4229-8f9d-a58213129fdc. The IDs of the servers in the server group are 15dac7fe-d81b-43bc-a4a7-4710fe673972 and 21303c5b-36ad-4510-a1b0-cb4ac4c2875c.

```
PUT https://{endpoint}/v5/{project_id}/host-management/groups

{
  "group_id" : "eca40dbe-27f7-4229-8f9d-a58213129fdc",
  "group_name" : "test",
  "host_id_list" : [ "15dac7fe-d81b-43bc-a4a7-4710fe673972", "21303c5b-36ad-4510-a1b0-cb4ac4c2875c" ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Edit the server group named test. The server group ID is eca40dbe-27f7-4229-8f9d-a58213129fdc. The IDs of the servers in the server group are 15dac7fe-d81b-43bc-a4a7-4710fe673972 and 21303c5b-36ad-4510-a1b0-cb4ac4c2875c.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class ChangeHostsGroupSolution {

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

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



```
        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ChangeHostsGroupRequest request = new ChangeHostsGroupRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        ChangeHostsGroupRequestInfo body = new ChangeHostsGroupRequestInfo();
        List<String> listbodyHostIdList = new ArrayList<>();
        listbodyHostIdList.add("15dac7fe-d81b-43bc-a4a7-4710fe673972");
        listbodyHostIdList.add("21303c5b-36ad-4510-a1b0-cb4ac4c2875c");
        body.withHostIdList(listbodyHostIdList);
        body.withGroupId("eca40dbe-27f7-4229-8f9d-a58213129fdc");
        body.withGroupName("test");
        request.withBody(body);
        try {
            ChangeHostsGroupResponse response = client.changeHostsGroup(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

Edit the server group named test. The server group ID is eca40dbe-27f7-4229-8f9d-a58213129fdc. The IDs of the servers in the server group are 15dac7fe-d81b-43bc-a4a7-4710fe673972 and 21303c5b-36ad-4510-a1b0-cb4ac4c2875c.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ChangeHostsGroupRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        listHostIdListbody = [
            "15dac7fe-d81b-43bc-a4a7-4710fe673972",
            "21303c5b-36ad-4510-a1b0-cb4ac4c2875c"
```



```
        ]
        request.body = ChangeHostsGroupRequestInfo(
            host_id_list=listHostIdListbody,
            group_id="eca40dbe-27f7-4229-8f9d-a58213129fdc",
            group_name="test"
        )
        response = client.change_hosts_group(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

Edit the server group named test. The server group ID is eca40dbe-27f7-4229-8f9d-a58213129fdc. The IDs of the servers in the server group are 15dac7fe-d81b-43bc-a4a7-4710fe673972 and 21303c5b-36ad-4510-a1b0-cb4ac4c2875c.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ChangeHostsGroupRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    var listHostIdListbody = []string{
        "15dac7fe-d81b-43bc-a4a7-4710fe673972",
        "21303c5b-36ad-4510-a1b0-cb4ac4c2875c",
    }
    groupNameChangeHostsGroupRequestInfo:= "test"
    request.Body = &model.ChangeHostsGroupRequestInfo{
        HostIdList: &listHostIdListbody,
        GroupId: "eca40dbe-27f7-4229-8f9d-a58213129fdc",
        GroupName: &groupNameChangeHostsGroupRequestInfo,
    }
    response, err := client.ChangeHostsGroup(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	success
400	Invalid parameter.
401	Authentication failed.
403	Insufficient permission.
404	Resource not found.
500	System error.

Error Codes

See **Error Codes**.

3.8.6 Deleting a Server Group

Function

This API is used to delete a server group.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v5/{project_id}/host-management/groups

Table 3-270 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-271 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**
group_id	Yes	String	Server group ID

Request Parameters

Table 3-272 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

None

Example Requests

Delete the server group whose ID is 34fcf861-402b-45c6-9b6a-13087791aae3.

```
DELETE https://{endpoint}/v5/{project_id}/host-management/groups

{
  "group_id" : "34fcf861-402b-45c6-9b6a-13087791aae3"
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Delete the server group whose ID is 34fcf861-402b-45c6-9b6a-13087791aae3.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class DeleteHostsGroupSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteHostsGroupRequest request = new DeleteHostsGroupRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withGroupId("<group_id>");
        try {
            DeleteHostsGroupResponse response = client.deleteHostsGroup(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 server group whose ID is 34fcf861-402b-45c6-9b6a-13087791aae3.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
```



```
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = DeleteHostsGroupRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.group_id = "<group_id>"
        response = client.delete_hosts_group(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 server group whose ID is 34fcf861-402b-45c6-9b6a-13087791aae3.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteHostsGroupRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    request.GroupId = "<group_id>"
```



```
    response, err := client.DeleteHostsGroup(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	success
400	Invalid parameter.
401	Authentication failed.
403	Insufficient permission.
404	Resource not found.
500	System error.

Error Codes

See **Error Codes**.

3.9 Container Image

3.9.1 Querying the Image List in the SWR Image Repository

Function

This API is used to query the image list in the SWR image repository. To synchronize the latest images from SWR, call the API for synchronizing images from SWR first.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/image/swr-repository

Table 3-273 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Tenant project ID Minimum: **1** Maximum: **256**

Table 3-274 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to all_granted_eps. Default: **0** Minimum: **1** Maximum: **256**
namespace	No	String	Organization name Minimum: **1** Maximum: **256**
image_name	No	String	Image name ID Minimum: **1** Maximum: **128**
image_version	No	String	Image tag Minimum: **1** Maximum: **64**
latest_version	No	Boolean	Display latest image versions only Default: **false**
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**. Minimum: **0** Maximum: **2000000** Default: **0**

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records displayed on each page. Minimum: **10** Maximum: **200** Default: **10**
image_type	Yes	String	Image type. The options are as follows: • private_image: private image repository • shared_image: shared image repository • local_image • instance_image: enterprise image Minimum: **1** Maximum: **32**
scan_status	No	String	Scanning status. The options are as follows: • unscan • success • scanning • failed • waiting_for_scan Minimum: **0** Maximum: **32**
instance_name	No	String	Enterprise image instance name Minimum: **0** Maximum: **128**
image_size	No	Long	Image size Minimum: **0** Maximum: **2147483547** Default: **0**
start_latest_update_time	No	Long	Creation start time(ms). Minimum: **0** Maximum: **4070880000000** Default: **0**

Parameter	Mandatory	Type	Description
end_latest_update_time	No	Long	Creation end time(ms). Minimum: **0** Maximum: **4070880000000** Default: **0**
start_latest_scan_time	No	Long	The start time of latest scan completion, in ms. Minimum: **0** Maximum: **4070880000000** Default: **0**
end_latest_scan_time	No	Long	The end time of latest scan completion, in ms. Minimum: **0** Maximum: **4070880000000** Default: **0**
has_malicious_file	No	Boolean	Whether there are malicious files
has_unsafe_setting	No	Boolean	Whether baseline check exists
has_vul	No	Boolean	Whether there are software vulnerabilities
instance_id	No	String	Enterprise repository instance ID. This API is not required for SWR shared edition. Minimum: **0** Maximum: **128**

Request Parameters

Table 3-275 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**

Parameter	Mandatory	Type	Description
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-276 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number Minimum: **0** Maximum: **2147483547**
data_list	Array of **PrivateImageRepositoryInfo** objects	Querying the image list in the SWR image repository Array Length: **0 - 200**

Table 3-277 PrivateImageRepositoryInfo

Parameter	Type	Description
id	Long	id Minimum: **0** Maximum: **2147483547**
namespace	String	Namespace Minimum: **0** Maximum: **64**
image_name	String	Image name Minimum: **0** Maximum: **128**
image_id	String	Image ID Minimum: **0** Maximum: **64**
image_digest	String	Image digest Minimum: **0** Maximum: **128**

Parameter	Type	Description
image_version	String	Image tag Minimum: **0** Maximum: **64**
image_type	String	Image type. The options are as follows: • private_image • shared_image Minimum: **0** Maximum: **64**
latest_version	Boolean	Check whether the version is the latest.
scan_status	String	Scan status. The options are as follows: • unscan • success • scanning • failed • download_failed • image_oversized • waiting_for_scan Minimum: **0** Maximum: **64**

Parameter	Type	Description
scan_failed_desc	String	Cause of the scanning failure. The options are as follows: ● "unknown_error" ● "authentication_failed" ● "download_failed": Failed to download the image. ● "image_over_sized": The size of the image exceeds the maximum. ● "image_oversized" ● "failed_to_scan_vulnerability" ● "failed_to_scan_file" ● "failed_to_scan_software" ● "failed_to_check_sensitive_information" ● "failed_to_check_baseline" ● "failed_to_check_software_compliance" ● "failed_to_query_basic_image_information" ● "response_timed_out" ● "database_error" ● "failed_to_send_the_scan_request" Minimum: **0** Maximum: **64**
image_size	Long	Image size Minimum: **0** Maximum: **2147483547**
latest_update_time	Long	Last update time of the image version, in ms. Minimum: **0** Maximum: **4070880000000**
latest_scan_time	Long	Last scanned, in ms. Minimum: **0** Maximum: **4070880000000**
vul_num	Integer	Vulnerabilities Minimum: **0** Maximum: **2147483647**
unsafe_setting_num	Integer	Number of failed baseline scans Minimum: **0** Maximum: **2147483647**

Parameter	Type	Description
malicious_file_num	Integer	Number of malicious files Minimum: **0** Maximum: **2147483647**
domain_name	String	Owner (shared image parameter) Minimum: **0** Maximum: **128**
shared_status	String	The status of a shared image. The value can be: • expired • effective Minimum: **1** Maximum: **32**
scannable	Boolean	Scannable or not
instance_name	String	Instance name of enterprise edition image Minimum: **0** Maximum: **128**
instance_id	String	Instance ID of enterprise edition image Minimum: **0** Maximum: **64**
instance_url	String	Instance URL of enterprise edition image Minimum: **0** Maximum: **256**
association_images	Array of **AssociateImages** objects	Multi-architecture associated image information Array Length: **0 - 200**

Table 3-278 AssociateImages

Parameter	Type	Description
image_name	String	Image name Minimum: **0** Maximum: **128**
image_version	String	Image tag Minimum: **0** Maximum: **64**

Parameter	Type	Description
image_type	String	Image type Minimum: **0** Maximum: **64**
namespace	String	Namespace Minimum: **0** Maximum: **64**
image_digest	String	Image digest Minimum: **0** Maximum: **128**
scan_status	String	Scan status. The options are as follows: • unscan • success • scanning • failed • download_failed • image_oversized • waiting_for_scan Minimum: **0** Maximum: **32**

Example Requests

Query the image list in the SWR image repository whose image type is private image.

```
GET https://{endpoint}/v5/{project_id}/image/swr-repository?
offset=0&limit=50&image_type=private_image&latest_version=false&enterprise_project_id=all_granted_eps
```

Example Responses

Status code: 200

This API is used to query the image list in the SWR image repository, including the private image list and shared image list (controlled by the input parameter image_type).

```
{
  "total_num" : 3,
  "data_list" : [ {
    "id" : "111 (example for private images)",
    "image_digest" : "sha256:cebcdacde18091448a5040dc55bb1a9f6540b093db8XXXXXX",
    "image_id" : "cebcdacde18091448a5040dc55bb1a9f6540b093db8XXXXXX",
    "image_name" : "centos7",
    "image_size" : "1000 (Bytes)",
    "image_type" : "private_image",
    "image_version" : "common",
```



```
  "latest_scan_time" : 1691748641788,
  "latest_update_time" : 1687664346000,
  "latest_version" : false,
  "malicious_file_num" : 0,
  "namespace" : "aaa",
  "scan_status" : "success",
  "scannable" : true,
  "unsafe_setting_num" : 1,
  "vul_num" : 111,
  "instance_name" : "",
  "instance_id" : "",
  "instance_url" : ""
 }, {
  "id" : "222 (example for shared image)",
  "domain_name" : "scc_cgs_XXX",
  "shared_status" : "effective",
  "image_digest" : "sha256:cebcdacde18091448a5040dc55bb1a9f6540b093db8XXXXXX",
  "image_id" : "cebcdacde18091448a5040dc55bb1a9f6540b093db8XXXXXX",
  "image_name" : "mysql",
  "image_size" : "1000 (Bytes)",
  "image_type" : "shared_image",
  "image_version" : "5.5",
  "latest_scan_time" : 1691748641788,
  "latest_update_time" : 1687664346000,
  "latest_version" : false,
  "malicious_file_num" : 0,
  "namespace" : "aaa",
  "scan_status" : "success",
  "scannable" : true,
  "unsafe_setting_num" : 1,
  "vul_num" : 111,
  "instance_name" : "",
  "instance_id" : "",
  "instance_url" : ""
 }, {
  "id" : "333 (example of an enterprise image)",
  "domain_name" : "scc_cgs_XXX",
  "shared_status" : "effective",
  "image_digest" : "sha256:cebcdacde18091448a5040dc55bb1a9f6540b093db8XXXXXX",
  "image_id" : "cebcdacde18091448a5040dc55bb1a9f6540b093db8XXXXXX",
  "image_name" : "mysql",
  "image_size" : "1000 (Bytes)",
  "image_type" : "shared_image",
  "image_version" : "5.5",
  "latest_scan_time" : 1691748641788,
  "latest_update_time" : 1687664346000,
  "latest_version" : false,
  "malicious_file_num" : 0,
  "namespace" : "aaa",
  "scan_status" : "success",
  "scannable" : true,
  "unsafe_setting_num" : 1,
  "vul_num" : 111,
  "instance_name" : "Enterprise instance name",
  "instance_id" : "",
  "instance_url" : ""
 } ]
}
```


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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListSwrImageRepositorySolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListSwrImageRepositoryRequest request = new ListSwrImageRepositoryRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withNamespace("<namespace>");
        request.withImageName("<image_name>");
        request.withImageVersion("<image_version>");
        request.withLatestVersion(<latest_version>);
        request.withOffset(<offset>);
        request.withLimit(<limit>);
        request.withImageType("<image_type>");
        request.withScanStatus("<scan_status>");
        request.withInstanceName("<instance_name>");
        request.withImageSize(<image_size>L);
        request.withStartLatestUpdateTime(<start_latest_update_time>L);
        request.withEndLatestUpdateTime(<end_latest_update_time>L);
        request.withStartLatestScanTime(<start_latest_scan_time>L);
        request.withEndLatestScanTime(<end_latest_scan_time>L);
        request.withHasMaliciousFile(<has_malicious_file>);
        request.withHasUnsafeSetting(<has_unsafe_setting>);
        request.withHasVul(<has_vul>);
        request.withInstanceId("<instance_id>");
        try {
            ListSwrImageRepositoryResponse response = client.listSwrImageRepository(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

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



```
from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListSwrImageRepositoryRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.namespace = "<namespace>"
        request.image_name = "<image_name>"
        request.image_version = "<image_version>"
        request.latest_version = <LatestVersion>
        request.offset = <offset>
        request.limit = <limit>
        request.image_type = "<image_type>"
        request.scan_status = "<scan_status>"
        request.instance_name = "<instance_name>"
        request.image_size = <image_size>
        request.start_latest_update_time = <start_latest_update_time>
        request.end_latest_update_time = <end_latest_update_time>
        request.start_latest_scan_time = <start_latest_scan_time>
        request.end_latest_scan_time = <end_latest_scan_time>
        request.has_malicious_file = <HasMaliciousFile>
        request.has_unsafe_setting = <HasUnsafeSetting>
        request.has_vul = <HasVul>
        request.instance_id = "<instance_id>"
        response = client.list_swr_image_repository(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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



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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListSwrImageRepositoryRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    namespaceRequest:= "<namespace>"
    request.Namespace = &namespaceRequest
    imageNameRequest:= "<image_name>"
    request.ImageName = &imageNameRequest
    imageVersionRequest:= "<image_version>"
    request.ImageVersion = &imageVersionRequest
    latestVersionRequest:= <latest_version>
    request.LatestVersion = &latestVersionRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    request.ImageType = "<image_type>"
    scanStatusRequest:= "<scan_status>"
    request.ScanStatus = &scanStatusRequest
    instanceNameRequest:= "<instance_name>"
    request.InstanceName = &instanceNameRequest
    imageSizeRequest:= int64(<image_size>)
    request.ImageSize = &imageSizeRequest
    startLatestUpdateTimeRequest:= int64(<start_latest_update_time>)
    request.StartLatestUpdateTime = &startLatestUpdateTimeRequest
    endLatestUpdateTimeRequest:= int64(<end_latest_update_time>)
    request.EndLatestUpdateTime = &endLatestUpdateTimeRequest
    startLatestScanTimeRequest:= int64(<start_latest_scan_time>)
    request.StartLatestScanTime = &startLatestScanTimeRequest
    endLatestScanTimeRequest:= int64(<end_latest_scan_time>)
    request.EndLatestScanTime = &endLatestScanTimeRequest
    hasMaliciousFileRequest:= <has_malicious_file>
    request.HasMaliciousFile = &hasMaliciousFileRequest
    hasUnsafeSettingRequest:= <has_unsafe_setting>
    request.HasUnsafeSetting = &hasUnsafeSettingRequest
    hasVulRequest:= <has_vul>
    request.HasVul = &hasVulRequest
    instanceIdRequest:= "<instance_id>"
    request.InstanceId = &instanceIdRequest
    response, err := client.ListSwrImageRepository(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	This API is used to query the image list in the SWR image repository, including the private image list and shared image list (controlled by the input parameter image_type).

Error Codes

See **Error Codes**.

3.9.2 Scanning Images in the Image Repository in Batches

Function

This API is used to scan images in the image repository in batches.

Calling Method

For details, see **Calling APIs**.

URI

POST /v5/{project_id}/image/batch-scan

Table 3-279 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Tenant project ID Minimum: **1** Maximum: **256**

Table 3-280 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to all_granted_eps. Default: **0** Minimum: **1** Maximum: **256**

Request Parameters

Table 3-281 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Table 3-282 Request body parameters

Parameter	Mandatory	Type	Description
repo_type	No	String	Repository type. Currently, SWR image repositories are connected. The options are as follows: • SWR: SWR image repository Minimum: **1** Maximum: **32**
image_info_list	No	Array of **BatchScanSwrImageInfo** objects	Specifies the list of images to be scanned. This parameter is mandatory when operate_all is false. Array Length: **0 - 10241**
operate_all	No	Boolean	If this parameter is set to true, all filter criteria can be used for full query. If image_info_list is empty, this parameter is mandatory.
namespace	No	String	Organization name Minimum: **1** Maximum: **256**

Parameter	Mandatory	Type	Description
image_name	No	String	Image name Minimum: **1** Maximum: **256**
image_version	No	String	Image tag Minimum: **1** Maximum: **256**
image_type	Yes	String	Image type. The options are as follows: • private_image: private image repository • shared_image: shared image repository Minimum: **1** Maximum: **32**
scan_status	No	String	Scan status. The options are as follows: • unscan • success • scanning • failed • download_failed • image_oversized Minimum: **1** Maximum: **32**
latest_version	No	Boolean	Display latest image versions only
image_size	No	Long	Image size Minimum: **0** Maximum: **2147483547** Default: **0**
start_latest_update_time	No	Long	Creation start date, in ms. Minimum: **0** Maximum: **2147483547** Default: **0**
end_latest_update_time	No	Long	Creation end date, in ms. Minimum: **0** Maximum: **2147483547** Default: **0**

Parameter	Mandatory	Type	Description
start_latest_scan_time	No	Long	The start time of latest scan completion, in ms. Minimum: **0** Maximum: **2147483547** Default: **0**
end_latest_scan_time	No	Long	The end time of latest scan completion, in ms. Minimum: **0** Maximum: **2147483547** Default: **0**

Table 3-283 BatchScanSwrImageInfo

Parameter	Mandatory	Type	Description
namespace	No	String	Namespace Minimum: **1** Maximum: **64**
image_name	No	String	Image name Minimum: **1** Maximum: **128**
image_version	No	String	Image tag Minimum: **1** Maximum: **128**
instance_id	No	String	Enterprise instance ID Minimum: **1** Maximum: **128**
instance_url	No	String	Downloading the enterprise image URL Minimum: **0** Maximum: **256**

Response Parameters

None

Example Requests

- Scan private images in batches. The request body transfers the image list and operate_all does not contain any parameter, indicating that the image list needs to be scanned in batches.

```
POST https://{endpoint}/v5/{project_id}/image/batch-scan

{
  "image_type" : "private_image",
  "image_info_list" : [ {
    "image_name" : "openjdk",
    "image_version" : "v8.8",
    "namespace" : "test"
  }, {
    "image_name" : "openjdk1",
    "image_version" : "v1.0",
    "namespace" : "test1"
  } ]
}
```

- Perform a full scan for private images. The request body does not transfer the image list and operate_all is set to true, indicating that the image list needs to be fully scanned.

```
POST https://{endpoint}/v5/{project_id}/image/batch-scan

{
  "image_type" : "private_image",
  "operate_all" : true
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

- Scan private images in batches. The request body transfers the image list and operate_all does not contain any parameter, indicating that the image list needs to be scanned in batches.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class BatchScanSwrImageSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
```



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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        BatchScanSwrImageRequest request = new BatchScanSwrImageRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        BatchScanPrivateImageRequestInfo body = new BatchScanPrivateImageRequestInfo();
        List<BatchScanSwrImageInfo> listbodyImageInfoList = new ArrayList<>();
        listbodyImageInfoList.add(
            new BatchScanSwrImageInfo()
                .withNamespace("test")
                .withImageName("openjdk")
                .withImageVersion("v8.8")
        );
        listbodyImageInfoList.add(
            new BatchScanSwrImageInfo()
                .withNamespace("test1")
                .withImageName("openjdk1")
                .withImageVersion("v1.0")
        );
        body.withImageType("private_image");
        body.withImageInfoList(listbodyImageInfoList);
        request.withBody(body);
        try {
            BatchScanSwrImageResponse response = client.batchScanSwrImage(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());
        }
    }
}
```

- Perform a full scan for private images. The request body does not transfer the image list and operate_all is set to true, indicating that the image list needs to be fully scanned.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class BatchScanSwrImageSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great
```

```
security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
        // In this example, AK and SK are stored in environment variables for authentication. Before running this example, set environment variables CLOUD_SDK_AK and CLOUD_SDK_SK in the local environment
        String ak = System.getenv("CLOUD_SDK_AK");
        String sk = System.getenv("CLOUD_SDK_SK");

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        BatchScanSwrImageRequest request = new BatchScanSwrImageRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        BatchScanPrivateImageRequestInfo body = new BatchScanPrivateImageRequestInfo();
        body.withImageType("private_image");
        body.withOperateAll(true);
        request.withBody(body);
        try {
            BatchScanSwrImageResponse response = client.batchScanSwrImage(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

- Scan private images in batches. The request body transfers the image list and operate_all does not contain any parameter, indicating that the image list needs to be scanned in batches.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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



```
    try:
        request = BatchScanSwrImageRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        listImageInfoListbody = [
            BatchScanSwrImageInfo(
                namespace="test",
                image_name="openjdk",
                image_version="v8.8"
            ),
            BatchScanSwrImageInfo(
                namespace="test1",
                image_name="openjdk1",
                image_version="v1.0"
            )
        ]
        request.body = BatchScanPrivateImageRequestInfo(
            image_type="private_image",
            image_info_list=listImageInfoListbody
        )
        response = client.batch_scan_swr_image(request)
        print(response)
    except exceptions.ClientRequestException as e:
        print(e.status_code)
        print(e.request_id)
        print(e.error_code)
        print(e.error_msg)
```

- Perform a full scan for private images. The request body does not transfer the image list and operate_all is set to true, indicating that the image list needs to be fully scanned.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = BatchScanSwrImageRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.body = BatchScanPrivateImageRequestInfo(
            image_type="private_image",
            operate_all=True
        )
        response = client.batch_scan_swr_image(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

- Scan private images in batches. The request body transfers the image list and operate_all does not contain any parameter, indicating that the image list needs to be scanned in batches.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.BatchScanSwrImageRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    namespaceImageInfoList:= "test"
    imageNameImageInfoList:= "openjdk"
    imageVersionImageInfoList:= "v8.8"
    namespaceImageInfoList1:= "test1"
    imageNameImageInfoList1:= "openjdk1"
    imageVersionImageInfoList1:= "v1.0"
    var listImageInfoListbody = []model.BatchScanSwrImageInfo{
        {
            Namespace: &namespaceImageInfoList,
            ImageName: &imageNameImageInfoList,
            ImageVersion: &imageVersionImageInfoList,
        },
        {
            Namespace: &namespaceImageInfoList1,
            ImageName: &imageNameImageInfoList1,
            ImageVersion: &imageVersionImageInfoList1,
        },
    }
    request.Body = &model.BatchScanPrivateImageRequestInfo{
        ImageType: "private_image",
        ImageInfoList: &listImageInfoListbody,
    }
    response, err := client.BatchScanSwrImage(request)
    if err == nil {
        fmt.Printf("%+v\n", response)
    } else {
        fmt.Println(err)
    }
}
```


- Perform a full scan for private images. The request body does not transfer the image list and operate_all is set to true, indicating that the image list needs to be fully scanned.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.BatchScanSwrImageRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    operateAllBatchScanPrivateImageRequestInfo:= true
    request.Body = &model.BatchScanPrivateImageRequestInfo{
        ImageType: "private_image",
        OperateAll: &operateAllBatchScanPrivateImageRequestInfo,
    }
    response, err := client.BatchScanSwrImage(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	successful response

Error Codes

See **Error Codes**.

3.9.3 Querying Image Vulnerability Information

Function

This API is used to query image vulnerability information.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/image/{image_id}/vulnerabilities

Table 3-284 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Tenant project ID Minimum: **1** Maximum: **256**
image_id	Yes	String	Image ID Minimum: **0** Maximum: **128**

Table 3-285 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to all_granted_eps. Default: **0** Minimum: **1** Maximum: **256**

Parameter	Mandatory	Type	Description
image_type	Yes	String	Image type. The options are as follows: • private_image: private image repository • shared_image: shared image repository Minimum: **1** Maximum: **32**
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**. Minimum: **0** Maximum: **2000000** Default: **0**
limit	No	Integer	Number of records displayed on each page. Minimum: **10** Maximum: **200** Default: **10**
instance_id	No	String	Enterprise repository instance ID. This API is not required for SWR shared edition. Minimum: **0** Maximum: **128**
namespace	Yes	String	Organization name Minimum: **0** Maximum: **64**
image_name	Yes	String	Image name Minimum: **0** Maximum: **128**
tag_name	Yes	String	Image tag Minimum: **0** Maximum: **64**

Parameter	Mandatory	Type	Description
repair_necessity	No	String	Risk level. The options are as follows: • immediate_repair: high risk • delay_repair: medium risk • not_needed_repair: low risk Minimum: **0** Maximum: **32**
vul_id	No	String	Vulnerability ID (fuzzy search supported) Minimum: **0** Maximum: **64**
app_name	No	String	Software Minimum: **0** Maximum: **64**
type	No	String	Vulnerability type. The options are as follows: -linux_vul: Linux vulnerability -app_vul: application vulnerability Minimum: **0** Maximum: **32**

Request Parameters

Table 3-286 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-287 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number of image vulnerabilities Minimum: **0** Maximum: **2147483547**
data_list	Array of **ImageVulInfo** objects	Image vulnerability list Array Length: **0 - 10241**

Table 3-288 ImageVulInfo

Parameter	Type	Description
vul_id	String	Vulnerability ID Minimum: **0** Maximum: **128**
repair_necessity	String	Emergency level. Its values and their meanings are as follows: • immediate_repair: high risk • delay_repair: medium risk • not_needed_repair: low risk Minimum: **0** Maximum: **128**
description	String	Vulnerability description Minimum: **0** Maximum: **128**
position	String	Image where a vulnerability exists Minimum: **0** Maximum: **128**
app_name	String	Vulnerability software name Minimum: **0** Maximum: **128**
app_path	String	Path of the application software (This field is available only for application vulnerabilities.) Minimum: **1** Maximum: **512**

Parameter	Type	Description
version	String	Software version Minimum: **0** Maximum: **128**
solution	String	Solution Minimum: **0** Maximum: **256**
url	String	Patch address Minimum: **0** Maximum: **128**

Example Requests

Query the vulnerability information of the private image whose namespace is scc_hss_container, image name is apptest, and image version is V1.

```
GET https://{endpoint}/v5/{project_id}/image/{image_id}/vulnerabilities?
limit=10&offset=0&namespace=scc_hss_container&tag_name=v1&image_name=apptest&image_type=private
_image&type=linux_vul&enterprise_project_id=all_granted_eps
```

Example Responses

Status code: 200

Image vulnerability list

```
{
  "total_num" : 1,
  "data_list" : [ {
    "app_name" : "xz-lib",
    "description" : "online",
    "position" : "sha256:74ddd0ec08fa43dXXXX",
    "repair_necessity" : "delay_repair",
    "solution" : "To upgrade the affected software",
    "url" : "https://access.redhat.com/errata/RHSAXXX",
    "version" : "5.2.4-3.el8",
    "vul_id" : "RHSA-2022:49XX"
  } ]
}
```

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.hss.v5.region.HssRegion;
```



```
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListImageVulnerabilitiesSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListImageVulnerabilitiesRequest request = new ListImageVulnerabilitiesRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withImageType("<image_type>");
        request.withOffset(<offset>);
        request.withLimit(<limit>);
        request.withInstanceId("<instance_id>");
        request.withNamespace("<namespace>");
        request.withImageName("<image_name>");
        request.withTagName("<tag_name>");
        request.withRepairNecessity("<repair_necessity>");
        request.withVulId("<vul_id>");
        request.withAppName("<app_name>");
        request.withType("<type>");
        try {
            ListImageVulnerabilitiesResponse response = client.listImageVulnerabilities(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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



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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListImageVulnerabilitiesRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.image_type = "<image_type>"
        request.offset = <offset>
        request.limit = <limit>
        request.instance_id = "<instance_id>"
        request.namespace = "<namespace>"
        request.image_name = "<image_name>"
        request.tag_name = "<tag_name>"
        request.repair_necessity = "<repair_necessity>"
        request.vul_id = "<vul_id>"
        request.app_name = "<app_name>"
        request.type = "<type>"
        response = client.list_image_vulnerabilities(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListImageVulnerabilitiesRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    request.ImageType = "<image_type>"
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
```



```
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    instanceIdRequest:= "<instance_id>"
    request.InstanceId = &instanceIdRequest
    request.Namespace = "<namespace>"
    request.ImageName = "<image_name>"
    request.TagName = "<tag_name>"
    repairNecessityRequest:= "<repair_necessity>"
    request.RepairNecessity = &repairNecessityRequest
    vulIdRequest:= "<vul_id>"
    request.VulId = &vulIdRequest
    appNameRequest:= "<app_name>"
    request.AppName = &appNameRequest
    typeRequest:= "<type>"
    request.Type = &typeRequest
    response, err := client.ListImageVulnerabilities(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	Image vulnerability list

Error Codes

See **Error Codes**.

3.9.4 CVE Information Corresponding to the Vulnerability

Function

This API is used to query the CVE information corresponding to the vulnerability.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/image/vulnerability/{vul_id}/cve

Table 3-289 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Tenant project ID Minimum: **1** Maximum: **256**
vul_id	Yes	String	Vulnerability ID Minimum: **0** Maximum: **64**

Table 3-290 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to all_granted_eps. Default: **0** Minimum: **1** Maximum: **256**
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**. Minimum: **0** Maximum: **2000000** Default: **0**
limit	No	Integer	Number of records displayed on each page. Minimum: **10** Maximum: **200** Default: **10**

Request Parameters

Table 3-291 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-292 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number Minimum: **0** Maximum: **2147483547**
data_list	Array of **ImageVulCveInfo** objects	List Array Length: **1 - 10000**

Table 3-293 ImageVulCveInfo

Parameter	Type	Description
cve_id	String	cve id Minimum: **0** Maximum: **32**
cvss_score	Float	CVSS score Minimum: **0** Maximum: **100**

Parameter	Type	Description
publish_time	Long	Release date, in ms. Minimum: **0** Maximum: **2147483547**
description	String	CVE description Minimum: **0** Maximum: **65534**

Example Requests

Query the CVE information of the vulnerability whose ID is vul_id.

```
GET https://{endpoint}/v5/{project_id}/image/vulnerability/{vul_id}/cve?
offset=0&limit=200&enterprise_project_id=all_granted_eps
```

Example Responses

Status code: 200

Succeeded in requesting the CVE information list corresponding to the vulnerability.

```
{
  "total_num" : 1,
  "data_list" : [ {
    "cve_id" : "CVE-2021-45960",
    "cvss_score" : 8.8,
    "description" : "In Expat (aka libexpat) XXXX",
    "publish_time" : 1641035700000
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListVulnerabilityCveSolution {

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



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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListVulnerabilityCveRequest request = new ListVulnerabilityCveRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withOffset(<offset>);
        request.withLimit(<limit>);
        try {
            ListVulnerabilityCveResponse response = client.listVulnerabilityCve(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListVulnerabilityCveRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.offset = <offset>
        request.limit = <limit>
        response = client.list_vulnerability_cve(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListVulnerabilityCveRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    response, err := client.ListVulnerabilityCve(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	Succeeded in requesting the CVE information list corresponding to the vulnerability.

Error Codes

See **Error Codes**.

3.9.5 Synchronizing the Image List from SWR

Function

This API is used to synchronize the image list from SWR.

Calling Method

For details, see **Calling APIs**.

URI

POST /v5/{project_id}/image/synchronize

Table 3-294 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-295 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to all_granted_eps. Default: **0** Minimum: **1** Maximum: **256**

Request Parameters

Table 3-296 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Table 3-297 Request body parameters

Parameter	Mandatory	Type	Description
image_type	Yes	String	Image type. The options are as follows: • private_image: private image repository • shared_image: shared image repository Minimum: **1** Maximum: **32**

Response Parameters

Status code: 200

Table 3-298 Response body parameters

Parameter	Type	Description
error_code	Integer	Error code Minimum: **0** Maximum: **10**
error_description	String	Error description Minimum: **1** Maximum: **128**

Example Requests

Synchronize private or shared images from SWR.

```
POST https://{endpoint}/v5/{project_id}/image/synchronize

{
  "image_type" : "private_image"
}
```

Example Responses

Status code: 200

Request succeeded.

```
{
  "error_code" : 0,
  "error_description" : "success"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Synchronize private or shared images from SWR.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class RunImageSynchronizeSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        RunImageSynchronizeRequest request = new RunImageSynchronizeRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        RunImageSynchronizeRequestInfo body = new RunImageSynchronizeRequestInfo();
        body.withImageType("private_image");
        request.withBody(body);
        try {
```



```
            RunImageSynchronizeResponse response = client.runImageSynchronize(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

Synchronize private or shared images from SWR.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = RunImageSynchronizeRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.body = RunImageSynchronizeRequestInfo(
            image_type="private_image"
        )
        response = client.run_image_synchronize(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

Synchronize private or shared images from SWR.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
```



```
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.RunImageSynchronizeRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    request.Body = &model.RunImageSynchronizeRequestInfo{
        ImageType: "private_image",
    }
    response, err := client.RunImageSynchronize(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 succeeded.

Error Codes

See **Error Codes**.

3.9.6 Querying the List of Image Security Configuration Detection Results

Function

This API is used to query the list of image security configuration detection results.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/image/baseline/risk-configs

Table 3-299 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Tenant project ID Minimum: **1** Maximum: **256**

Table 3-300 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to all_granted_eps. Default: **0** Minimum: **1** Maximum: **256**
image_type	Yes	String	Image type. The options are as follows: • private_image: private image repository • shared_image: shared image repository • local_image: local image • instance_image: enterprise image Minimum: **1** Maximum: **32**
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**. Minimum: **0** Maximum: **2000000** Default: **0**

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records displayed on each page. Minimum: **10** Maximum: **200** Default: **10**
namespace	No	String	Organization name Minimum: **0** Maximum: **64**
image_name	No	String	Image name Minimum: **0** Maximum: **128**
image_version	No	String	Image tag name Minimum: **0** Maximum: **64**
check_name	No	String	Baseline name Minimum: **0** Maximum: **256**
severity	No	String	Risk level. Its value can be: • Security • Low • Medium • High Minimum: **0** Maximum: **32**
standard	No	String	Standard type. Its value can be: • cn_standard: DJCP MLPS compliance standard • hw_standard: Huawei standard • qt_standard: Qingteng standard Minimum: **0** Maximum: **256**

Parameter	Mandatory	Type	Description
instance_id	No	String	Enterprise repository instance ID. This API is not required for SWR shared edition. Minimum: **0** Maximum: **128**

Request Parameters

Table 3-301 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-302 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number Minimum: **0** Maximum: **2147483647**
data_list	Array of **ImageRiskConfigsInfoResponseInfo** objects	Configuring the detection list Array Length: **0 - 2147483647**

Table 3-303 ImageRiskConfigsInfoResponseInfo

Parameter	Type	Description
severity	String	Risk level. Its value can be: • Security • Low • Medium • High Minimum: **1** Maximum: **32**
check_name	String	Baseline name Minimum: **0** Maximum: **256**
check_type	String	Baseline type Minimum: **0** Maximum: **256**
standard	String	Standard type. Its value can be: • cn_standard: DJCP MLPS compliance standard • hw_standard: Huawei standard • qt_standard: Qingteng standard Minimum: **1** Maximum: **16**
check_rule_num	Integer	Number of check items Minimum: **0** Maximum: **2097152**
failed_rule_num	Integer	Number of risk items Minimum: **0** Maximum: **2097152**
check_type_desc	String	Baseline description Minimum: **0** Maximum: **65534**

Example Requests

Query the security configuration result list of the private image whose namespace is scc_hss_container, image name is euleros, and image version is 2.2.

```
GET https://{endpoint}/v5/{project_id}/image/baseline/risk-configs?
offset=0&limit=200&image_type=private_image&namespace=scc_hss_container&image_name=euleros/
test&image_version=2.2.6&enterprise_project_id=all_granted_eps
```


Example Responses

Status code: 200

This API is used to query the list of image configuration results.

```
{
  "total_num" : 1,
  "data_list" : [ {
    "check_name" : "CentOS 7",
    "check_rule_num" : 3,
    "check_type" : 3,
    "check_type_desc" : "This document focuses on XXX.",
    "failed_rule_num" : 0,
    "severity" : "Low",
    "standard" : "cn_standard"
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListImageRiskConfigsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListImageRiskConfigsRequest request = new ListImageRiskConfigsRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withImageType("<image_type>");
        request.withOffset(<offset>);
        request.withLimit(<limit>);
        request.withNamespace("<namespace>");
        request.withImageName("<image_name>");
        request.withImageVersion("<image_version>");
        request.withCheckName("<check_name>");
        request.withSeverity("<severity>");
        request.withStandard("<standard>");
```



```
        request.withInstanceId("<instance_id>");
        try {
            ListImageRiskConfigsResponse response = client.listImageRiskConfigs(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListImageRiskConfigsRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.image_type = "<image_type>"
        request.offset = <offset>
        request.limit = <limit>
        request.namespace = "<namespace>"
        request.image_name = "<image_name>"
        request.image_version = "<image_version>"
        request.check_name = "<check_name>"
        request.severity = "<severity>"
        request.standard = "<standard>"
        request.instance_id = "<instance_id>"
        response = client.list_image_risk_configs(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListImageRiskConfigsRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    request.ImageType = "<image_type>"
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    namespaceRequest:= "<namespace>"
    request.Namespace = &namespaceRequest
    imageNameRequest:= "<image_name>"
    request.ImageName = &imageNameRequest
    imageVersionRequest:= "<image_version>"
    request.ImageVersion = &imageVersionRequest
    checkNameRequest:= "<check_name>"
    request.CheckName = &checkNameRequest
    severityRequest:= "<severity>"
    request.Severity = &severityRequest
    standardRequest:= "<standard>"
    request.Standard = &standardRequest
    instanceIdRequest:= "<instance_id>"
    request.InstanceId = &instanceIdRequest
    response, err := client.ListImageRiskConfigs(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	This API is used to query the list of image configuration results.

Error Codes

See **Error Codes**.

3.9.7 Querying the Check Item List of a Specified Security Configuration Item of an Image

Function

This API is used to query the check item list of a specified security configuration item of an image.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/image/baseline/risk-configs/{check_name}/rules

Table 3-304 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**
check_name	Yes	String	Baseline name Minimum: **0** Maximum: **128**

Table 3-305 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**
image_type	Yes	String	Image type. The options are as follows: • private_image: private image repository • shared_image: shared image repository • local_image: local image • instance_image: enterprise image Minimum: **1** Maximum: **32**
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**. Minimum: **0** Maximum: **2000000** Default: **0**
limit	No	Integer	Number of records displayed on each page. Minimum: **10** Maximum: **200** Default: **10**
namespace	No	String	Specifies the organization name. If no image information is available, all images are queried. Minimum: **0** Maximum: **64**
image_name	No	String	Image name Minimum: **0** Maximum: **128**

Parameter	Mandatory	Type	Description
image_version	No	String	Image tag name Minimum: **0** Maximum: **64**
standard	Yes	String	Standard type. Its value can be: • cn_standard: DJCP MLPS compliance standard • hw_standard: Huawei standard • qt_standard: Qingteng standard Minimum: **0** Maximum: **32**
result_type	No	String	Result type. Its value can be: • pass: The item passed the check. • failed: The item failed the check. Default: **unhandled** Minimum: **0** Maximum: **64**
check_rule_name	No	String	Check item name. Fuzzy match is supported. Minimum: **0** Maximum: **2048**
severity	No	String	Risk level. Its value can be: • Security • Low • Medium • High • Critical Minimum: **0** Maximum: **255**
instance_id	No	String	Enterprise repository instance ID. This API is not required for SWR shared edition. Minimum: **0** Maximum: **128**

Request Parameters

Table 3-306 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-307 Response body parameters

Parameter	Type	Description
total_num	Integer	Total risks Minimum: **0** Maximum: **2147483647**
data_list	Array of **ImageRiskConfigsCheckRulesResponseInfo** objects	Data list Array Length: **0 - 2147483647**

Table 3-308 ImageRiskConfigsCheckRulesResponseInfo

Parameter	Type	Description
severity	String	Risk level. Its value can be: • Security • Low • Medium • High Minimum: **0** Maximum: **255**
check_name	String	Baseline name Minimum: **0** Maximum: **256**
check_type	String	Baseline type Minimum: **0** Maximum: **256**
standard	String	Standard type. Its value can be: • cn_standard: DJCP MLPS compliance standard • hw_standard: Huawei standard • qt_standard: Qingteng standard Minimum: **0** Maximum: **16**
check_rule_name	String	Check items Minimum: **0** Maximum: **2048**
check_rule_id	String	Check item ID Minimum: **0** Maximum: **64**
scan_result	String	Detection result. The options are as follows: • pass • failed Minimum: **0** Maximum: **64**

Example Requests

Query the check items of a specified security configuration item whose organization is aaa, image name is centos7, image version is common, and standard type is Huawei standard.


```
GET https://{endpoint}/v5/{project_id}/image/baseline/risk-configs/{check_name}/rules?
offset=0&limit=200&image_type=private_image&namespace=aaa&image_name=centos7/
test&image_version=common&standard=hw_standard&enterprise_project_id=all_granted_eps
```

Example Responses

Status code: 200

Checklist of the specified security configuration item

```
{
  "total_num" : 1,
  "data_list" : [ {
    "check_rule_id" : "1.1",
    "check_rule_name" : "Rule: Password locking policy.",
    "check_name" : "CentOS 7",
    "check_type" : "CentOS 7",
    "standard" : "hw_standard",
    "scan_result" : "failed",
    "severity" : "High"
  } ]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListImageRiskConfigRulesSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListImageRiskConfigRulesRequest request = new ListImageRiskConfigRulesRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withImageType("<image_type>");
        request.withOffset(<offset>);
        request.withLimit(<limit>);
        request.withNamespace("<namespace>");
        request.withImageName("<image_name>");
```



```
        request.withImageVersion("<image_version>");
        request.withStandard("<standard>");
        request.withResultType("<result_type>");
        request.withCheckRuleName("<check_rule_name>");
        request.withSeverity("<severity>");
        request.withInstanceId("<instance_id>");
        try {
            ListImageRiskConfigRulesResponse response = client.listImageRiskConfigRules(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListImageRiskConfigRulesRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.image_type = "<image_type>"
        request.offset = <offset>
        request.limit = <limit>
        request.namespace = "<namespace>"
        request.image_name = "<image_name>"
        request.image_version = "<image_version>"
        request.standard = "<standard>"
        request.result_type = "<result_type>"
        request.check_rule_name = "<check_rule_name>"
        request.severity = "<severity>"
        request.instance_id = "<instance_id>"
        response = client.list_image_risk_config_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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListImageRiskConfigRulesRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    request.ImageType = "<image_type>"
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    namespaceRequest:= "<namespace>"
    request.Namespace = &namespaceRequest
    imageNameRequest:= "<image_name>"
    request.ImageName = &imageNameRequest
    imageVersionRequest:= "<image_version>"
    request.ImageVersion = &imageVersionRequest
    request.Standard = "<standard>"
    resultTypeRequest:= "<result_type>"
    request.ResultType = &resultTypeRequest
    checkRuleNameRequest:= "<check_rule_name>"
    request.CheckRuleName = &checkRuleNameRequest
    severityRequest:= "<severity>"
    request.Severity = &severityRequest
    instanceIdRequest:= "<instance_id>"
    request.InstanceId = &instanceIdRequest
    response, err := client.ListImageRiskConfigRules(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	Checklist of the specified security configuration item

Error Codes

See **Error Codes**.

3.9.8 Querying the Mirror Configuration Check Report

Function

This API is used to query the mirror configuration check report.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/image/baseline/check-rule/detail

Table 3-309 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Tenant project ID Minimum: **1** Maximum: **256**

Table 3-310 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to all_granted_eps. Default: **0** Minimum: **1** Maximum: **256**

Parameter	Mandatory	Type	Description
image_type	Yes	String	Image type. The options are as follows: • private_image: private image repository • shared_image: shared image repository • local_image: local image • instance_image: enterprise image Minimum: **1** Maximum: **32**
namespace	No	String	Specifies the organization name. If no image information is available, all images are queried. Minimum: **0** Maximum: **64**
image_name	No	String	Image name Minimum: **0** Maximum: **128**
image_version	No	String	Image tag name Minimum: **0** Maximum: **64**
check_name	Yes	String	Baseline name Minimum: **0** Maximum: **255**
check_type	Yes	String	Baseline Type Minimum: **0** Maximum: **255**
check_rule_id	Yes	String	Check item ID Minimum: **0** Maximum: **255**

Parameter	Mandatory	Type	Description
standard	Yes	String	Standard type. Its value can be: • cn_standard: DJCP MLPS compliance standard • hw_standard: Huawei standard • qt_standard: Qingteng standard Minimum: **0** Maximum: **32**
instance_id	No	String	Enterprise repository instance ID. This API is not required for SWR shared edition. Minimum: **0** Maximum: **128**

Request Parameters

Table 3-311 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-312 Response body parameters

Parameter	Type	Description
description	String	Check item description Minimum: **0** Maximum: **2048**
reference	String	Reference Minimum: **0** Maximum: **255**
audit	String	Audit description Minimum: **0** Maximum: **65534**
remediation	String	Suggestion Minimum: **0** Maximum: **65534**
check_info_list	Array of **ImageCheckRuleCheckCaseResponseInfo** objects	Test case Array Length: **0 - 2147483647**

Table 3-313 ImageCheckRuleCheckCaseResponseInfo

Parameter	Type	Description
check_description	String	Test case description Minimum: **0** Maximum: **65534**
current_value	String	Current result Minimum: **0** Maximum: **65534**
suggest_value	String	Expected result Minimum: **0** Maximum: **65534**

Example Requests

Query the check report of the configuration item whose organization is aaa, image name is centos7, image version is common, baseline name is SSH, check item ID is 1.12, and standard type is Huawei standard.


```
GET https://{endpoint}/v5/{project_id}/image/baseline/check-rule/detail?
image_type=private_image&namespace=aaa&image_name=centos7&image_version=common&check_rule_id
=1.12&standard=hw_standard&check_type=SSH&check_name=SSH&enterprise_project_id=all_granted_eps
```

Example Responses

Status code: 200

The check report of configuration check items is returned.

```
{
  "audit" : "Check the configuration file: /etc/pam.d/system",
  "check_info_list" : [ {
    "check_description" : "Check the configuration file: /etc/pam.d/system-auth"
  }, {
    "current_value" : ""
  }, {
    "suggest_value" : "auth required is configured for each file."
  } ],
  "description" : "The two options ClientAliveInterval and ClientAliveCountMax control the timeout of SSH
sessions. The ClientAliveInterval parameter sets a timeout interval in seconds after which if no data has
been received from the client, sshd will send a message through the encrypted channel to request a
response from the client. The ClientAliveCountMax parameter sets the number of client alive messages
which may be sent without sshd receiving any messages back from the client. For example, if the
ClientAliveInterval is set to 15s and the ClientAliveCountMax is set to 3, unresponsive SSH clients will be
disconnected after approximately 45s.",
  "reference" : "",
  "remediation" : "Edit the /etc/ssh/sshd_config file to set the parameter as follows: \nClientAliveInterval
300 \nClientAliveCountMax 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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ShowImageCheckRuleDetailSolution {

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

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

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



```
                .build();
        ShowImageCheckRuleDetailRequest request = new ShowImageCheckRuleDetailRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withImageType("<image_type>");
        request.withNamespace("<namespace>");
        request.withImageName("<image_name>");
        request.withImageVersion("<image_version>");
        request.withCheckName("<check_name>");
        request.withCheckType("<check_type>");
        request.withCheckRuleId("<check_rule_id>");
        request.withStandard("<standard>");
        request.withInstanceId("<instance_id>");
        try {
            ShowImageCheckRuleDetailResponse response = client.showImageCheckRuleDetail(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ShowImageCheckRuleDetailRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.image_type = "<image_type>"
        request.namespace = "<namespace>"
        request.image_name = "<image_name>"
        request.image_version = "<image_version>"
        request.check_name = "<check_name>"
        request.check_type = "<check_type>"
        request.check_rule_id = "<check_rule_id>"
        request.standard = "<standard>"
        request.instance_id = "<instance_id>"
        response = client.show_image_check_rule_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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowImageCheckRuleDetailRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    request.ImageType = "<image_type>"
    namespaceRequest:= "<namespace>"
    request.Namespace = &namespaceRequest
    imageNameRequest:= "<image_name>"
    request.ImageName = &imageNameRequest
    imageVersionRequest:= "<image_version>"
    request.ImageVersion = &imageVersionRequest
    request.CheckName = "<check_name>"
    request.CheckType = "<check_type>"
    request.CheckRuleId = "<check_rule_id>"
    request.Standard = "<standard>"
    instanceIdRequest:= "<instance_id>"
    request.InstanceId = &instanceIdRequest
    response, err := client.ShowImageCheckRuleDetail(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 check report of configuration check items is returned.

Error Codes

See **Error Codes**.

3.10 Policy Management

3.10.1 Querying the Policy Group List

Function

This API is used to query the policy group list.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/policy/groups

Table 3-314 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-315 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**

Parameter	Mandatory	Type	Description
group_name	No	String	Policy group name Minimum: **1** Maximum: **256**
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**. Minimum: **0** Maximum: **100000** Default: **0**
limit	No	Integer	Number of records displayed on each page. Minimum: **10** Maximum: **200** Default: **10**
container_mode	No	Boolean	Whether to query the container edition policy.

Request Parameters

Table 3-316 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**

Response Parameters

Status code: 200

Table 3-317 Response body parameters

Parameter	Type	Description
total_num	Integer	Total number
data_list	Array of **PolicyGroupResponseInfo** objects	Policy group list Array Length: **0 - 100**

Table 3-318 PolicyGroupResponseInfo

Parameter	Type	Description
group_name	String	Policy group name
group_id	String	Policy group ID
description	String	Description of the policy group Minimum: **1** Maximum: **64**
deletable	Boolean	Whether a policy group can be deleted
host_num	Integer	Number of associated servers
default_group	Boolean	Whether a policy group is the default policy group
support_os	String	Supported OS. The options are as follows: • Linux • Windows: Windows OS is supported.
support_version	String	Supported versions. The options are as follows: • hss.version.basic: policy group of the basic edition • hss.version.advanced: policy group of the professional edition • hss.version.enterprise: policy group of the enterprise edition • hss.version.premium: policy group of the premium edition • hss.version.wtp: policy group of the WTP edition • hss.version.container.enterprise: policy group of the container edition

Example Requests

Query the policy group list of all enterprise projects.

```
GET https://{endpoint}/v5/{project_id}/policy/groups?
offset=0&limit=100&enterprise_project_id=all_granted_eps
```

Example Responses

Status code: 200

Policy group list


```
{
  "data_list" : [ {
    "default_group" : true,
    "deletable" : false,
    "description" : "container policy group for linux",
    "group_id" : "c831f177-226d-4b91-be0f-bcf98d04ef5d",
    "group_name" : "tenant_linux_container_default_policy_group ",
    "host_num" : 0,
    "support_version" : "hss.version.container.enterprise",
    "support_os" : "Linux"
  }, {
    "default_group" : true,
    "deletable" : false,
    "description" : "enterprise policy group for windows",
    "group_id" : "1ff54b90-1b3e-42a9-a1da-9883a83385ce",
    "group_name" : "tenant_windows_enterprise_default_policy_group ",
    "host_num" : 0,
    "support_version" : "hss.version.enterprise",
    "support_os" : "Windows"
  }, {
    "default_group" : true,
    "deletable" : false,
    "description" : "enterprise policy group for linux",
    "group_id" : "1069bcc0-c806-4ccd-a35d-f1f7456805e9",
    "group_name" : "tenant_linux_enterprise_default_policy_group ",
    "host_num" : 1,
    "support_version" : "hss.version.enterprise",
    "support_os" : "Linux"
  }, {
    "default_group" : true,
    "deletable" : false,
    "description" : "premium policy group for windows",
    "group_id" : "11216d24-9e91-4a05-9212-c4c1d646ee79",
    "group_name" : "tenant_windows_premium_default_policy_group ",
    "host_num" : 0,
    "support_version" : "hss.version.premium",
    "support_os" : "Linux"
  }, {
    "default_group" : true,
    "deletable" : false,
    "description" : "premium policy group for linux",
    "group_id" : "e6e1228a-7bb4-424f-a42b-755162234da7",
    "group_name" : "tenant_linux_premium_default_policy_group ",
    "host_num" : 0,
    "support_version" : "hss.version.premium",
    "support_os" : "Windows"
  } ],
  "total_num" : 5
}
```


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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListPolicyGroupSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListPolicyGroupRequest request = new ListPolicyGroupRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withGroupName("<group_name>");
        request.withOffset(<offset>);
        request.withLimit(<limit>);
        request.withContainerMode(<container_mode>);
        try {
            ListPolicyGroupResponse response = client.listPolicyGroup(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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



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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListPolicyGroupRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.group_name = "<group_name>"
        request.offset = <offset>
        request.limit = <limit>
        request.container_mode = <ContainerMode>
        response = client.list_policy_group(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListPolicyGroupRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    groupNameRequest:= "<group_name>"
    request.GroupName = &groupNameRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    containerModeRequest:= <container_mode>
```



```
    request.ContainerMode = &containerModeRequest
    response, err := client.ListPolicyGroup(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	Policy group list

Error Codes

See **Error Codes**.

3.10.2 Applying a policy group

Function

This API is used to apply a policy group.

Calling Method

For details, see **Calling APIs**.

URI

POST /v5/{project_id}/policy/deploy

Table 3-319 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-320 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **1** Maximum: **256**

Request Parameters

Table 3-321 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region ID Minimum: **0** Maximum: **128**
Content-Type	No	String	Default value: application/json; charset=utf-8 Minimum: **0** Maximum: **128**

Table 3-322 Request body parameters

Parameter	Mandatory	Type	Description
target_policy_group_id	Yes	String	ID of the policy group to be deployed Minimum: **36** Maximum: **64**

Parameter	Mandatory	Type	Description
operate_all	No	Boolean	Whether to deploy the policy on all hosts. If the value is true, you do not need to configure host_id_list. If the value is false, configure host_id_list.
host_id_list	No	Array of strings	ID list of servers where the policy group needs to be deployed Minimum: **1** Maximum: **128** Array Length: **0 - 10000**

Response Parameters

None

Example Requests

Deploy a server protection policy. The target server ID is 15462c0e-32c6-4217-a869-bbd131a00ecf, and the target policy ID is f671f7-2677-4705-a320-de1a62bff306.

```
POST https://{endpoint}/v5/{project_id}/policy/deploy

{
  "target_policy_group_id" : "1df671f7-2677-4705-a320-de1a62bff306",
  "host_id_list" : [ "15462c0e-32c6-4217-a869-bbd131a00ecf" ],
  "operate_all" : false
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Deploy a server protection policy. The target server ID is 15462c0e-32c6-4217-a869-bbd131a00ecf, and the target policy ID is f671f7-2677-4705-a320-de1a62bff306.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class AssociatePolicyGroupSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        AssociatePolicyGroupRequest request = new AssociatePolicyGroupRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        AssociatePolicyGroupRequestInfo body = new AssociatePolicyGroupRequestInfo();
        List<String> listbodyHostIdList = new ArrayList<>();
        listbodyHostIdList.add("15462c0e-32c6-4217-a869-bbd131a00ecf");
        body.withHostIdList(listbodyHostIdList);
        body.withOperateAll(false);
        body.withTargetPolicyGroupId("1df671f7-2677-4705-a320-de1a62bff306");
        request.withBody(body);
        try {
            AssociatePolicyGroupResponse response = client.associatePolicyGroup(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

Deploy a server protection policy. The target server ID is 15462c0e-32c6-4217-a869-bbd131a00ecf, and the target policy ID is f671f7-2677-4705-a320-de1a62bff306.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

if __name__ == "__main__":
    # The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security
```



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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = AssociatePolicyGroupRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        listHostIdListbody = [
            "15462c0e-32c6-4217-a869-bbd131a00ecf"
        ]
        request.body = AssociatePolicyGroupRequestInfo(
            host_id_list=listHostIdListbody,
            operate_all=False,
            target_policy_group_id="1df671f7-2677-4705-a320-de1a62bff306"
        )
        response = client.associate_policy_group(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

Deploy a server protection policy. The target server ID is 15462c0e-32c6-4217-a869-bbd131a00ecf, and the target policy ID is f671f7-2677-4705-a320-de1a62bff306.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())
```



```
    request := &model.AssociatePolicyGroupRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    var listHostIdListbody = []string{
        "15462c0e-32c6-4217-a869-bbd131a00ecf",
    }
    operateAllAssociatePolicyGroupRequestInfo:= false
    request.Body = &model.AssociatePolicyGroupRequestInfo{
        HostIdList: &listHostIdListbody,
        OperateAll: &operateAllAssociatePolicyGroupRequestInfo,
        TargetPolicyGroupId: "1df671f7-2677-4705-a320-de1a62bff306",
    }
    response, err := client.AssociatePolicyGroup(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	success
400	Invalid parameter.
401	Authentication failed.
403	Insufficient permission.
404	Resource not found.
500	System error.

Error Codes

See **Error Codes**.

3.11 Vulnerability Management

3.11.1 Querying the Vulnerability List

Function

This API is used to query the list of detected vulnerabilities.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/vulnerability/vulnerabilities

Table 3-323 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-324 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. The value **0** indicates the default enterprise project. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **0** Maximum: **256**
type	No	String	Vulnerability type. The options are as follows: -linux_vul: Linux vulnerability -windows_vul: windows vulnerability -web_cms: Web-CMS vulnerability -app_vul: application vulnerability Minimum: **0** Maximum: **32**
vul_id	No	String	Vulnerability ID Minimum: **0** Maximum: **256**
vul_name	No	String	Vulnerability name Minimum: **0** Maximum: **256**

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records displayed on each page Minimum: **0** Maximum: **200** Default: **10**
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**. Minimum: **0** Maximum: **2000000** Default: **0**
repair_priority	No	String	Fix Priority Critical High Medium Low Minimum: **1** Maximum: **10**
handle_status	No	String	description: |- Handling status. The options are as follows: - unhandled - handled Default: **unhandled** Minimum: **1** Maximum: **32**
cve_id	No	String	Vulnerability ID Minimum: **0** Maximum: **32**
label_list	No	String	Vulnerability tag Minimum: **0** Maximum: **128**
status	No	String	Vulnerability status Minimum: **0** Maximum: **32**
asset_value	No	String	Asset importance important common test Minimum: **0** Maximum: **32**

Parameter	Mandatory	Type	Description
group_name	No	String	Server group name Minimum: **0** Maximum: **256**

Request Parameters

Table 3-325 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of **X-Subject-Token** in the response header is a token. Minimum: **1** Maximum: **32768**

Response Parameters

Status code: 200

Table 3-326 Response body parameters

Parameter	Type	Description
total_num	Long	Total number of software vulnerabilities Minimum: **0** Maximum: **2147483647**
data_list	Array of **VulInfo** objects	Software vulnerability list Array Length: **0 - 2147483647**

Table 3-327 VulInfo

Parameter	Type	Description
vul_name	String	Vulnerability name Minimum: **0** Maximum: **256**

Parameter	Type	Description
vul_id	String	Vulnerability ID Minimum: **0** Maximum: **64**
label_list	Array of strings	Vulnerability tag Minimum: **0** Maximum: **65534** Array Length: **0 - 2147483647**
repair_necessity	String	Repair necessity • Critical: The CVSS score of the vulnerability is greater than or equal to 9, corresponding to the high risk level on the console. • High: The CVSS score of the vulnerability is greater than or equal to 7 and less than 9, corresponding to the medium risk level on the console. • Medium: The CVSS score of the vulnerability is greater than or equal to 4 and less than 7, corresponding to the medium risk level on the console. • Low: The CVSS score of the vulnerability is less than 4, corresponding to the low risk level on the console. Minimum: **0** Maximum: **64**
severity_level	String	Severity • Critical: The CVSS score of the vulnerability is greater than or equal to 9, corresponding to the high risk level on the console. • High: The CVSS score of the vulnerability is greater than or equal to 7 and less than 9, corresponding to the medium risk level on the console. • Medium: The CVSS score of the vulnerability is greater than or equal to 4 and less than 7, corresponding to the medium risk level on the console. • Low: The CVSS score of the vulnerability is less than 4, corresponding to the low risk level on the console. Minimum: **0** Maximum: **64**

Parameter	Type	Description
host_num	Integer	Number of affected servers Minimum: **0** Maximum: **2147483647**
unhandle_host_num	Integer	Number of unprocessed servers, excluding ignored and fixed servers Minimum: **0** Maximum: **2147483647**
scan_time	Long	Last scanned, in ms. Minimum: **0** Maximum: **9223372036854775807**
solution_detail	String	Vulnerability fixing guide Minimum: **0** Maximum: **65534**
url	String	Vulnerability URL Minimum: **0** Maximum: **2083**
description	String	Vulnerability description Minimum: **0** Maximum: **65534**
type	String	Vulnerability type. The options are as follows: -linux_vul: Linux vulnerability -windows_vul: windows vulnerability -web_cms: Web-CMS vulnerability -app_vul: application vulnerability Minimum: **0** Maximum: **128**
host_id_list	Array of strings	Server lists that can handle the vulnerability Minimum: **0** Maximum: **128** Array Length: **0 - 2147483647**
cve_list	Array of **cve_list** objects	CVE list Array Length: **1 - 10000**
patch_url	String	Patch address Minimum: **0** Maximum: **512**

Parameter	Type	Description
repair_priority	String	Fix Priority Critical High Medium Low Minimum: **1** Maximum: **32**
hosts_num	**VulnerabilityHostNumberInfo** object	Affected server
repair_success_num	Integer	Number of successful repairs Minimum: **0** Maximum: **1000000**
fixed_num	Long	Number of repairs Minimum: **0** Maximum: **1000000**
ignored_num	Long	Number of ignored items Minimum: **0** Maximum: **1000000**
verify_num	Integer	Number of verifications Minimum: **0** Maximum: **1000000**
repair_priority_list	Array of **RepairPriorityListInfo** objects	Fixing priority. The number of servers corresponding to each fixing priority. Array Length: **0 - 4**

Table 3-328 cve_list

Parameter	Type	Description
cve_id	String	CVE ID Minimum: **1** Maximum: **32**
cvss	Float	CVSS score Minimum: **0** Maximum: **10**

Table 3-329 VulnerabilityHostNumberInfo

Parameter	Type	Description
important	Integer	Number of important servers Minimum: **0** Maximum: **10000**
common	Integer	Number of common servers Minimum: **0** Maximum: **10000**
test	Integer	Number of test servers Minimum: **0** Maximum: **10000**

Table 3-330 RepairPriorityListInfo

Parameter	Type	Description
repair_priority	String	Priority Critical High Medium Low Minimum: **1** Maximum: **10**
host_num	Integer	Number of servers corresponding to the fixing priority Minimum: **0** Maximum: **2147483647**

Example Requests

Query the first 10 records in the vulnerability list whose project_id is 2b31ed520xxxxxxebedb6e57xxxxxxxx.

```
GET https://{endpoint}/v5/2b31ed520xxxxxxebedb6e57xxxxxxxx/vulnerability/vulnerabilities?offset=0&limit=10
```

Example Responses

Status code: 200

vulnerability list

```
{
  "total_num" : 1,
  "data_list" : [ {
    "description" : "It was discovered that FreeType did not correctly handle certain malformed font files. If a user were tricked into using a specially crafted font file, a remote attacker could cause FreeType to crash, or possibly execute arbitrary code.",
    "host_id_list" : [ "caa958ad-a481-4d46-b51e-6861b8864515" ],
    "host_num" : 1,
    "scan_time" : 1661752185836,
```



```
    "severity_level" : "Critical",
    "repair_necessity" : "Critical",
    "solution_detail" : "To upgrade the affected software",
    "type" : "linux_vul",
    "unhandle_host_num" : 0,
    "url" : "https://ubuntu.com/security/CVE-2022-27405",
    "vul_id" : "USN-5528-1",
    "vul_name" : "USN-5528-1: FreeType vulnerabilities",
    "repair_priority_list" : [ {
      "repair_priority" : "Critical",
      "host_num" : 0
    }, {
      "repair_priority" : "High",
      "host_num" : 0
    }, {
      "repair_priority" : "Medium",
      "host_num" : 1
    }, {
      "repair_priority" : "Low",
      "host_num" : 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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListVulnerabilitiesSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListVulnerabilitiesRequest request = new ListVulnerabilitiesRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withType("<type>");
        request.withVulId("<vul_id>");
        request.withVulName("<vul_name>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
```



```
        request.withRepairPriority("<repair_priority>");
        request.withHandleStatus("<handle_status>");
        request.withCveId("<cve_id>");
        request.withLabelList("<label_list>");
        request.withStatus("<status>");
        request.withAssetValue("<asset_value>");
        request.withGroupName("<group_name>");
        try {
            ListVulnerabilitiesResponse response = client.listVulnerabilities(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListVulnerabilitiesRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.type = "<type>"
        request.vul_id = "<vul_id>"
        request.vul_name = "<vul_name>"
        request.limit = <limit>
        request.offset = <offset>
        request.repair_priority = "<repair_priority>"
        request.handle_status = "<handle_status>"
        request.cve_id = "<cve_id>"
        request.label_list = "<label_list>"
        request.status = "<status>"
        request.asset_value = "<asset_value>"
        request.group_name = "<group_name>"
        response = client.list_vulnerabilities(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListVulnerabilitiesRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    typeRequest:= "<type>"
    request.Type = &typeRequest
    vulIdRequest:= "<vul_id>"
    request.VulId = &vulIdRequest
    vulNameRequest:= "<vul_name>"
    request.VulName = &vulNameRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    repairPriorityRequest:= "<repair_priority>"
    request.RepairPriority = &repairPriorityRequest
    handleStatusRequest:= "<handle_status>"
    request.HandleStatus = &handleStatusRequest
    cveIdRequest:= "<cve_id>"
    request.CveId = &cveIdRequest
    labelListRequest:= "<label_list>"
    request.LabelList = &labelListRequest
    statusRequest:= "<status>"
    request.Status = &statusRequest
    assetValueRequest:= "<asset_value>"
    request.AssetValue = &assetValueRequest
    groupNameRequest:= "<group_name>"
    request.GroupName = &groupNameRequest
    response, err := client.ListVulnerabilities(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	vulnerability list

Error Codes

See **Error Codes**.

3.11.2 Querying the Servers Affected by a Vulnerability

Function

This API is used to query the servers affected by a vulnerability.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/vulnerability/hosts

Table 3-331 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-332 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **128**

Parameter	Mandatory	Type	Description
vul_id	Yes	String	Vulnerability ID Minimum: **0** Maximum: **64**
type	Yes	String	Vulnerability type • linux_vul: Linux vulnerability • windows_vul: Windows vulnerability -web_cms: Web-CMS vulnerability • app_vul: application vulnerability • urgent_vul: emergency vulnerability Minimum: **0** Maximum: **64**
host_name	No	String	Affected server name Minimum: **0** Maximum: **256**
host_ip	No	String	IP address of the affected server Minimum: **0** Maximum: **128**
status	No	String	Vulnerability status. • vul_status_unfix: not fixed • vul_status_ignored: ignored – vul_status_verified: verification in progress – vul_status_fixing: The fix is in progress. – vul_status_fixed: The fix succeeded. – vul_status_reboot: The issue is fixed and waiting for restart. – vul_status_failed: The issue failed to be fixed. – vul_status_fix_after_reboot: Restart the server and try again. Minimum: **0** Maximum: **128**

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of records on each page Minimum: **10** Maximum: **200** Default: **10**
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**. Minimum: **0** Maximum: **2000000** Default: **0**
asset_value	No	String	Asset importance important common test Minimum: **0** Maximum: **32**
group_name	No	String	Server group name Minimum: **0** Maximum: **256**
handle_status	No	String	description: |- Handling status. The options are as follows: - unhandled - handled Minimum: **1** Maximum: **32**
severity_level	No	String	Risk level. The value can be Critical, High, Medium, or Low. Minimum: **0** Maximum: **32**
is_affect_business	No	Boolean	Indicates whether services are affected. The value can be y or n.

Parameter	Mandatory	Type	Description
repair_priority	No	String	Fixing priority. The options are as follows: • Critical: • High • Medium • Low Minimum: **1** Maximum: **10**

Request Parameters

Table 3-333 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**

Response Parameters

Status code: 200

Table 3-334 Response body parameters

Parameter	Type	Description
total_num	Integer	Number of affected servers Minimum: **0** Maximum: **10000**
data_list	Array of **VulHostInfo** objects	List of affected ECSs Array Length: **1 - 10000**

Table 3-335 VulHostInfo

Parameter	Type	Description
host_id	String	ID of the server affected by the vulnerability Minimum: **1** Maximum: **128**
severity_level	String	Risk level. • Critical: The CVSS score of the vulnerability is greater than or equal to 9, corresponding to the high risk level on the console. • High: The CVSS score of the vulnerability is greater than or equal to 7 and less than 9, corresponding to the medium risk level on the console. • Medium: The CVSS score of the vulnerability is greater than or equal to 4 and less than 7, corresponding to the medium risk level on the console. • Low: The CVSS score of the vulnerability is less than 4, corresponding to the low risk level on the console. Minimum: **1** Maximum: **128**
host_name	String	Affected server name Minimum: **1** Maximum: **256**
host_ip	String	IP address of the affected server Minimum: **1** Maximum: **256**
agent_id	String	Agent ID corresponding to the server Minimum: **1** Maximum: **128**
version	String	The quota version bound to the server Minimum: **1** Maximum: **128**
cve_num	Integer	Vulnerability CVEs Minimum: **0** Maximum: **10000**

Parameter	Type	Description
cve_id_list	Array of strings	The CVE ID list corresponding to the vulnerability Minimum: **1** Maximum: **64** Array Length: **1 - 10000**
status	String	Vulnerability status. • vul_status_unfix: not fixed • vul_status_ignored: ignored • vul_status_verified: verification in progress • vul_status_fixing: The fix is in progress. • vul_status_fixed: The fix succeeded. • vul_status_reboot: The issue is fixed and waiting for restart. • vul_status_failed: The issue failed to be fixed. • vul_status_fix_after_reboot: Restart the server and try again. Minimum: **1** Maximum: **128**
repair_cmd	String	Command line to be executed to fix the vulnerability (This field is available only for Linux vulnerabilities.) Minimum: **1** Maximum: **256**
app_path	String	Path of the application software (This field is available only for application vulnerabilities.) Minimum: **1** Maximum: **512**
region_name	String	Region Minimum: **0** Maximum: **128**
public_ip	String	Server public IP address Minimum: **0** Maximum: **128**
private_ip	String	Server private IP address Minimum: **0** Maximum: **128**

Parameter	Type	Description
group_id	String	Server group ID Minimum: **0** Maximum: **128**
group_name	String	Server group name Minimum: **0** Maximum: **256**
os_type	String	Operating system (OS) Minimum: **0** Maximum: **32**
asset_value	String	Asset importance. The options are as follows: • important • common • test Minimum: **0** Maximum: **32**
is_affect_business	Boolean	Whether services are affected
first_scan_time	Long	First scan time Minimum: **0** Maximum: **9223372036854775807**
scan_time	Long	Scanning time, in ms. Minimum: **0** Maximum: **9223372036854775807**
support_restore	Boolean	Indicates whether data can be rolled back to the backup created when the vulnerability was fixed.
disabled_operate_types	Array of **disabled_operate_types** objects	List of operation types of vulnerabilities that cannot be performed on the current server. Array Length: **1 - 10000**
repair_priority	String	Fixing priority. The options are as follows: • Critical • High • Medium • Low Minimum: **1** Maximum: **10**

Table 3-336 disabled_operate_types

Parameter	Type	Description
operate_type	String	Operation type. • ignore • not_ignore: unignore • immediate_repair: fix • manual_repair: • verify • add_to_whitelist: Minimum: **1** Maximum: **64**
reason	String	Indicates the reason why the operation cannot be performed. Minimum: **0** Maximum: **512**

Example Requests

Query the first 10 records in the list of servers with EulerOS-SA-2021-1894 vulnerability.

```
GET https://{endpoint}/v5/2b31ed520xxxxxxebedb6e57xxxxxxxx/vulnerability/hosts?vul_id=EulerOS-SA-2021-1894&offset=0&limit=10
```

Example Responses

Status code: 200

Vul host info list

```
{
  "total_num" : 1,
  "data_list" : [ {
    "host_id" : "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx",
    "severity_level" : "Low",
    "host_name" : "ecs",
    "host_ip" : "xxx.xxx.xxx.xxx",
    "agent_id" : "xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx",
    "version" : "hss.version.enterprise",
    "cve_num" : 1,
    "cve_id_list" : [ "CVE-2022-1664" ],
    "status" : "vul_status_ignored",
    "repair_cmd" : "zypper update update-alternatives",
    "app_path" : "/root/apache-tomcat-8.5.15/bin/bootstrap.jar",
    "support_restore" : true,
    "disabled_operate_types" : [ {
      "operate_type" : "immediate_repair",
      "reason" : "The kernel vulnerability of CCE container node cannot be automatically fixed."
    } ],
    "repair_priority" : "Critical"
```



```
 }]
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListVulHostsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListVulHostsRequest request = new ListVulHostsRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withVulId("<vul_id>");
        request.withType("<type>");
        request.withHostName("<host_name>");
        request.withHostIp("<host_ip>");
        request.withStatus("<status>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withAssetValue("<asset_value>");
        request.withGroupName("<group_name>");
        request.withHandleStatus("<handle_status>");
        request.withSeverityLevel("<severity_level>");
        request.withIsAffectBusiness(<is_affect_business>);
        request.withRepairPriority("<repair_priority>");
        try {
            ListVulHostsResponse response = client.listVulHosts(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
```



```
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListVulHostsRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.vul_id = "<vul_id>"
        request.type = "<type>"
        request.host_name = "<host_name>"
        request.host_ip = "<host_ip>"
        request.status = "<status>"
        request.limit = <limit>
        request.offset = <offset>
        request.asset_value = "<asset_value>"
        request.group_name = "<group_name>"
        request.handle_status = "<handle_status>"
        request.severity_level = "<severity_level>"
        request.is_affect_business = <IsAffectBusiness>
        request.repair_priority = "<repair_priority>"
        response = client.list_vul_hosts(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

func main() {
    // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
```



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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListVulHostsRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    request.VulId = "<vul_id>"
    request.Type = "<type>"
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    hostIpRequest:= "<host_ip>"
    request.HostIp = &hostIpRequest
    statusRequest:= "<status>"
    request.Status = &statusRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    assetValueRequest:= "<asset_value>"
    request.AssetValue = &assetValueRequest
    groupNameRequest:= "<group_name>"
    request.GroupName = &groupNameRequest
    handleStatusRequest:= "<handle_status>"
    request.HandleStatus = &handleStatusRequest
    severityLevelRequest:= "<severity_level>"
    request.SeverityLevel = &severityLevelRequest
    isAffectBusinessRequest:= <is_affect_business>
    request.IsAffectBusiness = &isAffectBusinessRequest
    repairPriorityRequest:= "<repair_priority>"
    request.RepairPriority = &repairPriorityRequest
    response, err := client.ListVulHosts(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	Vul host info list

Error Codes

See **Error Codes**.

3.11.3 Changing the Status of a Vulnerability

Function

This API is used to change the status of a vulnerability.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v5/{project_id}/vulnerability/status

Table 3-337 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Table 3-338 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Minimum: **0** Maximum: **128**

Request Parameters

Table 3-339 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **32** Maximum: **4096**
Content-Type	No	String	Default value: application/json; charset=utf-8 Minimum: **0** Maximum: **128**

Table 3-340 Request body parameters

Parameter	Mandatory	Type	Description
operate_type	Yes	String	Operation type. • ignore • not_ignore: unignore • immediate_repair: fix • verify Minimum: **1** Maximum: **64**
remark	No	String	Remarks Minimum: **0** Maximum: **512**
select_type	No	String	Select vulnerabilities. • all_vul: Select all vulnerabilities. • all_host: Select all server vulnerabilities. Minimum: **1** Maximum: **64**

Parameter	Mandatory	Type	Description
type	No	String	Vulnerability type. The default value is **linux_vul**. The options are as follows: • linux_vul: Linux vulnerability • windows_vul: Windows vulnerability • web_cms: Web-CMS vulnerability • app_vul: application vulnerability Minimum: **0** Maximum: **64**
data_list	No	Array of **VulOperateInfo** objects	Vulnerability list Array Length: **1 - 500**
host_data_list	No	Array of **HostVulOperateInfo** objects	Vulnerability list in the server dimension Array Length: **1 - 500**
backup_info_id	No	String	Specifies the ID of the backup information processed by the vulnerability. If this parameter is not specified, the backup is not performed. Minimum: **1** Maximum: **128**
custom_backup_hosts	No	Array of **custom_backup_hosts** objects	Customize the vault and backup name used by the backup host. For hosts that are not in the list, the system automatically selects the vault with the largest remaining space and generates a backup name. Array Length: **1 - 50**

Table 3-341 VulOperateInfo

Parameter	Mandatory	Type	Description
vul_id	Yes	String	Vulnerability ID Minimum: **1** Maximum: **64**
host_id_list	Yes	Array of strings	Server list Minimum: **1** Maximum: **64** Array Length: **1 - 500**

Table 3-342 HostVulOperateInfo

Parameter	Mandatory	Type	Description
host_id	Yes	String	Server ID Minimum: **1** Maximum: **64**
vul_id_list	Yes	Array of strings	Vulnerability list Minimum: **1** Maximum: **64** Array Length: **1 - 500**

Table 3-343 custom_backup_hosts

Parameter	Mandatory	Type	Description
host_id	No	String	Host ID Minimum: **1** Maximum: **128**
vault_id	No	String	Vault ID Minimum: **1** Maximum: **128**
backup_name	No	String	Backup name Minimum: **1** Maximum: **64**

Response Parameters

None

Example Requests

Change the vulnerability status of the server whose ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f. Change the status of EulerOS-SA-2021-1894 to ignored.

```
{
  "operate_type" : "ignore",
  "data_list" : [ {
    "vul_id" : "EulerOS-SA-2021-1894",
    "host_id_list" : [ "71a15ecc-049f-4cca-bd28-5e90aca1817f" ]
  } ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Change the vulnerability status of the server whose ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f. Change the status of EulerOS-SA-2021-1894 to ignored.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class ChangeVulStatusSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ChangeVulStatusRequest request = new ChangeVulStatusRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        ChangeVulStatusRequestInfo body = new ChangeVulStatusRequestInfo();
        List<String> listDataListHostIdList = new ArrayList<>();
        listDataListHostIdList.add("71a15ecc-049f-4cca-bd28-5e90aca1817f");
        List<VulOperateInfo> listbodyDataList = new ArrayList<>();
```



```
        listbodyDataList.add(
            new VulOperateInfo()
                .withVulId("EulerOS-SA-2021-1894")
                .withHostIdList(listDataListHostIdList)
        );
        body.withDataList(listbodyDataList);
        body.withOperateType("ignore");
        request.withBody(body);
        try {
            ChangeVulStatusResponse response = client.changeVulStatus(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 vulnerability status of the server whose ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f. Change the status of EulerOS-SA-2021-1894 to ignored.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ChangeVulStatusRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        listHostIdListDataList = [
            "71a15ecc-049f-4cca-bd28-5e90aca1817f"
        ]
        listDataListbody = [
            VulOperateInfo(
                vul_id="EulerOS-SA-2021-1894",
                host_id_list=listHostIdListDataList
            )
        ]
        request.body = ChangeVulStatusRequestInfo(
            data_list=listDataListbody,
            operate_type="ignore"
        )
```



```
        response = client.change_vul_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 vulnerability status of the server whose ID is 71a15ecc-049f-4cca-bd28-5e90aca1817f. Change the status of EulerOS-SA-2021-1894 to ignored.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ChangeVulStatusRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    var listHostIdListDataList = []string{
        "71a15ecc-049f-4cca-bd28-5e90aca1817f",
    }
    var listDataListbody = []model.VulOperateInfo{
        {
            VulId: "EulerOS-SA-2021-1894",
            HostIdList: listHostIdListDataList,
        },
    }
    request.Body = &model.ChangeVulStatusRequestInfo{
        DataList: &listDataListbody,
        OperateType: "ignore",
    }
    response, err := client.ChangeVulStatus(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	successful response

Error Codes

See **Error Codes**.

3.11.4 Querying Vulnerability Information About a Server

Function

This API is used to query the vulnerability information about a server.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/vulnerability/host/{host_id}

Table 3-344 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Tenant project ID. Minimum: **1** Maximum: **256**
host_id	Yes	String	Server ID. Minimum: **1** Maximum: **128**

Table 3-345 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **0** Maximum: **256**
type	No	String	Vulnerability type. The default value is **linux_vul**. The options are as follows: • linux_vul: Linux vulnerability • windows_vul: Windows vulnerability -web_cms: Web-CMS vulnerability • app_vul: application vulnerability • urgent_vul: emergency vulnerability Minimum: **0** Maximum: **64**
vul_name	No	String	Vulnerability name Minimum: **0** Maximum: **256**
limit	No	Integer	Number of records displayed on each page. Minimum: **0** Maximum: **200** Default: **10**
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**. Minimum: **0** Maximum: **2000000** Default: **0**

Parameter	Mandatory	Type	Description
handle_status	No	String	Handling status. The options are as follows: - unhandled - handled Minimum: **1** Maximum: **32**
status	No	String	Vulnerability status. The options are as follows: • vul_status_unfix: not fixed • vul_status_ignored: ignored • vul_status_verified: verification in progress • vul_status_fixing: The fix is in progress. • vul_status_fixed: The fix succeeded. • vul_status_reboot : The issue is fixed and waiting for restart. • vul_status_failed: The issue failed to be fixed. • vul_status_fix_after_reboot: Restart the server and try again. Minimum: **1** Maximum: **32**
repair_priority	No	String	Fixing priority. The options are as follows: • Critical • High • Medium • Low Minimum: **1** Maximum: **10**

Request Parameters

Table 3-346 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**

Response Parameters

Status code: 200

Table 3-347 Response body parameters

Parameter	Type	Description
total_num	Long	Total Minimum: **0** Maximum: **2147483647**
data_list	Array of **HostVulInfo** objects	List of vulnerabilities on a server Array Length: **0 - 2147483647**

Table 3-348 HostVulInfo

Parameter	Type	Description
vul_name	String	Vulnerability name Minimum: **0** Maximum: **256**
vul_id	String	Vulnerability ID Minimum: **0** Maximum: **64**
label_list	Array of strings	Vulnerability tag list Minimum: **0** Maximum: **65534** Array Length: **0 - 2147483647**

Parameter	Type	Description
repair_necessity	String	Repair urgency. The options are as follows: • immediate_repair: The problem must be rectified as soon as possible. • delay_repair: The problem can be fixed later. • not_needed_repair: The problem does not need to be fixed. Minimum: **0** Maximum: **64**
scan_time	Long	Latest scan time Minimum: **0** Maximum: **9223372036854775807**
type	String	Vulnerability type. The options are as follows: -linux_vul: Linux vulnerability -windows_vul: windows vulnerability -web_cms: Web-CMS vulnerability -app_vul: application vulnerability Minimum: **0** Maximum: **128**
app_list	Array of **app_list** objects	List of software affected by the vulnerability on the server Array Length: **0 - 2147483647**
severity_level	String	Risk level. • Critical: The CVSS score of the vulnerability is greater than or equal to 9, corresponding to the high risk level on the console. • High: The CVSS score of the vulnerability is greater than or equal to 7 and less than 9, corresponding to the medium risk level on the console. • Medium: The CVSS score of the vulnerability is greater than or equal to 4 and less than 7, corresponding to the medium risk level on the console. • Low: The CVSS score of the vulnerability is less than 4, corresponding to the low risk level on the console. Minimum: **1** Maximum: **128**
solution_detail	String	Solution Minimum: **0** Maximum: **65534**

Parameter	Type	Description
url	String	URL Minimum: **0** Maximum: **2083**
description	String	Vulnerability description Minimum: **0** Maximum: **65534**
repair_cmd	String	Repair command Minimum: **1** Maximum: **256**
status	String	Vulnerability status • vul_status_unfix: not fixed • vul_status_ignored: ignored • vul_status_verified: verification in progress • vul_status_fixing: The fix is in progress. • vul_status_fixed: The fix succeeded. • vul_status_reboot : The issue is fixed and waiting for restart. • vul_status_failed: The issue failed to be fixed. • vul_status_fix_after_reboot: Restart the server and try again. Minimum: **1** Maximum: **128**
repair_success_num	Integer	Total times that the vulnerability is fixed by HSS on the entire network Minimum: **0** Maximum: **1000000**
cve_list	Array of **cve_list** objects	CVE list Array Length: **1 - 10000**
is_affect_business	Boolean	Whether services are affected
first_scan_time	Long	First scan time Minimum: **0** Maximum: **9223372036854775807**
app_name	String	Software Minimum: **0** Maximum: **256**

Parameter	Type	Description
app_version	String	Version Minimum: **0** Maximum: **256**
app_path	String	Software path Minimum: **0** Maximum: **512**
version	String	ECS quota Minimum: **0** Maximum: **128**
support_restore	Boolean	Indicates whether data can be rolled back to the backup created when the vulnerability was fixed.
disabled_operate_types	Array of **disabled_operate_types** objects	List of operation types of vulnerabilities that cannot be performed. Array Length: **1 - 10000**
repair_priority	String	Fixing priority. The options are as follows: • Critical • High • Medium • Low Minimum: **1** Maximum: **10**

Table 3-349 app_list

Parameter	Type	Description
app_name	String	Software Minimum: **0** Maximum: **256**
app_version	String	Software Version Minimum: **0** Maximum: **256**
upgrade_version	String	Version that the software with vulnerability needs to be upgraded to Minimum: **0** Maximum: **256**

Parameter	Type	Description
app_path	String	Path of the application software (This field is available only for application vulnerabilities.) Minimum: **1** Maximum: **512**

Table 3-350 cve_list

Parameter	Type	Description
cve_id	String	CVE ID Minimum: **1** Maximum: **32**
cvss	Float	CVSS score Minimum: **0** Maximum: **10**

Table 3-351 disabled_operate_types

Parameter	Type	Description
operate_type	String	Operation type. • ignore • not_ignore: unignore • immediate_repair: fix • manual_repair: • verify • add_to_whitelist: Minimum: **1** Maximum: **64**
reason	String	Indicates the reason why the operation cannot be performed. Minimum: **0** Maximum: **512**

Example Requests

Query the first 10 vulnerabilities on the server whose ID is xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx.

```
GET https://{endpoint}/v5/2b31ed520xxxxxxebedb6e57xxxxxxxx/vulnerability/host/xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx?offset=0&limit=10
```


Example Responses

Status code: 200

List of vulnerabilities on a server


```
{
  "data_list" : [ {
    "app_list" : [ {
      "app_name" : "Apache Log4j API(Apache Log4j API)",
      "app_version" : "2.8.2",
      "upgrade_version" : "2.8.3",
      "app_path" : "/CloudResetPwdUpdateAgent/lib/log4j-api-2.8.2.jar"
    }, {
      "app_name" : "Apache Log4j Core(Apache Log4j Core)",
      "app_version" : "2.8.2",
      "upgrade_version" : "2.8.3",
      "app_path" : "/CloudResetPwdUpdateAgent/lib/log4j-api-2.8.2.jar"
    } ],
    "app_name" : "Apache Log4j API(Apache Log4j API)",
    "app_path" : "/CloudResetPwdUpdateAgent/lib/log4j-api-2.8.2.jar",
    "app_version" : "2.8.2",
    "cve_list" : [ {
      "cve_id" : "CVE-2021-45046",
      "cvss" : 9
    } ],
    "description" : "It was found that the fix for address CVE-2021-44228 in Apache Log4j 2.15.0 was incomplete in some non-default configurations. This could allow attackers with control over Thread Context Map (MDC) input data when the logging configuration uses a non-default Pattern Layout with either a Context Lookup (for example, $${ctx:loginId}) or a Thread Context Map pattern (%X, %mdc, or %MDC) to craft malicious input data using a JNDI Lookup pattern, leading to information leakage and remote code execution in some environments. Log4j 2.16.0 (Java 8) and 2.12.2 (Java 7) fix this issue by removing support for the message search mode and disabling the JNDI function by default.",
    "first_scan_time" : 1688956612533,
    "is_affect_business" : true,
    "label_list" : [ ],
    "repair_necessity" : "Critical",
    "scan_time" : 1690469489713,
    "severity_level" : "Critical",
    "repair_cmd" : "yum update tcpdump",
    "solution_detail" : "The official fixing suggestions for this vulnerability have been released. You can visit the following website and fix the vulnerability accordingly:\nhttps://logging.apache.org/log4j/2.x/security.html\nFor details about the patch for this vulnerability, visit the following website:\nhttps://www.oracle.com/security-alerts/cpujan2022.html\nFor details about unofficial fixing suggestions for this vulnerability, visit the following website:\nhttp://www.openwall.com/lists/oss-security/2021/12/14/4\nhttps://www.intel.com/content/www/us/en/security-center/advisory/intel-sa-00646.html\nhttps://tools.cisco.com/security/center/content/CiscoSecurityAdvisory/cisco-sa-apache-log4j-qRuKNEbd\nhttp://www.openwall.com/lists/oss-security/2021/12/15/3\nhttps://cert-portal.siemens.com/productcert/pdf/ssa-661247.pdf\nhttps://www.kb.cert.org/vuls/id/930724\nhttps://cert-portal.siemens.com/productcert/pdf/ssa-714170.pdf\nhttps://www.debian.org/security/2021/dsa-5022\nhttps://www.oracle.com/security-alerts/alert-cve-2021-44228.html\nhttps://psirt.global.sonicwall.com/vuln-detail/SNWLID-2021-0032\nhttp://www.openwall.com/lists/oss-security/2021/12/18/1\nhttps://cert-portal.siemens.com/productcert/pdf/ssa-397453.pdf\nhttps://cert-portal.siemens.com/productcert/pdf/ssa-479842.pdf\nhttps://lists.fedoraproject.org/archives/list/package-announce@lists.fedoraproject.org/message/EOKPQGV24RRBBI4TBZUDQMM4MEH7MXCY/\nhttps://lists.fedoraproject.org/archives/list/package-announce@lists.fedoraproject.org/message/SIG7FZULMNK2XF6FZRU4VWYDQXNMUGAJ/\nThe vulnerability exploitation/POC of this vulnerability has been exposed. You can verify the vulnerability by referring to the following links:\nhttps://github.com/X1pe0/Log4J-Scan-Win\nhttps://github.com/cckuailong/Log4j_CVE-2021-45046\nhttps://github.com/BobTheShoplifter/CVE-2021-45046-Info\nhttps://github.com/tejas-nagchandi/CVE-2021-45046\nhttps://github.com/pravin-pp/log4j2-CVE-2021-45046\nhttps://github.com/mergebase/log4j-samples\nhttps://github.com/lukepasek/log4jjndilookupremove\nhttps://github.com/ludy-dev/cve-2021-45046\nhttps://github.com/lijiejie/log4j2_vul_local_scanner\nhttps://github.com/CaptanMoss/Log4Shell-Sandbox-Signature\nhttps://github.com/taise-hub/log4j-poc",
    "status" : "vul_status_unfix",
    "type" : "app_vul",
    "url" : "[\"https://www.oracle.com/security-alerts/cpujan2022.html\"]",
    "version" : "hss.version.wtp",
    "vul_id" : "HCVD-APP-CVE-2021-45046",
    "vul_name" : "CVE-2021-45046",
```



```
    "repair_success_num" : 3,
    "support_restore" : true,
    "disabled_operate_types" : [ {
      "operate_type" : "immediate_repair",
      "reason" : "The kernel vulnerability of CCE container node cannot be automatically fixed."
    } ]
  } ],
  "total_num" : 31
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListHostVulsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListHostVulsRequest request = new ListHostVulsRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withType("<type>");
        request.withVulName("<vul_name>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withHandleStatus("<handle_status>");
        request.withStatus("<status>");
        request.withRepairPriority("<repair_priority>");
        try {
            ListHostVulsResponse response = client.listHostVuls(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
```



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

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListHostVulsRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.type = "<type>"
        request.vul_name = "<vul_name>"
        request.limit = <limit>
        request.offset = <offset>
        request.handle_status = "<handle_status>"
        request.status = "<status>"
        request.repair_priority = "<repair_priority>"
        response = client.list_host_vuls(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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



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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListHostVulsRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    typeRequest:= "<type>"
    request.Type = &typeRequest
    vulNameRequest:= "<vul_name>"
    request.VulName = &vulNameRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    handleStatusRequest:= "<handle_status>"
    request.HandleStatus = &handleStatusRequest
    statusRequest:= "<status>"
    request.Status = &statusRequest
    repairPriorityRequest:= "<repair_priority>"
    request.RepairPriority = &repairPriorityRequest
    response, err := client.ListHostVuls(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	List of vulnerabilities on a server

Error Codes

See **Error Codes**.

3.11.5 Creating a Vulnerability Scan Task

Function

This API is used to create a vulnerability scan task.

Calling Method

For details, see **Calling APIs**.

URI

POST /v5/{project_id}/vulnerability/scan-task

Table 3-352 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. Minimum: **20** Maximum: **64**

Table 3-353 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID of the tenant Minimum: **0** Maximum: **64**

Request Parameters

Table 3-354 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling an IAM API. The value of X-Subject-Token in the response header is the user token. Minimum: **32** Maximum: **2097152**

Table 3-355 Request body parameters

Parameter	Mandatory	Type	Description
manual_scan_type	No	Array of strings	Operation type. The options are as follows: -linux_vul: Linux vulnerability -windows_vul: windows vulnerability -web_cms: Web-CMS vulnerability -app_vul: application vulnerability -urgent_vul: emergency vulnerability Array Length: **1 - 200**
batch_flag	No	Boolean	Specifies whether the operation is performed in batches. If the value is true, all supported servers are scanned.
range_type	No	String	Range of servers to be scanned. The options are as follows: -all_host: Scan all servers. You do not need to set agent_id_list for this type. -specific_host: Minimum: **0** Maximum: **32**
agent_id_list	No	Array of strings	Server list Minimum: **0** Maximum: **32** Array Length: **1 - 200**

Parameter	Mandatory	Type	Description
urgent_vul_id_list	No	Array of strings	Scan all ID list of emergency vulnerabilities. If this parameter is left blank, all emergency vulnerabilities are scanned. Its value can be: URGENT-CVE-2023-46604 Apache ActiveMQ Remote Code Execution Vulnerability URGENT-HSSVD-2020-1109 Elasticsearch Unauthorized Access Vulnerability URGENT-CVE-2022-26134 Atlassian Confluence OGNL Remote Code Execution Vulnerability (Cve-2022-26134) URGENT-CVE-2023-22515 Atlassian Confluence Data Center and Server Privilege Escalation Vulnerability (CVE-2023-22515) URGENT-CVE-2023-22518 Atlassian Confluence Data Center & Server Inappropriate Authorization Mechanism Vulnerability (CVE-2023-22518) URGENT-CVE-2023-28432 MinIO Information Disclosure Vulnerability (CVE-2023-28432) URGENT-CVE-2023-37582 Apache RocketMQ Remote Code Execution Vulnerability (CVE-2023-37582) URGENT-CVE-2023-33246 Apache RocketMQ Remote Code Execution Vulnerability (CVE-2023-33246) URGENT-CNVD-2023-02709 ZENTAO Project Management System Remote Command Execution Vulnerability (CNVD-2023-02709) URGENT-CVE-2022-36804 Atlassian Bitbucket Server and Data Center Command Injection Vulnerability (CVE-2022-36804) URGENT-CVE-2022-22965 Spring Framework JDK >= 9 Remote

Parameter	Mandatory	Type	Description
			Code Execution Vulnerability URGENT-CVE-2022-25845 fastjson <1.2.83 Remote Code Execution Vulnerability URGENT-CVE-2019-14439 Jackson-databind Remote Command Execution Vulnerability (CVE-2019-14439) URGENT-CVE-2020-13933 Apache Shiro Authentication Bypass Vulnerability (CVE-2020-13933) URGENT-CVE-2020-26217 XStream < 1.4.14 Remote Code Execution Vulnerability (CVE-2020-26217) URGENT-CVE-2021-4034 Linux Polkit Privilege Escalation Vulnerability (CVE-2021-4034) URGENT-CVE-2021-44228 Apache Log4j2 Remote Code Execution Vulnerability (CVE-2021-44228 and CVE-2021-45046) URGENT-CVE-2022-0847 Dirty Pipe - Linux Kernel Local Privilege Escalation Vulnerability (CVE-2022-0847) Minimum: **0** Maximum: **32** Array Length: **1 - 200**

Response Parameters

Status code: 200

Table 3-356 Response body parameters

Parameter	Type	Description
task_id	String	Detection task ID Minimum: **0** Maximum: **32**

Example Requests

Create an emergency vulnerability detection task whose agent_id is 0253edfd-30e7-439d-8f3f-17c54c997064 and vulnerability ID list is urgent_vul_id_list.

```
POST https://{endpoint}/v5/{project_id}/vulnerability/scan-task?enterprise_project_id=XXX

{
  "manual_scan_type" : "urgent_vul",
  "batch_flag" : false,
  "range_type" : "specific_host",
  "agent_id_list" : [ "0253edfd-30e7-439d-8f3f-17c54c997064" ],
  "urgent_vul_id_list" : [ "URGENT-CVE-2023-46604", "URGENT-HSSVD-2020-1109", "URGENT-CVE-2022-26134", "URGENT-CVE-2023-22515", "URGENT-CVE-2023-22518", "URGENT-CVE-2023-28432", "URGENT-CVE-2023-37582", "URGENT-CVE-2023-33246", "URGENT-CNVD-2023-02709", "URGENT-CVE-2022-36804", "URGENT-CVE-2022-22965", "URGENT-CVE-2022-25845", "URGENT-CVE-2019-14439", "URGENT-CVE-2020-13933", "URGENT-CVE-2020-26217", "URGENT-CVE-2021-4034", "URGENT-CVE-2021-44228", "URGENT-CVE-2022-0847" ]
}
```

Example Responses

Status code: 200

Succeeded in manually detecting vulnerabilities

```
{
  "task_id" : "d8a12cf7-6a43-4cd6-92b4-aabf1e917"
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Create an emergency vulnerability detection task whose agent_id is 0253edfd-30e7-439d-8f3f-17c54c997064 and vulnerability ID list is urgent_vul_id_list.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class CreateVulnerabilityScanTaskSolution {

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



```
        String sk = System.getenv("CLOUD_SDK_SK");

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        CreateVulnerabilityScanTaskRequest request = new CreateVulnerabilityScanTaskRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        ManualVulScanRequestInfo body = new ManualVulScanRequestInfo();
        List<String> listbodyUrgentVulIdList = new ArrayList<>();
        listbodyUrgentVulIdList.add("URGENT-CVE-2023-46604");
        listbodyUrgentVulIdList.add("URGENT-HSSVD-2020-1109");
        listbodyUrgentVulIdList.add("URGENT-CVE-2022-26134");
        listbodyUrgentVulIdList.add("URGENT-CVE-2023-22515");
        listbodyUrgentVulIdList.add("URGENT-CVE-2023-22518");
        listbodyUrgentVulIdList.add("URGENT-CVE-2023-28432");
        listbodyUrgentVulIdList.add("URGENT-CVE-2023-37582");
        listbodyUrgentVulIdList.add("URGENT-CVE-2023-33246");
        listbodyUrgentVulIdList.add("URGENT-CNVD-2023-02709");
        listbodyUrgentVulIdList.add("URGENT-CVE-2022-36804");
        listbodyUrgentVulIdList.add("URGENT-CVE-2022-22965");
        listbodyUrgentVulIdList.add("URGENT-CVE-2022-25845");
        listbodyUrgentVulIdList.add("URGENT-CVE-2019-14439");
        listbodyUrgentVulIdList.add("URGENT-CVE-2020-13933");
        listbodyUrgentVulIdList.add("URGENT-CVE-2020-26217");
        listbodyUrgentVulIdList.add("URGENT-CVE-2021-4034");
        listbodyUrgentVulIdList.add("URGENT-CVE-2021-44228");
        listbodyUrgentVulIdList.add("URGENT-CVE-2022-0847");
        List<String> listbodyAgentIdList = new ArrayList<>();
        listbodyAgentIdList.add("0253edfd-30e7-439d-8f3f-17c54c997064");
        body.withUrgentVulIdList(listbodyUrgentVulIdList);
        body.withAgentIdList(listbodyAgentIdList);
        body.withRangeType("specific_host");
        body.withBatchFlag(false);
        request.withBody(body);
        try {
            CreateVulnerabilityScanTaskResponse response = client.createVulnerabilityScanTask(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

Create an emergency vulnerability detection task whose agent_id is 0253edfd-30e7-439d-8f3f-17c54c997064 and vulnerability ID list is urgent_vul_id_list.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *
```



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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = CreateVulnerabilityScanTaskRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        listUrgentVulIdListbody = [
            "URGENT-CVE-2023-46604",
            "URGENT-HSSVD-2020-1109",
            "URGENT-CVE-2022-26134",
            "URGENT-CVE-2023-22515",
            "URGENT-CVE-2023-22518",
            "URGENT-CVE-2023-28432",
            "URGENT-CVE-2023-37582",
            "URGENT-CVE-2023-33246",
            "URGENT-CNVD-2023-02709",
            "URGENT-CVE-2022-36804",
            "URGENT-CVE-2022-22965",
            "URGENT-CVE-2022-25845",
            "URGENT-CVE-2019-14439",
            "URGENT-CVE-2020-13933",
            "URGENT-CVE-2020-26217",
            "URGENT-CVE-2021-4034",
            "URGENT-CVE-2021-44228",
            "URGENT-CVE-2022-0847"
        ]
        listAgentIdListbody = [
            "0253edfd-30e7-439d-8f3f-17c54c997064"
        ]
        request.body = ManualVulScanRequestInfo(
            urgent_vul_id_list=listUrgentVulIdListbody,
            agent_id_list=listAgentIdListbody,
            range_type="specific_host",
            batch_flag=False
        )
        response = client.create_vulnerability_scan_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

Create an emergency vulnerability detection task whose agent_id is 0253edfd-30e7-439d-8f3f-17c54c997064 and vulnerability ID list is urgent_vul_id_list.

```
package main

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



```
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.CreateVulnerabilityScanTaskRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    var listUrgentVulIdListbody = []string{
        "URGENT-CVE-2023-46604",
        "URGENT-HSSVD-2020-1109",
        "URGENT-CVE-2022-26134",
        "URGENT-CVE-2023-22515",
        "URGENT-CVE-2023-22518",
        "URGENT-CVE-2023-28432",
        "URGENT-CVE-2023-37582",
        "URGENT-CVE-2023-33246",
        "URGENT-CNVD-2023-02709",
        "URGENT-CVE-2022-36804",
        "URGENT-CVE-2022-22965",
        "URGENT-CVE-2022-25845",
        "URGENT-CVE-2019-14439",
        "URGENT-CVE-2020-13933",
        "URGENT-CVE-2020-26217",
        "URGENT-CVE-2021-4034",
        "URGENT-CVE-2021-44228",
        "URGENT-CVE-2022-0847",
    }
    var listAgentIdListbody = []string{
        "0253edfd-30e7-439d-8f3f-17c54c997064",
    }
    rangeTypeManualVulScanRequestInfo:= "specific_host"
    batchFlagManualVulScanRequestInfo:= false
    request.Body = &model.ManualVulScanRequestInfo{
        UrgentVulIdList: &listUrgentVulIdListbody,
        AgentIdList: &listAgentIdListbody,
        RangeType: &rangeTypeManualVulScanRequestInfo,
        BatchFlag: &batchFlagManualVulScanRequestInfo,
    }
    response, err := client.CreateVulnerabilityScanTask(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	Succeeded in manually detecting vulnerabilities

Error Codes

See **Error Codes**.

3.11.6 Querying a Vulnerability Scan Policy

Function

This API is used to query a vulnerability scan policy.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/vulnerability/scan-policy

Table 3-357 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Tenant project ID Minimum: **1** Maximum: **256**

Table 3-358 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **0** Maximum: **256**

Request Parameters

Table 3-359 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling an IAM API. The value of X-Subject-Token in the response header is the user token. Minimum: **1** Maximum: **32768**

Response Parameters

Status code: 200

Table 3-360 Response body parameters

Parameter	Type	Description
scan_period	String	Scan period • one_day • three_day • one_week Minimum: **1** Maximum: **32**
scan_vul_types	Array of strings	List of scanned vulnerability types Minimum: **0** Maximum: **32** Array Length: **0 - 2147483647**

Parameter	Type	Description
scan_range_type	String	Range of hosts to be scanned. The options are as follows: -all_host -specific_host Minimum: **0** Maximum: **32**
host_ids	Array of strings	Specifies the host ID list. When scan_range_type is set to specific_host, this parameter indicates the list of hosts to be scanned. Minimum: **1** Maximum: **128** Array Length: **0 - 20000**
total_host_num	Long	Total number of hosts that can be scanned for vulnerabilities Minimum: **0** Maximum: **20000**
status	String	Scan policy status. The options are as follows: -open: enabled -close: disabled Minimum: **0** Maximum: **32**

Example Requests

Query the vulnerability scan policy whose project_id is 2b31ed520xxxxxxebedb6e57xxxxxxxx.

```
GET https://{endpoint}/v5/2b31ed520xxxxxxebedb6e57xxxxxxxx/vulnerability/scan-policy
```

Example Responses

Status code: 200

Vulnerability scan policy

```
{
  "scan_period" : "one_day",
  "scan_vul_types" : [ "linux_vul" ],
  "scan_range_type" : "specific_host",
  "host_ids" : [ "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx" ],
  "total_host_num" : 5,
  "status" : "open"
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ShowVulScanPolicySolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowVulScanPolicyRequest request = new ShowVulScanPolicyRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        try {
            ShowVulScanPolicyResponse response = client.showVulScanPolicy(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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



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

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

    try:
        request = ShowVulScanPolicyRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        response = client.show_vul_scan_policy(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowVulScanPolicyRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    response, err := client.ShowVulScanPolicy(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	Vulnerability scan policy

Error Codes

See **Error Codes**.

3.11.7 Modifying a Vulnerability Scan Policy

Function

This API is used to modify a vulnerability scan policy.

Calling Method

For details, see **Calling APIs**.

URI

PUT /v5/{project_id}/vulnerability/scan-policy

Table 3-361 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Tenant project ID Minimum: **1** Maximum: **256**

Table 3-362 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. Note: The vulnerability scan policy affects the scan behavior of all servers under the tenant. Therefore, this parameter must be set to all_granted_eps if the multi-enterprise project is enabled. Default: **0** Minimum: **0** Maximum: **256**

Request Parameters

Table 3-363 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling an IAM API. The value of X-Subject-Token in the response header is the user token. Minimum: **1** Maximum: **32768**

Table 3-364 Request body parameters

Parameter	Mandatory	Type	Description
scan_period	Yes	String	Scan period • one_day • three_day • one_week Minimum: **1** Maximum: **32**
scan_range_type	Yes	String	Range of hosts to be scanned. The options are as follows: -all_host -specific_host Minimum: **0** Maximum: **32**

Parameter	Mandatory	Type	Description
host_ids	No	Array of strings	Specifies the host ID list. This parameter is mandatory when scan_range_type is set to specific_host. Minimum: **1** Maximum: **128** Array Length: **0 - 20000**
scan_vul_types	No	Array of strings	List of scanned vulnerability types Minimum: **0** Maximum: **32** Array Length: **0 - 2147483647**
status	Yes	String	Scan policy status. The options are as follows: -open: enabled -close: disabled Minimum: **0** Maximum: **32**

Response Parameters

None

Example Requests

Modify a vulnerability scan policy. The scan period is daily, scan scope is specified host, host ID is xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx, and policy status is enabled.

```
PUT https://{endpoint}/v5/2b31ed520xxxxxxebedb6e57xxxxxxxx/vulnerability/scan-policy?
enterprise_project_id=all_granted_eps

{
  "scan_period" : "one_day",
  "scan_range_type" : "specific_host",
  "host_ids" : [ "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx" ],
  "status" : "open"
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Modify a vulnerability scan policy. The scan period is daily, scan scope is specified host, host ID is xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx, and policy 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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class ChangeVulScanPolicySolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ChangeVulScanPolicyRequest request = new ChangeVulScanPolicyRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        ChangeVulScanPolicyRequestInfo body = new ChangeVulScanPolicyRequestInfo();
        List<String> listbodyHostIds = new ArrayList<>();
        listbodyHostIds.add("xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx");
        body.withStatus("open");
        body.withHostIds(listbodyHostIds);
        body.withScanRangeType("specific_host");
        body.withScanPeriod("one_day");
        request.withBody(body);
        try {
            ChangeVulScanPolicyResponse response = client.changeVulScanPolicy(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

Modify a vulnerability scan policy. The scan period is daily, scan scope is specified host, host ID is xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx, and policy status is enabled.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ChangeVulScanPolicyRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        listHostIdsbody = [
            "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"
        ]
        request.body = ChangeVulScanPolicyRequestInfo(
            status="open",
            host_ids=listHostIdsbody,
            scan_range_type="specific_host",
            scan_period="one_day"
        )
        response = client.change_vul_scan_policy(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

Modify a vulnerability scan policy. The scan period is daily, scan scope is specified host, host ID is xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx, and policy status is enabled.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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



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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ChangeVulScanPolicyRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    var listHostIdsbody = []string{
        "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx",
    }
    request.Body = &model.ChangeVulScanPolicyRequestInfo{
        Status: "open",
        HostIds: &listHostIdsbody,
        ScanRangeType: "specific_host",
        ScanPeriod: "one_day",
    }
    response, err := client.ChangeVulScanPolicy(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	successful response

Error Codes

See **Error Codes**.

3.11.8 Querying the Vulnerability Scan Tasks

Function

This API is used to query the vulnerability scan tasks.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/vulnerability/scan-tasks

Table 3-365 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Tenant project ID. Minimum: **1** Maximum: **256**

Table 3-366 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to all_granted_eps. Default: **0** Minimum: **0** Maximum: **256**
limit	No	Integer	Number of records displayed on each page. Minimum: **0** Maximum: **200** Default: **10**
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**. Minimum: **0** Maximum: **2000000** Default: **0**
scan_type	No	String	Type of a scan task. The options are as follows: -manual -schedule Minimum: **0** Maximum: **32**

Parameter	Mandatory	Type	Description
task_id	No	String	Scan task ID. Minimum: **0** Maximum: **32**
min_start_time	No	Long	Minimum start time of a scan task. Minimum: **0** Maximum: **9999999999999**
max_start_time	No	Long	Maximum start time of a scan task. Minimum: **0** Maximum: **9999999999999**

Request Parameters

Table 3-367 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling an IAM API. The value of X-Subject-Token in the response header is the user token. Minimum: **1** Maximum: **32768**

Response Parameters

Status code: 200

Table 3-368 Response body parameters

Parameter	Type	Description
total_num	Long	Total number Minimum: **0** Maximum: **2147483647**
data_list	Array of **VulScanTaskInfo** objects	Vulnerability scan tasks Array Length: **0 - 2147483647**

Table 3-369 VulScanTaskInfo

Parameter	Type	Description
id	String	Task ID Minimum: **1** Maximum: **256**
scan_type	String	Type of a scan task. The options are as follows: -manual -schedule Minimum: **0** Maximum: **128**
start_time	Long	Start time of a scan task. Minimum: **0** Maximum: **2147483647**
end_time	Long	End time of a scan task. Minimum: **0** Maximum: **2147483647**
scan_vul_types	Array of strings	List of vulnerability types scanned by the task Minimum: **1** Maximum: **32** Array Length: **1 - 2147483647**
status	String	Execution status of a scan task. The options are as follows: -running -finished Minimum: **1** Maximum: **32**
scanning_host_num	Integer	Number of servers are being scanned Minimum: **0** Maximum: **2147483647**
success_host_num	Integer	Number of servers have been successfully scanned Minimum: **0** Maximum: **2147483647**
failed_host_num	Integer	Number of servers fail to be scanned Minimum: **0** Maximum: **2147483647**

Example Requests

Query information about the vulnerability scan task whose type is manual scan and task_id is 195db604-2008-4e8b-a49e-389ab0175beb. By default, 10 records on the first page are queried.


```
GET https://{endpoint}/v5/{project_id}/vulnerability/scan-tasks?offset=0&limit=10&enterprise_project_id=XXX

{
  "scan_type" : "manual",
  "task_id" : "195db604-2008-4e8b-a49e-389ab0175beb"
}
```

Example Responses

Status code: 200

Vulnerability scan tasks

```
{
  "total_num" : 10,
  "data_list" : [ {
    "id" : "2b31ed520xxxxxxebedb6e57xxxxxxxx",
    "scan_type" : "manual",
    "start_time" : 1679042408195,
    "end_time" : 1679042408295,
    "scan_vul_types" : [ "linux_vul" ],
    "status" : "running",
    "scanning_host_num" : 1,
    "success_host_num" : 1,
    "failed_host_num" : 1
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Query information about the vulnerability scan task whose type is manual scan and task_id is 195db604-2008-4e8b-a49e-389ab0175beb. By default, 10 records on the first page are queried.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListVulScanTaskSolution {

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

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

        HssClient client = HssClient.newBuilder()
```



```
            .withCredential(auth)
            .withRegion(HssRegion.valueOf("<YOUR REGION>"))
            .build();
        ListVulScanTaskRequest request = new ListVulScanTaskRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withScanType("<scan_type>");
        request.withTaskId("<task_id>");
        request.withMinStartTime(<min_start_time>L);
        request.withMaxStartTime(<max_start_time>L);
        try {
            ListVulScanTaskResponse response = client.listVulScanTask(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 information about the vulnerability scan task whose type is manual scan and task_id is 195db604-2008-4e8b-a49e-389ab0175beb. By default, 10 records on the first page are queried.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListVulScanTaskRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.limit = <limit>
        request.offset = <offset>
        request.scan_type = "<scan_type>"
        request.task_id = "<task_id>"
        request.min_start_time = <min_start_time>
        request.max_start_time = <max_start_time>
        response = client.list_vul_scan_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

Query information about the vulnerability scan task whose type is manual scan and task_id is 195db604-2008-4e8b-a49e-389ab0175beb. By default, 10 records on the first page are queried.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListVulScanTaskRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    scanTypeRequest:= "<scan_type>"
    request.ScanType = &scanTypeRequest
    taskIdRequest:= "<task_id>"
    request.TaskId = &taskIdRequest
    minStartTimeRequest:= int64(<min_start_time>)
    request.MinStartTime = &minStartTimeRequest
    maxStartTimeRequest:= int64(<max_start_time>)
    request.MaxStartTime = &maxStartTimeRequest
    response, err := client.ListVulScanTask(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	Vulnerability scan tasks

Error Codes

See **Error Codes**.

3.11.9 Querying the List of Servers Corresponding to a Vulnerability Scan Task

Function

This API is used to query the list of servers corresponding to a vulnerability scan task.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/vulnerability/scan-task/{task_id}/hosts

Table 3-370 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Tenant project ID Minimum: **1** Maximum: **256**
task_id	Yes	String	Task ID Minimum: **1** Maximum: **256**

Table 3-371 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **0** Maximum: **256**
limit	No	Integer	Number of records displayed on each page. Minimum: **0** Maximum: **200** Default: **10**
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**. Minimum: **0** Maximum: **2000000** Default: **0**
scan_status	No	String	Scan status of the server. The options are as follows: • scanning • success • failed Minimum: **0** Maximum: **32**

Request Parameters

Table 3-372 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling an IAM API. The value of X-Subject-Token in the response header is the user token. Minimum: **1** Maximum: **32768**

Response Parameters

Status code: 200

Table 3-373 Response body parameters

Parameter	Type	Description
total_num	Long	Total number Minimum: **0** Maximum: **2147483647**
data_list	Array of **VulScanTaskHostInfo** objects	Indicates the list of servers corresponding to a vulnerability scan task. Array Length: **0 - 2147483647**

Table 3-374 VulScanTaskHostInfo

Parameter	Type	Description
host_id	String	Server ID Minimum: **1** Maximum: **128**
host_name	String	Server name Minimum: **0** Maximum: **128**
public_ip	String	EIP Minimum: **0** Maximum: **128**
private_ip	String	Private IP address Minimum: **0** Maximum: **128**
asset_value	String	Asset importance. The options are as follows: • important • common • test Minimum: **0** Maximum: **128**
scan_status	String	Scan status of the server. The options are as follows: -scanning -success -failed: Minimum: **0** Maximum: **32**

Parameter	Type	Description
failed_reasons	Array of failed_reasons objects	List of scan failure causes Array Length: **0 - 2147483647**

Table 3-375 failed_reasons

Parameter	Type	Description
vul_type	String	Type of the vulnerability that fails to be scanned. The options are as follows: -linux_vul: Linux vulnerability -windows_vul: windows vulnerability -web_cms: Web-CMS vulnerability -app_vul: application vulnerability Minimum: **1** Maximum: **32**
failed_reason	String	Cause of the scanning failure. Minimum: **0** Maximum: **128**

Example Requests

This API is used to query details of vulnerability scan task whose ID is 2b31ed520xxxxxxebedb6e57xxxxxxxx. The list of failed servers and failure causes are displayed. By default, 10 servers on the first page are queried.

```
GET https://{endpoint}/v5/{project_id}/vulnerability/scan-task/{task_id}/hosts?
offset=0&limit=10&scan_status=failed&enterprise_project_id=XXX

{
  "scan_status" : "failed",
  "task_id" : "2b31ed520xxxxxxebedb6e57xxxxxxxx"
}
```

Example Responses

Status code: 200

Indicates the list of servers corresponding to a vulnerability scan task.

```
{
  "total_num" : 1,
  "data_list" : [ {
    "host_id" : "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx",
    "host_name" : "ecs-ubuntu-abc123",
    "public_ip" : "112.10.10.3",
    "private_ip" : "192.168.10.1",
    "asset_value" : "important",
    "scan_status" : "failed",
    "failed_reasons" : [ {
      "vul_type" : "linux_vul",
      "failed_reason" : "this_is_failed_reason"
```



```
  } ]
 } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

This API is used to query details of vulnerability scan task whose ID is 2b31ed520xxxxxxebedb6e57xxxxxxxx. The list of failed servers and failure causes are displayed. By default, 10 servers on the first page are queried.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListVulScanTaskHostSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListVulScanTaskHostRequest request = new ListVulScanTaskHostRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withScanStatus("<scan_status>");
        try {
            ListVulScanTaskHostResponse response = client.listVulScanTaskHost(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

This API is used to query details of vulnerability scan task whose ID is 2b31ed520xxxxxxebedb6e57xxxxxxxx. The list of failed servers and failure causes are displayed. By default, 10 servers on the first page are queried.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListVulScanTaskHostRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.limit = <limit>
        request.offset = <offset>
        request.scan_status = "<scan_status>"
        response = client.list_vul_scan_task_host(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

This API is used to query details of vulnerability scan task whose ID is 2b31ed520xxxxxxebedb6e57xxxxxxxx. The list of failed servers and failure causes are displayed. By default, 10 servers on the first page are queried.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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



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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListVulScanTaskHostRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    scanStatusRequest:= "<scan_status>"
    request.ScanStatus = &scanStatusRequest
    response, err := client.ListVulScanTaskHost(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	Indicates the list of servers corresponding to a vulnerability scan task.

Error Codes

See **Error Codes**.

3.11.10 Querying Vulnerability Management Statistics

Function

This API is used to query vulnerability management statistics.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/vulnerability/statistics

Table 3-376 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Tenant project ID Minimum: **1** Maximum: **256**

Table 3-377 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. To query all enterprise projects, set this parameter to **all_granted_eps**. Default: **0** Minimum: **0** Maximum: **256**

Request Parameters

Table 3-378 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **1** Maximum: **32768**

Response Parameters

Status code: 200

Table 3-379 Response body parameters

Parameter	Type	Description
need_urgent_repair	Integer	Number of vulnerabilities that need to be fixed urgently Minimum: **0** Maximum: **2147483647**
unrepair	Integer	Number of vulnerabilities not fixed Minimum: **0** Maximum: **2147483647**
existed_vul_hosts	Integer	Number of servers with vulnerabilities Minimum: **0** Maximum: **2147483647**
today_handle	Integer	Vulnerabilities handled today Minimum: **0** Maximum: **2147483647**
all_handle	Integer	Total handled vulnerabilities Minimum: **0** Maximum: **2147483647**
supported	Integer	Supported vulnerabilities Minimum: **0** Maximum: **2147483647**
vul_library_update_time	Long	Vulnerability library updated Minimum: **0** Maximum: **9223372036854775807**

Example Requests

Query vulnerability statistics whose project_id is 2b31ed520xxxxxxebedb6e57xxxxxxxx.

```
GET https://{endpoint}/v5/2b31ed520xxxxxxebedb6e57xxxxxxxx/vulnerability/statistics
```

Example Responses

Status code: 200

Vulnerability statistics

```
{
  "need_urgent_repair" : 22,
  "unrepair" : 23,
  "existed_vul_hosts" : 33,
  "today_handle" : 77,
  "all_handle" : 44,
```



```
  "supported" : 78,
  "vul_library_update_time" : 1692170925188
}
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ShowVulStaticsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ShowVulStaticsRequest request = new ShowVulStaticsRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        try {
            ShowVulStaticsResponse response = client.showVulStatics(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
```



```
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ShowVulStaticsRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        response = client.show_vul_statics(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"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ShowVulStaticsRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    response, err := client.ShowVulStatics(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	Vulnerability statistics

Error Codes

See **Error Codes**.

3.12 Web Tamper Protection

3.12.1 Querying the Protection List

Function

This API is used to query the protection list.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/webtamper/hosts

Table 3-380 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **0** Maximum: **64**

Table 3-381 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID Minimum: **0** Maximum: **64**
host_name	No	String	Server name Minimum: **0** Maximum: **256**
host_id	No	String	Host ID Minimum: **0** Maximum: **128**
public_ip	No	String	EIP Minimum: **0** Maximum: **128**
private_ip	No	String	Private IP address Minimum: **0** Maximum: **128**
group_name	No	String	Server group name Minimum: **0** Maximum: **256**
os_type	No	String	OS type. Its value can be: • linux • windows Minimum: **0** Maximum: **32**
protect_status	No	String	Protection status. • closed: disabled • opened: protection enabled Minimum: **0** Maximum: **32**
agent_status	No	String	Agent status. Its value can be: • not_installed: The agent is not installed. • online: The agent is online. • offline: The agent is offline. Minimum: **0** Maximum: **32**

Parameter	Mandatory	Type	Description
limit	No	Integer	Default value: 10 Minimum: **10** Maximum: **100** Default: **10**
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**. Minimum: **0** Maximum: **100** Default: **0**

Request Parameters

Table 3-382 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region Id Minimum: **0** Maximum: **32**

Response Parameters

Status code: 200

Table 3-383 Response body parameters

Parameter	Type	Description
data_list	Array of **WtpProtectHostResponseInfo** objects	data list Array Length: **0 - 200000**
total_num	Integer	total number of WTP protected servers Minimum: **0** Maximum: **65535**

Table 3-384 WtpProtectHostResponseInfo

Parameter	Type	Description
host_name	String	Server name Minimum: **0** Maximum: **256**
host_id	String	Host ID Minimum: **0** Maximum: **128**
public_ip	String	EIP Minimum: **0** Maximum: **128**
private_ip	String	Private IP address Minimum: **0** Maximum: **128**
ipv6	String	Private IPv6 address Minimum: **0** Maximum: **256**
group_name	String	Server group name Minimum: **0** Maximum: **256**
os_bit	String	OS bit version Minimum: **0** Maximum: **8**
os_type	String	OS (linux or windows) Minimum: **0** Maximum: **32**

Parameter	Type	Description
protect_status	String	Protection status. Its value can be: • closed • opened Minimum: **0** Maximum: **32**
rasp_protect_status	String	Dynamic WTP status. • closed • opened Minimum: **0** Maximum: **32**
anti_tampering_times	Long	Number of blocked tampering attacks Minimum: **0** Maximum: **2000000000**
detect_tampering_times	Long	Number of detected tampering attacks Minimum: **0** Maximum: **2000000000**
last_detect_time	Long	Latest detection time (ms) Minimum: **0** Maximum: **4070880000000**
scheduled_shutdown_status	String	Status of scheduled protection. • opened • closed Minimum: **0** Maximum: **32**
agent_status	String	Agent status. • not_installed: The agent is not installed. • online: The agent is online. • offline: The agent is offline. Minimum: **0** Maximum: **32**

Example Requests

This API is used to query the 10 records on the first page of WTP status list of servers whose status is enabled and enterprise project ID is XX by default.

```
GET https://{endpoint}/v5/{project_id}/webtamper/hosts?
offset=XX&limit=XX&protect_status=opened&enterprise_project_id=XX
```



```
{
  "protect_status" : "opened"
}
```

Example Responses

Status code: 200

OK

```
{
  "total_num" : 1,
  "data_list" : [ {
    "host_name" : "test",
    "host_id" : "000411f9-42a7-4acd-80e6-f7b9d3db895f",
    "public_ip" : "",
    "private_ip" : "192.168.0.70,fe80::f816:3eff:fed4:c4d7",
    "ipv6" : "fe80::f816:3eff:fed4:c4d7",
    "group_name" : "testGroup",
    "os_bit" : "64",
    "os_type" : "Linux",
    "protect_status" : "opened",
    "rasp_protect_status" : "opened",
    "anti_tampering_times" : 0,
    "detect_tampering_times" : 0,
    "last_detect_time" : 0,
    "agent_status" : "online"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

This API is used to query the 10 records on the first page of WTP status list of servers whose status is enabled and enterprise project ID is XX by default.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListWtpProtectHostSolution {

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

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



```
        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListWtpProtectHostRequest request = new ListWtpProtectHostRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withHostName("<host_name>");
        request.withHostId("<host_id>");
        request.withPublicIp("<public_ip>");
        request.withPrivateIp("<private_ip>");
        request.withGroupName("<group_name>");
        request.withOsType("<os_type>");
        request.withProtectStatus("<protect_status>");
        request.withAgentStatus("<agent_status>");
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        try {
            ListWtpProtectHostResponse response = client.listWtpProtectHost(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

This API is used to query the 10 records on the first page of WTP status list of servers whose status is enabled and enterprise project ID is XX by default.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListWtpProtectHostRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.host_name = "<host_name>"
        request.host_id = "<host_id>"
        request.public_ip = "<public_ip>"
        request.private_ip = "<private_ip>"
        request.group_name = "<group_name>"
```



```
        request.os_type = "<os_type>"
        request.protect_status = "<protect_status>"
        request.agent_status = "<agent_status>"
        request.limit = <limit>
        request.offset = <offset>
        response = client.list_wtp_protect_host(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

This API is used to query the 10 records on the first page of WTP status list of servers whose status is enabled and enterprise project ID is XX by default.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListWtpProtectHostRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    publicIpRequest:= "<public_ip>"
    request.PublicIp = &publicIpRequest
    privateIpRequest:= "<private_ip>"
    request.PrivateIp = &privateIpRequest
    groupNameRequest:= "<group_name>"
    request.GroupName = &groupNameRequest
    osTypeRequest:= "<os_type>"
    request.OsType = &osTypeRequest
    protectStatusRequest:= "<protect_status>"
    request.ProtectStatus = &protectStatusRequest
    agentStatusRequest:= "<agent_status>"
    request.AgentStatus = &agentStatusRequest
    limitRequest:= int32(<limit>)
    request.Limit = &limitRequest
```



```
    offsetRequest:= int32(<offset>)
    request.Offset = &offsetRequest
    response, err := client.ListWtpProtectHost(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**.

3.12.2 Enabling or Disabling WTP

Function

This API is used to enable or disable WTP.

Calling Method

For details, see **Calling APIs**.

URI

POST /v5/{project_id}/webtamper/static/status

Table 3-385 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **0** Maximum: **64**

Table 3-386 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID Minimum: **0** Maximum: **64**

Request Parameters

Table 3-387 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **1** Maximum: **32768**
Content-Type	No	String	Default value: application/json; charset=utf-8 Minimum: **0** Maximum: **128**
region	Yes	String	Region Id Minimum: **0** Maximum: **32**

Table 3-388 Request body parameters

Parameter	Mandatory	Type	Description
status	Yes	Boolean	Status (enabled or disabled)
host_id_list	Yes	Array of strings	The value in the array is server ID and the server ID cannot be empty. Minimum: **0** Maximum: **128** Array Length: **1 - 20000**

Parameter	Mandatory	Type	Description
resource_id	No	String	Resource ID Minimum: **0** Maximum: **64**
charging_mode	No	String	Billing mode. • packet_cycle: yearly/monthly Minimum: **0** Maximum: **32**

Response Parameters

None

Example Requests

Enable WTP, set the target server IDs to a and b, and pay for the yearly/monthly billing mode.

```
POST https://{endpoint}/v5/{project_id}/webtamper/static/status

{
  "status" : true,
  "host_id_list" : [ "a", "b" ],
  "resource_id" : "aaxxx",
  "charging_mode" : "packet_cycle"
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Enable WTP, set the target server IDs to a and b, and pay for the yearly/monthly billing mode.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

import java.util.List;
```



```
import java.util.ArrayList;

public class SetWtpProtectionStatusInfoSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        SetWtpProtectionStatusInfoRequest request = new SetWtpProtectionStatusInfoRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        SetWtpProtectionStatusRequestInfo body = new SetWtpProtectionStatusRequestInfo();
        List<String> listbodyHostIdList = new ArrayList<>();
        listbodyHostIdList.add("a");
        listbodyHostIdList.add("b");
        body.withChargingMode("packet_cycle");
        body.withResourceId("aaxxx");
        body.withHostIdList(listbodyHostIdList);
        body.withStatus(true);
        request.withBody(body);
        try {
            SetWtpProtectionStatusInfoResponse response = client.setWtpProtectionStatusInfo(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 WTP, set the target server IDs to a and b, and pay for the yearly/monthly billing mode.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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



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

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

    try:
        request = SetWtpProtectionStatusInfoRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        listHostIdListbody = [
            "a",
            "b"
        ]
        request.body = SetWtpProtectionStatusRequestInfo(
            charging_mode="packet_cycle",
            resource_id="aaxxx",
            host_id_list=listHostIdListbody,
            status=True
        )
        response = client.set_wtp_protection_status_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

Enable WTP, set the target server IDs to a and b, and pay for the yearly/monthly billing mode.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.SetWtpProtectionStatusInfoRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    var listHostIdListbody = []string{
        "a",
```



```
        "b",
    }
    chargingModeSetWtpProtectionStatusRequestInfo:= "packet_cycle"
    resourceIdSetWtpProtectionStatusRequestInfo:= "aaxxx"
    request.Body = &model.SetWtpProtectionStatusRequestInfo{
        ChargingMode: &chargingModeSetWtpProtectionStatusRequestInfo,
        ResourceId: &resourceIdSetWtpProtectionStatusRequestInfo,
        HostIdList: listHostIdListbody,
        Status: true,
    }
    response, err := client.SetWtpProtectionStatusInfo(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	successful response

Error Codes

See **Error Codes**.

3.12.3 Enabling or Disabling Dynamic WTP

Function

This API is used to enable or disable dynamic WTP.

Calling Method

For details, see **Calling APIs**.

URI

POST /v5/{project_id}/webtamper/rasp/status

Table 3-389 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **0** Maximum: **64**

Table 3-390 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID Minimum: **0** Maximum: **64**

Request Parameters

Table 3-391 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **1** Maximum: **32768**
Content-Type	No	String	Default value: application/json; charset=utf-8 Minimum: **0** Maximum: **128**
region	Yes	String	Region Id Minimum: **0** Maximum: **32**

Table 3-392 Request body parameters

Parameter	Mandatory	Type	Description
host_id_list	No	Array of strings	HostId list Minimum: **0** Maximum: **128** Array Length: **0 - 20000**
status	No	Boolean	Dynamic WTP status

Response Parameters

None

Example Requests

Enable dynamic WTP for servers a and b.

```
POST https://{endpoint}/v5/{project_id}/webtamper/rasp/status

{
  "host_id_list" : [ "a", "b" ],
  "status" : true
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Enable dynamic WTP for servers a and b.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class SetRaspSwitchSolution {

    public static void main(String[] args) {
        // The AK and SK used for authentication are hard-coded or stored in plaintext, which has great security risks. It is recommended that the AK and SK be stored in ciphertext in configuration files or environment variables and decrypted during use to ensure security.
```



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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        SetRaspSwitchRequest request = new SetRaspSwitchRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        SetRaspSwitchRequestInfo body = new SetRaspSwitchRequestInfo();
        List<String> listbodyHostIdList = new ArrayList<>();
        listbodyHostIdList.add("a");
        listbodyHostIdList.add("b");
        body.withStatus(true);
        body.withHostIdList(listbodyHostIdList);
        request.withBody(body);
        try {
            SetRaspSwitchResponse response = client.setRaspSwitch(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 dynamic WTP for servers a and b.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = SetRaspSwitchRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
```



```
        listHostIdListbody = [
            "a",
            "b"
        ]
        request.body = SetRaspSwitchRequestInfo(
            status=True,
            host_id_list=listHostIdListbody
        )
        response = client.set_rasp_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

Enable dynamic WTP for servers a and b.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.SetRaspSwitchRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    var listHostIdListbody = List<String>{
        "a",
        "b",
    }
    statusSetRaspSwitchRequestInfo:= true
    request.Body = &model.SetRaspSwitchRequestInfo{
        Status: &statusSetRaspSwitchRequestInfo,
        HostIdList: &listHostIdListbody,
    }
    response, err := client.SetRaspSwitch(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	successful response

Error Codes

See **Error Codes**.

3.12.4 Querying the Status of Static WTP for a Server

Function

This API is used to query the status of static WTP for a server.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/webtamper/static/protect-history

Table 3-393 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **0** Maximum: **64**

Table 3-394 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID Minimum: **0** Maximum: **64**

Parameter	Mandatory	Type	Description
host_id	No	String	Server ID. If this parameter is left empty, all the servers are queried. Minimum: **0** Maximum: **128**
start_time	Yes	Long	Start time (ms) Minimum: **0** Maximum: **4070880000000**
end_time	Yes	Long	End time (ms) Minimum: **0** Maximum: **4070880000000**
limit	Yes	Integer	limit Minimum: **0** Maximum: **100**
offset	Yes	Integer	offset Minimum: **0** Maximum: **100**
host_name	No	String	Server name Minimum: **0** Maximum: **128**
host_ip	No	String	Server IP address Minimum: **0** Maximum: **128**
file_path	No	String	Protected file Minimum: **0** Maximum: **128**
file_operation	No	String	Types of file operations, including: • add • delete • modify • attribute Minimum: **0** Maximum: **128**

Request Parameters

Table 3-395 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region Id Minimum: **0** Maximum: **32**

Response Parameters

Status code: 200

Table 3-396 Response body parameters

Parameter	Type	Description
host_name	String	Server name Minimum: **0** Maximum: **256**
protect_status	String	Protection status. Its value can be: • close • opened Minimum: **0** Maximum: **32**
total_num	Long	total number of static WTPs Minimum: **0** Maximum: **20000000**
data_list	Array of **HostProtectHistoryResponseInfo** objects	data list Array Length: **0 - 20000**

Table 3-397 HostProtectHistoryResponseInfo

Parameter	Type	Description
occr_time	Long	Static WTP detection time (ms) Minimum: **0** Maximum: **4070880000000**
file_path	String	Tampered file path Minimum: **0** Maximum: **2000**
file_operation	String	Types of file operations • add • delete • modify • attribute • unknown Minimum: **0** Maximum: **32**
host_name	String	Server name Minimum: **0** Maximum: **64**
host_ip	String	Server IP address Minimum: **0** Maximum: **64**
process_id	String	Process ID Minimum: **0** Maximum: **8**
process_name	String	Process name Minimum: **0** Maximum: **200**
process_cmd	String	Process command line Minimum: **0** Maximum: **8191**

Example Requests

Query the static WTP status of a server where target ID is caa958ad-a481-4d46-b51e-6861b8864515, start time is 1668563099000, and end time is 1668563199000.

```
GET https://{endpoint}/v5/{project_id}/webtamper/static/protect-history
```



```
{
  "host_id" : "caa958ad-a481-4d46-b51e-6861b8864515",
  "start_time" : 1668563099000,
  "end_time" : 1668563199000,
  "limit" : 10,
  "offset" : 0
}
```

Example Responses

Status code: 200

successful response

```
{
  "host_name" : "ecs-ubuntu",
  "protect_status" : "opened",
  "total_num" : 1,
  "data_list" : [ {
    "occr_time" : 1668156691000,
    "file_path" : "/root/test/tamper/test.xml",
    "host_name" : "hss-test",
    "host_ip" : "192.168.5.98",
    "file_operation" : "add",
    "process_id" : "18672",
    "process_name" : "program1",
    "process_cmd" : "del test.xml"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Query the static WTP status of a server where target ID is caa958ad-a481-4d46-b51e-6861b8864515, start time is 1668563099000, and end time is 1668563199000.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListHostProtectHistoryInfoSolution {

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

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



```
        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListHostProtectHistoryInfoRequest request = new ListHostProtectHistoryInfoRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withHostId("<host_id>");
        request.withStartTime(<start_time>L);
        request.withEndTime(<end_time>L);
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withHostName("<host_name>");
        request.withHostIp("<host_ip>");
        request.withFilePath("<file_path>");
        request.withFileOperation("<file_operation>");
        try {
            ListHostProtectHistoryInfoResponse response = client.listHostProtectHistoryInfo(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 static WTP status of a server where target ID is caa958ad-a481-4d46-b51e-6861b8864515, start time is 1668563099000, and end time is 1668563199000.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListHostProtectHistoryInfoRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.host_id = "<host_id>"
        request.start_time = <start_time>
        request.end_time = <end_time>
```



```
        request.limit = <limit>
        request.offset = <offset>
        request.host_name = "<host_name>"
        request.host_ip = "<host_ip>"
        request.file_path = "<file_path>"
        request.file_operation = "<file_operation>"
        response = client.list_host_protect_history_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

Query the static WTP status of a server where target ID is caa958ad-a481-4d46-b51e-6861b8864515, start time is 1668563099000, and end time is 1668563199000.

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListHostProtectHistoryInfoRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    request.StartTime = int64(<start_time>)
    request.EndTime = int64(<end_time>)
    request.Limit = int32(<limit>)
    request.Offset = int32(<offset>)
    hostNameRequest:= "<host_name>"
    request.HostName = &hostNameRequest
    hostIpRequest:= "<host_ip>"
    request.HostIp = &hostIpRequest
    filePathRequest:= "<file_path>"
    request.FilePath = &filePathRequest
    fileOperationRequest:= "<file_operation>"
    request.FileOperation = &fileOperationRequest
    response, err := client.ListHostProtectHistoryInfo(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	successful response

Error Codes

See **Error Codes**.

3.12.5 Querying the Status of Dynamic WTP for a Server

Function

This API is used to query the status of dynamic WTP for a server.

Calling Method

For details, see **Calling APIs**.

URI

GET /v5/{project_id}/webtamper/rasp/protect-history

Table 3-398 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **0** Maximum: **64**

Table 3-399 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID Minimum: **0** Maximum: **64**
host_id	No	String	Server ID. If this parameter is left empty, all the servers are queried. Minimum: **0** Maximum: **128**
start_time	Yes	Long	Start time (ms) Minimum: **0** Maximum: **4070880000000**
end_time	Yes	Long	End time (ms) Minimum: **0** Maximum: **4070880000000**
limit	Yes	Integer	limit Minimum: **0** Maximum: **100**
offset	Yes	Integer	offset Minimum: **0** Maximum: **100**
alarm_level	No	Integer	Alarm severity. The options are as follows: • 1: low-risk • 2: medium risk • 3: high risk • 4: major Minimum: **0** Maximum: **100**
severity	No	String	Threat level. Its value can be: • Security • Low: low risk • Medium: medium risk • High: high risk • Critical Minimum: **0** Maximum: **32**

Parameter	Mandatory	Type	Description
protect_status	No	String	Protection status. • closed: disabled • opened: protection enabled Minimum: **0** Maximum: **32**

Request Parameters

Table 3-400 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a user token. Minimum: **1** Maximum: **32768**
region	Yes	String	Region Id Minimum: **0** Maximum: **32**

Response Parameters

Status code: 200

Table 3-401 Response body parameters

Parameter	Type	Description
total_num	Long	total number of dynamic WTPs Minimum: **0** Maximum: **200000**
data_list	Array of **HostRaspProtectHistoryResponseInfo** objects	data list Array Length: **0 - 200000**

Table 3-402 HostRaspProtectHistoryResponseInfo

Parameter	Type	Description
host_ip	String	Server IP address Minimum: **0** Maximum: **64**
host_name	String	Server name Minimum: **0** Maximum: **64**
alarm_time	Long	Dynamic WTP alarm time (ms) Minimum: **0** Maximum: **4070880000000**
threat_type	String	Threat type Minimum: **0** Maximum: **64**
alarm_level	Integer	Alarm severity Minimum: **0** Maximum: **100**
source_ip	String	Source IP address of the attacking server Minimum: **0** Maximum: **128**
attacked_url	String	URL of the attack request Minimum: **0** Maximum: **2000**

Example Requests

Query the dynamic WTP status of a server where target ID is caa958ad-a481-4d46-b51e-6861b8864515, start time is 1668563099000, and end time is 1668563199000.

```
GET https://{endpoint}/v5/{project_id}/webtamper/rasp/protect-history

{
  "host_id" : "caa958ad-a481-4d46-b51e-6861b8864515",
  "start_time" : 1668563099000,
  "end_time" : 1668563199000,
  "limit" : 10,
  "offset" : 0
}
```

Example Responses

Status code: 200

successful response


```
{
  "total_num" : 1,
  "data_list" : [ {
    "host_ip" : "192.168.5.98",
    "host_name" : "hss-test",
    "alarm_level" : 2,
    "alarm_time" : 1668394634000,
    "attacked_url" : "/vulns/001-dir-1.jsp",
    "source_ip" : "10.100.30.200",
    "threat_type" : "Path Traversal"
  } ]
}
```

SDK Sample Code

The SDK sample code is as follows.

Java

Query the dynamic WTP status of a server where target ID is caa958ad-a481-4d46-b51e-6861b8864515, start time is 1668563099000, and end time is 1668563199000.

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class ListHostRaspProtectHistoryInfoSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        ListHostRaspProtectHistoryInfoRequest request = new ListHostRaspProtectHistoryInfoRequest();
        request.withEnterpriseProjectId("<enterprise_project_id>");
        request.withHostId("<host_id>");
        request.withStartTime(<start_time>L);
        request.withEndTime(<end_time>L);
        request.withLimit(<limit>);
        request.withOffset(<offset>);
        request.withAlarmLevel(<alarm_level>);
        request.withSeverity("<severity>");
        request.withProtectStatus("<protect_status>");
        try {
            ListHostRaspProtectHistoryInfoResponse response = client.listHostRaspProtectHistoryInfo(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 dynamic WTP status of a server where target ID is caa958ad-a481-4d46-b51e-6861b8864515, start time is 1668563099000, and end time is 1668563199000.

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = ListHostRaspProtectHistoryInfoRequest()
        request.enterprise_project_id = "<enterprise_project_id>"
        request.host_id = "<host_id>"
        request.start_time = <start_time>
        request.end_time = <end_time>
        request.limit = <limit>
        request.offset = <offset>
        request.alarm_level = <alarm_level>
        request.severity = "<severity>"
        request.protect_status = "<protect_status>"
        response = client.list_host_rasp_protect_history_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

Query the dynamic WTP status of a server where target ID is caa958ad-a481-4d46-b51e-6861b8864515, start time is 1668563099000, and end time is 1668563199000.


```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.ListHostRaspProtectHistoryInfoRequest{}
    enterpriseProjectIdRequest:= "<enterprise_project_id>"
    request.EnterpriseProjectId = &enterpriseProjectIdRequest
    hostIdRequest:= "<host_id>"
    request.HostId = &hostIdRequest
    request.StartTime = int64(<start_time>)
    request.EndTime = int64(<end_time>)
    request.Limit = int32(<limit>)
    request.Offset = int32(<offset>)
    alarmLevelRequest:= int32(<alarm_level>)
    request.AlarmLevel = &alarmLevelRequest
    severityRequest:= "<severity>"
    request.Severity = &severityRequest
    protectStatusRequest:= "<protect_status>"
    request.ProtectStatus = &protectStatusRequest
    response, err := client.ListHostRaspProtectHistoryInfo(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	successful response

Error Codes

See **Error Codes**.

3.13 Tag Management

3.13.1 Creating Tags in Batches

Function

This API is used to create tags in batches.

Calling Method

For details, see **Calling APIs**.

URI

POST /v5/{project_id}/{resource_type}/{resource_id}/tags/create

Table 3-403 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**
resource_type	Yes	String	Resource type defined by TMS. When HSS calls the API, the resource type is HSS. Minimum: **1** Maximum: **64**
resource_id	Yes	String	Resource ID defined by TMS. When HSS calls the API, the resource ID is the quota ID. Minimum: **0** Maximum: **128**

Request Parameters

Table 3-404 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **32** Maximum: **512**
Content-Type	No	String	Default value: application/json; charset=utf-8 Minimum: **0** Maximum: **128**

Table 3-405 Request body parameters

Parameter	Mandatory	Type	Description
tags	Yes	Array of **ResourceTagInfo** objects	Tag List Array Length: **0 - 1024**

Table 3-406 ResourceTagInfo

Parameter	Mandatory	Type	Description
key	Yes	String	Key. It can contain up to 128 Unicode characters. The key cannot be left blank. Minimum: **1** Maximum: **128**
value	Yes	String	Value Minimum: **1** Maximum: **128**

Response Parameters

None

Example Requests

Create a tag key TESTKEY20220831190155 (the tag value is 2) and a tag key test (the tag value is hss).

```
POST https://{endpoint}/v5/05e1e8b7ba8010dd2f80c01070a8d4cd/hss/fbaa9aca-2b5f-11ee-8c64-fa163e139e02/tags/create

{
  "tags" : [ {
    "key" : "TESTKEY20220831190155",
    "value" : "2"
  }, {
    "key" : "test",
    "value" : "hss"
  } ]
}
```

Example Responses

None

SDK Sample Code

The SDK sample code is as follows.

Java

Create a tag key TESTKEY20220831190155 (the tag value is 2) and a tag key test (the tag value is hss).

```
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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;

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

public class BatchCreateTagsSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        BatchCreateTagsRequest request = new BatchCreateTagsRequest();
```



```
        BatchCreateTagsRequestInfo body = new BatchCreateTagsRequestInfo();
        List<ResourceTagInfo> listbodyTags = new ArrayList<>();
        listbodyTags.add(
            new ResourceTagInfo()
                .withKey("TESTKEY20220831190155")
                .withValue("2")
        );
        listbodyTags.add(
            new ResourceTagInfo()
                .withKey("test")
                .withValue("hss")
        );
        body.withTags(listbodyTags);
        request.withBody(body);
        try {
            BatchCreateTagsResponse response = client.batchCreateTags(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

Create a tag key TESTKEY20220831190155 (the tag value is 2) and a tag key test (the tag value is hss).

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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

    credentials = BasicCredentials(ak, sk) \

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

    try:
        request = BatchCreateTagsRequest()
        listTagsbody = [
            ResourceTagInfo(
                key="TESTKEY20220831190155",
                value="2"
            ),
            ResourceTagInfo(
                key="test",
                value="hss"
```



```
            )
        ]
        request.body = BatchCreateTagsRequestInfo(
            tags=listTagsbody
        )
        response = client.batch_create_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

Create a tag key TESTKEY20220831190155 (the tag value is 2) and a tag key test (the tag value is hss).

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.BatchCreateTagsRequest{}
    var listTagsbody = []model.ResourceTagInfo{
        {
            Key: "TESTKEY20220831190155",
            Value: "2",
        },
        {
            Key: "test",
            Value: "hss",
        },
    }
    request.Body = &model.BatchCreateTagsRequestInfo{
        Tags: listTagsbody,
    }
    response, err := client.BatchCreateTags(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	success
400	Invalid parameter.
401	Authentication failed.
403	Insufficient permission.
404	Resources not found.
500	System error.

Error Codes

See **Error Codes**.

3.13.2 Deleting a Resource Tag

Function

This API is used to delete a tag from a resource.

Calling Method

For details, see **Calling APIs**.

URI

DELETE /v5/{project_id}/{resource_type}/{resource_id}/tags/{key}

Table 3-407 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID Minimum: **1** Maximum: **256**

Parameter	Mandatory	Type	Description
resource_type	Yes	String	Resource type defined by TMS. When HSS calls the API, the resource type is HSS. Minimum: **1** Maximum: **64**
resource_id	Yes	String	Resource ID defined by TMS. When HSS calls the API, the resource ID is the quota ID. Minimum: **0** Maximum: **128**
key	Yes	String	Key to be deleted Minimum: **1** Maximum: **256**

Request Parameters

Table 3-408 Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. It can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is a token. Minimum: **32** Maximum: **512**

Response Parameters

None

Example Requests

Delete the tag whose key is abc, project_id is 94b5266c14ce489fa6549817f032dc61, resource_type is hss, and resource_id is 2acc46ee-34c2-40c2-8060-dc652e6c672a.

```
DELETE https://{endpoint}/v5/94b5266c14ce489fa6549817f032dc61/hss/2acc46ee-34c2-40c2-8060-dc652e6c672a/tags/abc
```

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.hss.v5.region.HssRegion;
import com.huaweicloud.sdk.hss.v5.*;
import com.huaweicloud.sdk.hss.v5.model.*;


public class DeleteResourceInstanceTagSolution {

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

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

        HssClient client = HssClient.newBuilder()
                .withCredential(auth)
                .withRegion(HssRegion.valueOf("<YOUR REGION>"))
                .build();
        DeleteResourceInstanceTagRequest request = new DeleteResourceInstanceTagRequest();
        try {
            DeleteResourceInstanceTagResponse response = client.deleteResourceInstanceTag(request);
            System.out.println(response.toString());
        } catch (ConnectionException e) {
            e.printStackTrace();
        } catch (RequestTimeoutException e) {
            e.printStackTrace();
        } catch (ServiceResponseException e) {
            e.printStackTrace();
            System.out.println(e.getHttpStatusCode());
            System.out.println(e.getRequestId());
            System.out.println(e.getErrorCode());
            System.out.println(e.getErrorMsg());
        }
    }
}
```

Python

```
# coding: utf-8

from huaweicloudsdkcore.auth.credentials import BasicCredentials
from huaweicloudsdkhss.v5.region.hss_region import HssRegion
from huaweicloudsdkcore.exceptions import exceptions
from huaweicloudsdkhss.v5 import *

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



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

    credentials = BasicCredentials(ak, sk) \

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

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

Go

```
package main

import (
    "fmt"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/core/auth/basic"
    hss "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5"
    "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/model"
    region "github.com/huaweicloud/huaweicloud-sdk-go-v3/services/hss/v5/region"
)

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

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

    client := hss.NewHssClient(
        hss.HssClientBuilder().
            WithRegion(region.ValueOf("<YOUR REGION>")).
            WithCredential(auth).
            Build())

    request := &model.DeleteResourceInstanceTagRequest{}
    response, err := client.DeleteResourceInstanceTag(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	success
400	Invalid parameter.
401	Authentication failed.
403	Insufficient permission.
404	Resources not found.
500	System error.

Error Codes

See **Error Codes**.

A Appendixes

A.1 Status Code

Status Code	Status	Description
200	OK	Request processing succeeded.
400	Bad Request	Invalid request parameters.
500	Internal Server Error	Internal service error.

A.2 Error Codes

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

Status Code	Error Codes	Error Message	Description	Solution
400	HSS.0001	invalid param error	invalid param error	Please check the input parameter
500	HSS.0041	Query host extend info error	Query host info error	Please check the input parameter

B Change History

Date	Change Description
2023-10-27	This issue is the fifth official release. Added: • 3.1.6.1 Querying the List of Blocked IP Addresses • 3.1.6.2 Unblocking a Blocked IP Address • 3.1.6.3 Querying the List of Isolated Files • 3.1.6.4 Restoring Isolated Files • 3.1.9.1 Querying the Image List in the SWR Image Repository • 3.1.9.2 Scanning Images in the Image Repository in Batches • 3.1.9.3 Querying Image Vulnerability Information • 3.1.9.4 CVE Information Corresponding to the Vulnerability • 3.1.9.5 Synchronizing the Image List from SWR • 3.1.9.6 Querying the List of Image Security Configuration Detection Results • 3.1.9.7 Querying the Check Item List of a Specified Security Configuration Item of an Image • 3.1.9.8 Querying the Mirror Configuration Check Report • 3.1.11.5 Querying a Vulnerability Scan Policy

Date	Change Description
	• 3.1.11.6 Modifying a Vulnerability Scan Policy • 3.1.11.7 Querying Vulnerability Management Statistics
2023-07-25	This issue is the fourth official release. Added: • 3.1.1.1 Querying the Middleware List • 3.1.1.2 Querying the Server List of a Specified Middleware • 3.1.8.4 Querying Vulnerability Information About a Server
2022-12-14	This issue is the third official release. Added supported APIs.
2022-10-31	This issue is the second official release. Optimized the description about APIs.
2022-06-30	This issue is the first official release.

